طرح نگهداشت و افزایش تولید 27 مخزن

STRESS ANALYSIS CALCULATIONS REPORT

نگهداشت و افزایش تولید میدان نفتی بینک

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Rev.	**Date**	**Purpose of Issue/Status**	**Prepared by:**	**Checked by:**	**Approved by:**	**CLIENT Approval**

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Status:

IDC: Inter-Discipline Check
IFC: Issued For Comment
IFA: Issued For Approval
AFD: Approved For Design
AFC: Approved For Construction
AFP: Approved For Purchase
AFQ: Approved For Quotation
IFI: Issued For Information
AB-R: As-Built for CLIENT Review
AB-A: As-Built –Approved

REVISION RECORD SHEET

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1.0 INTRODUCTION

Binak oilfield in Bushehr province is a part of the southern oilfields of Iran, is located 20 km northwest of Genaveh city.

With the aim of increasing production of oil from Binak oilfield, an EPC/EPD Project has been defined by NIOC/NISOC and awarded to Petro Iran Development Company (PEDCO). Also PEDCO (as General Contractor) has assigned the EPC-packages of the Project to "Hirgan Energy - Design and Inspection" JV.

As a part of the Project, a New Gas Compressor Station (adjacent to existing Binak GCS) shall be constructed to gather of 15 MMSCFD (approx.) associated gases and compress & transfer them to Siahmakan GIS.

GENERAL DEFINITION

The following terms shall be used in this document.

CLIENT:	National Iranian South Oilfields CLIENT (NISOC)
PROJECT:	Binak Oilfield Development – Surface Fcilities; New Gas Compressor Station
EPD/EPC CONTRACTOR (GC):	Petro Iran Development Company (PEDCO)
EPC CONTRACTOR:	Joint Venture of : Hirgan Energy – Design & Inspection (D&I) Companies
VENDOR:	The firm or person who will fabricate the equipment or material.
EXECUTOR:	Executor is the party which carries out all or part of construction and/or commissioning for the project.
THIRD PARTY INSPECTOR (TPI):	The firm appointed by EPD/EPC CONTRACTOR (GC) and approved by CLIENT (in writing) for the inspection of goods.
SHALL:	Is used where a provision is mandatory.
SHOULD:	Is used where a provision is advisory only.
WILL:	Is normally used in connection with the action by CLIENT rather than by an EPC/EPD CONTRACTOR, supplier or VENDOR.
MAY:	Is used where a provision is completely discretionary.

2.0 SCOPE

This document covers piping Stress Analysis Calculations Report for BINAK Compressor Gas Station.

3.0 THE PROJECT DOCUMENTS

- BK-GCS-PEDCO-120-PI-SP-0001 Piping Material Specification
- BK-GCS-PEDCO-120-PR-LI-0004 LINE LIST
- BK-GNRAL-PEDCO-000-PI-SP-0012 Specification For Flexibility Analysis
- BK-GCS-PEDCO-120-PI-LI-0001 Critical Line List

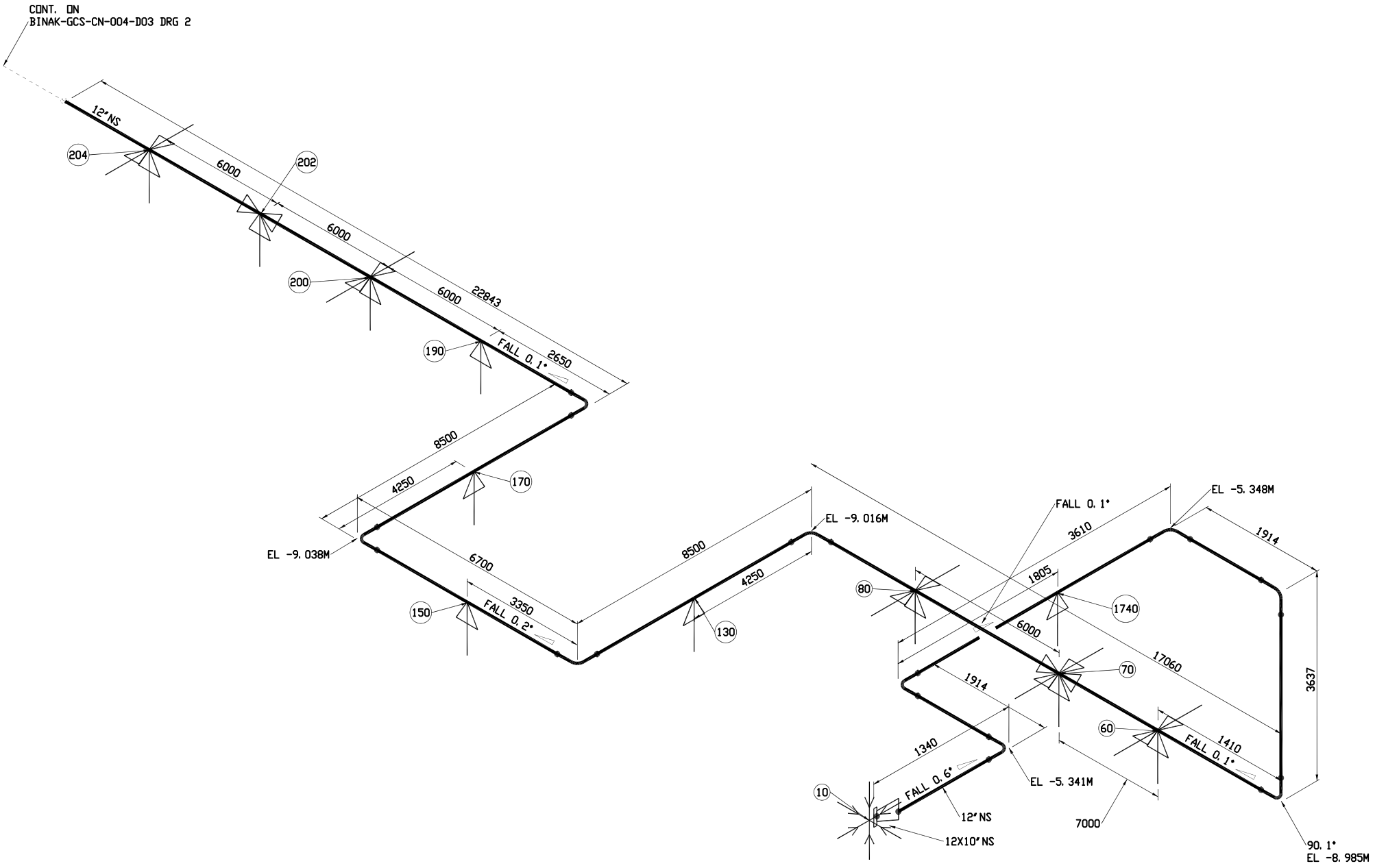
4.0 STANDARD AND REFRENCE

- IPS-E-PI-200 Engineering standard for Flexibility Analysis
- IPS-E-PI-240 Engineering standard for plant piping systems
- API 5L Specification for Line Pipe
- ASME B31.3 Process Piping (Petroleum Refinery Piping)
- ASME B16.5 Steel Pipe Flanges, Flanged Valves and Fittings
- ASME B16.9 Factory Made Wrought Steel Butt Welding Fittings
- ASME B16.10 Face to Face and End to End Dimension of Valves
- ASME B16.11 Forged Steel Fittings Socket Welding and Threaded
- ASME B16.34 Valves Flanged, Threaded , and Welding End

5.0 ATTACHEMENT (stress analysis calculation report)

BNK-GCS-CN-004

1. FL-112-0004-AN07-12"-PT



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INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

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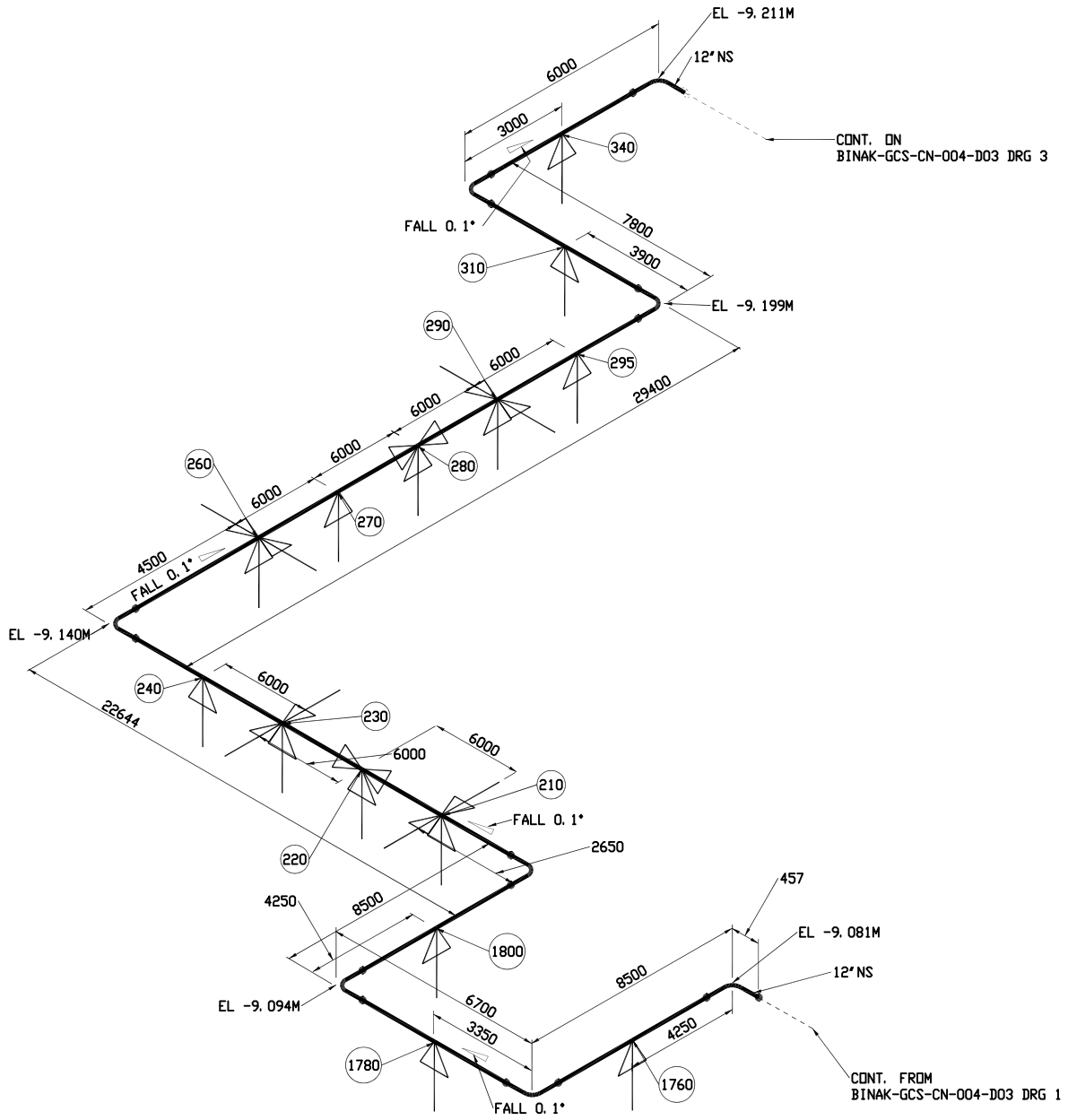

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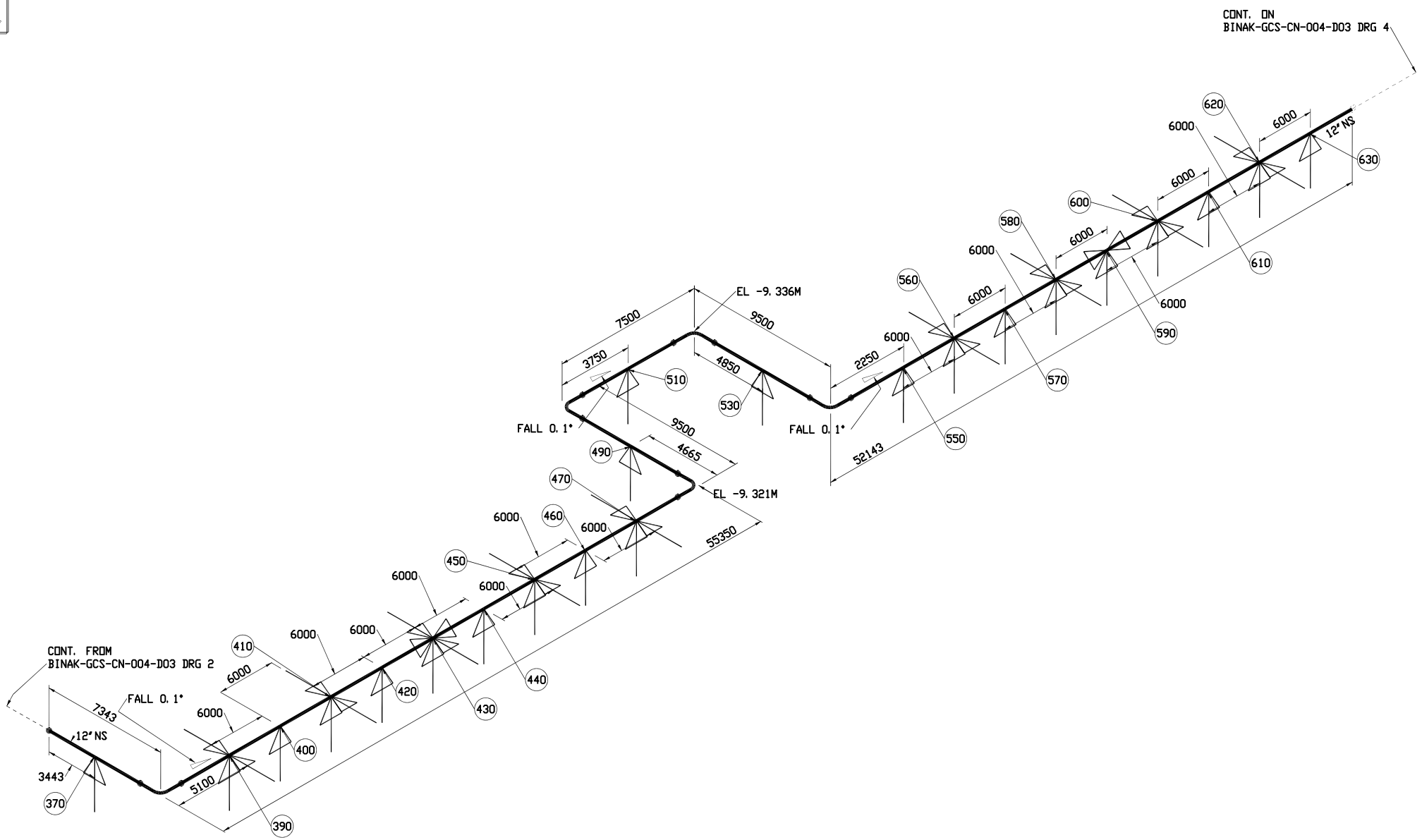

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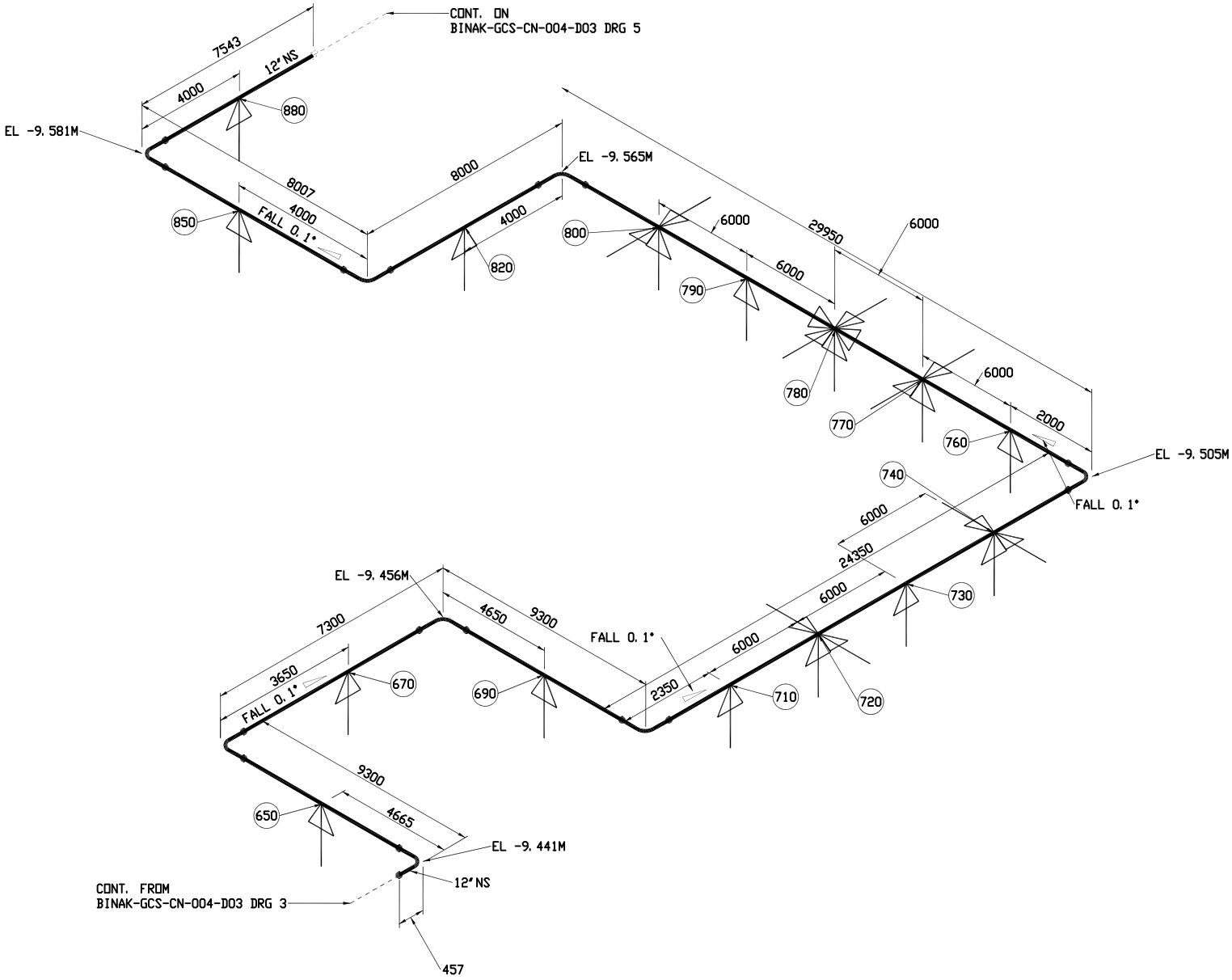

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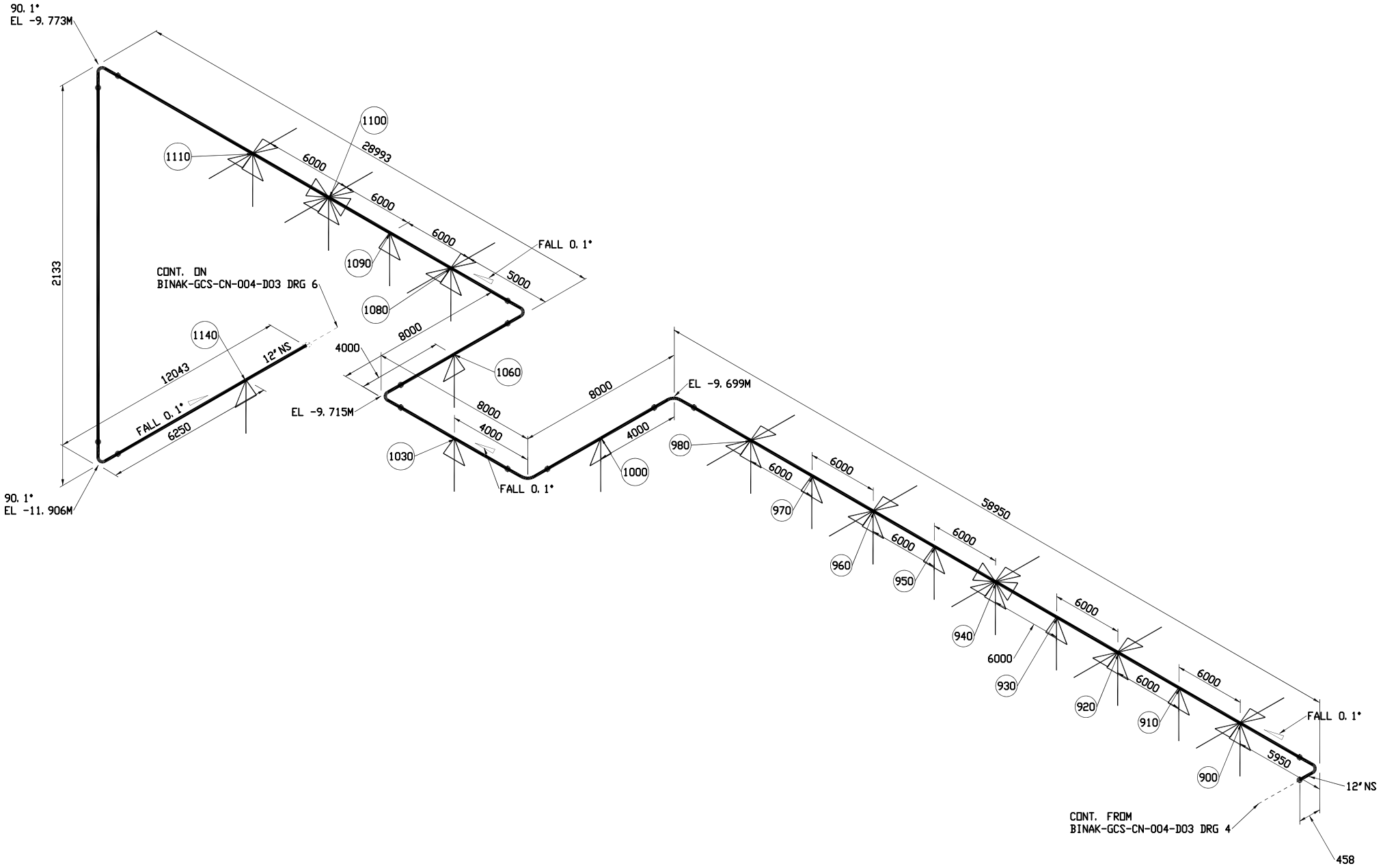

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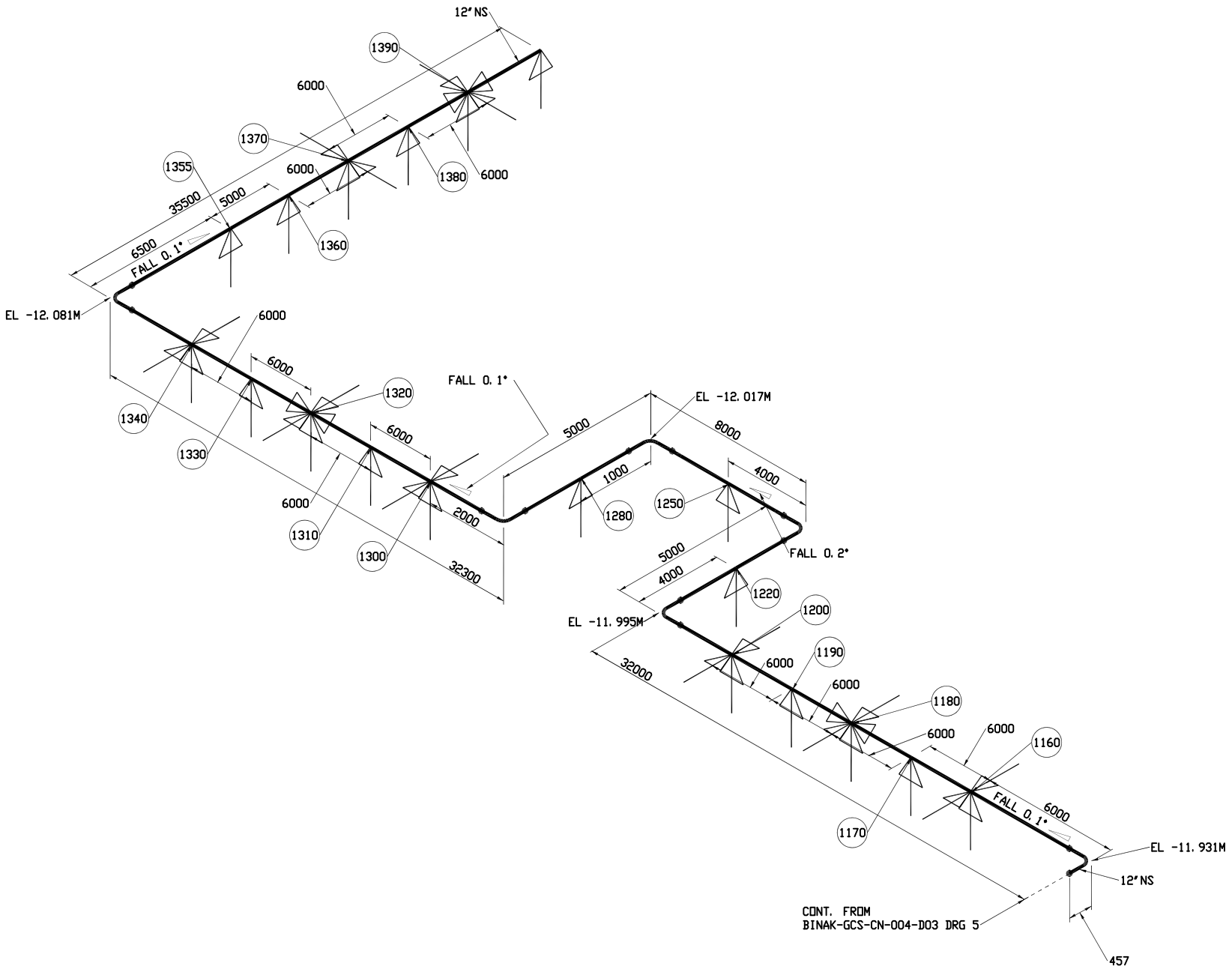

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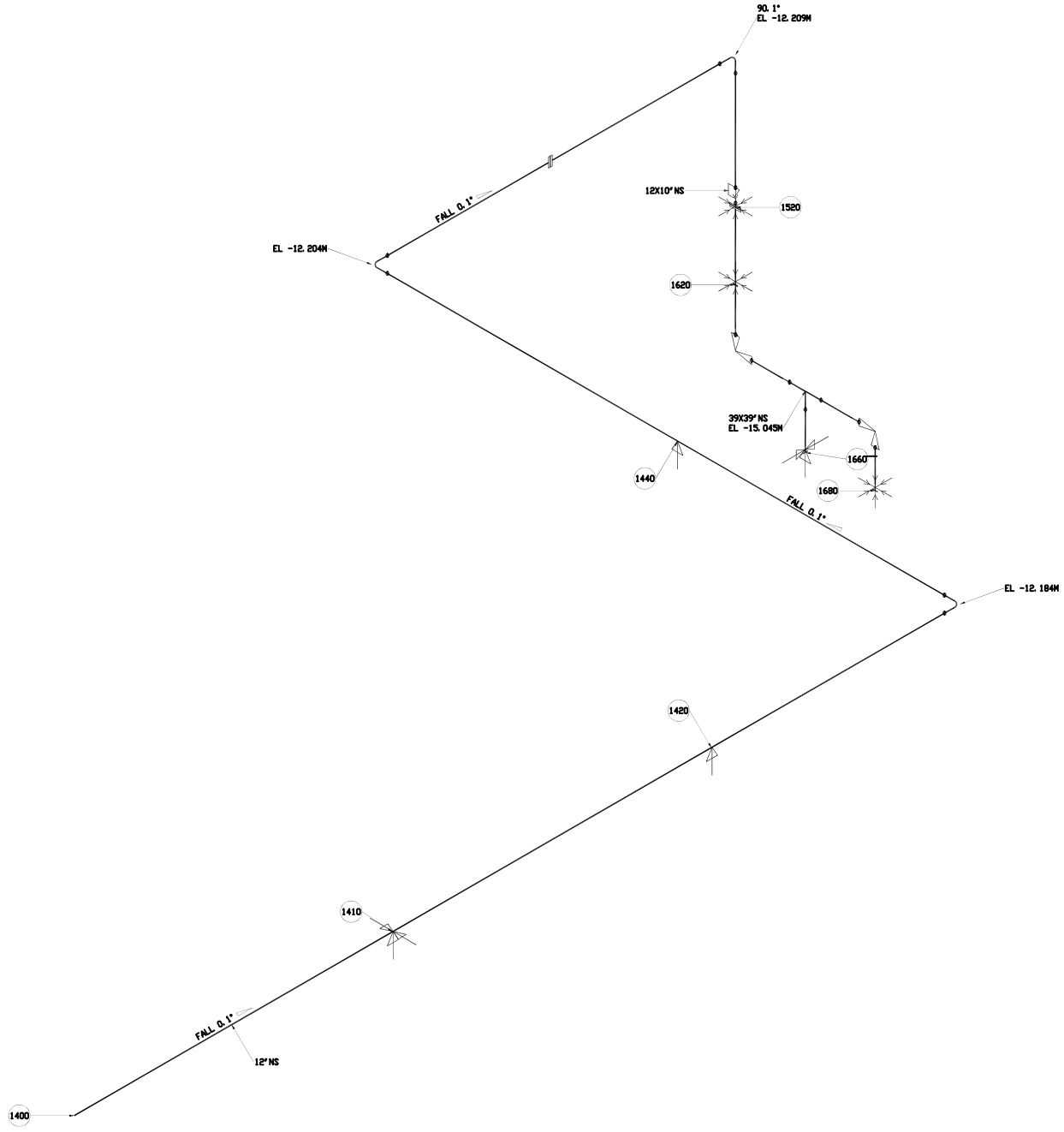

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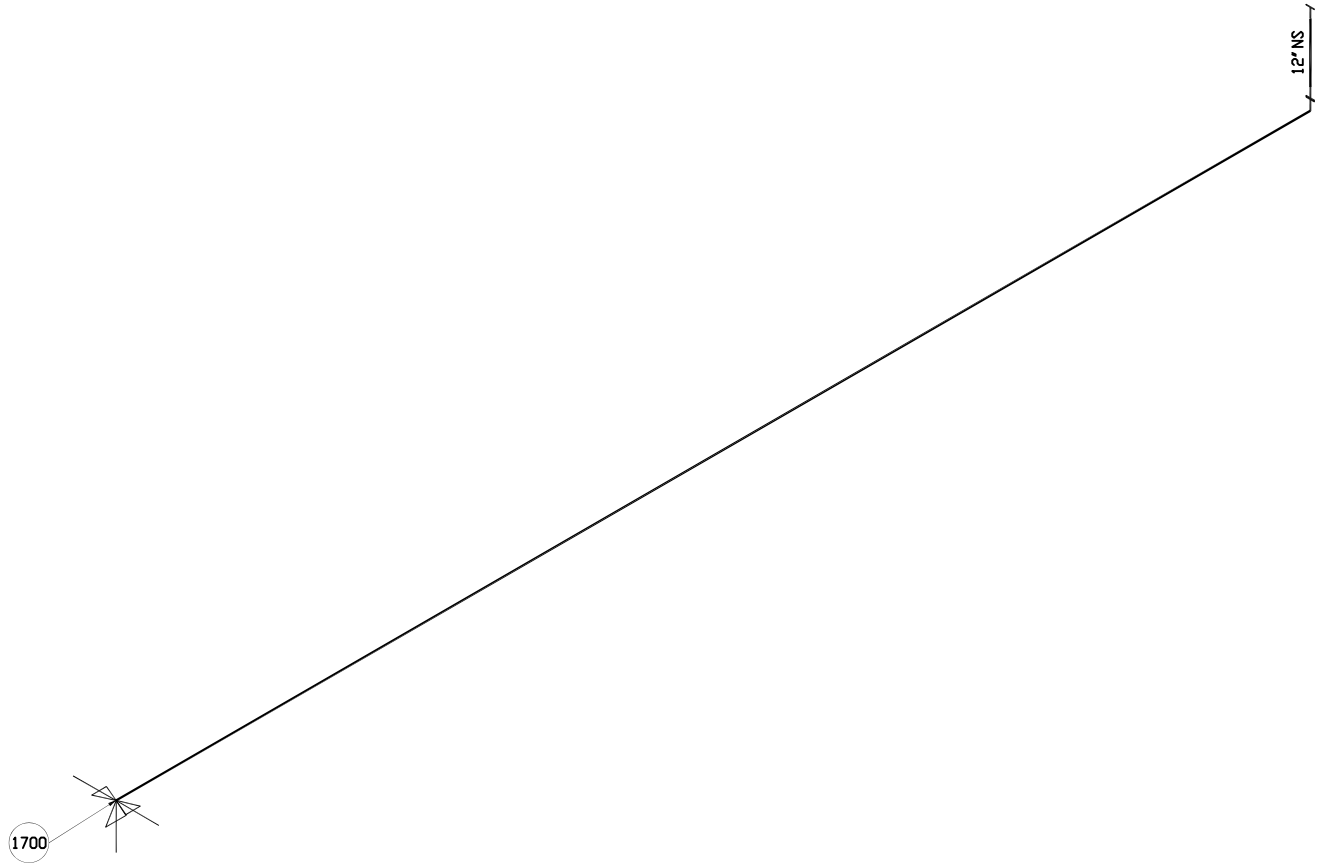

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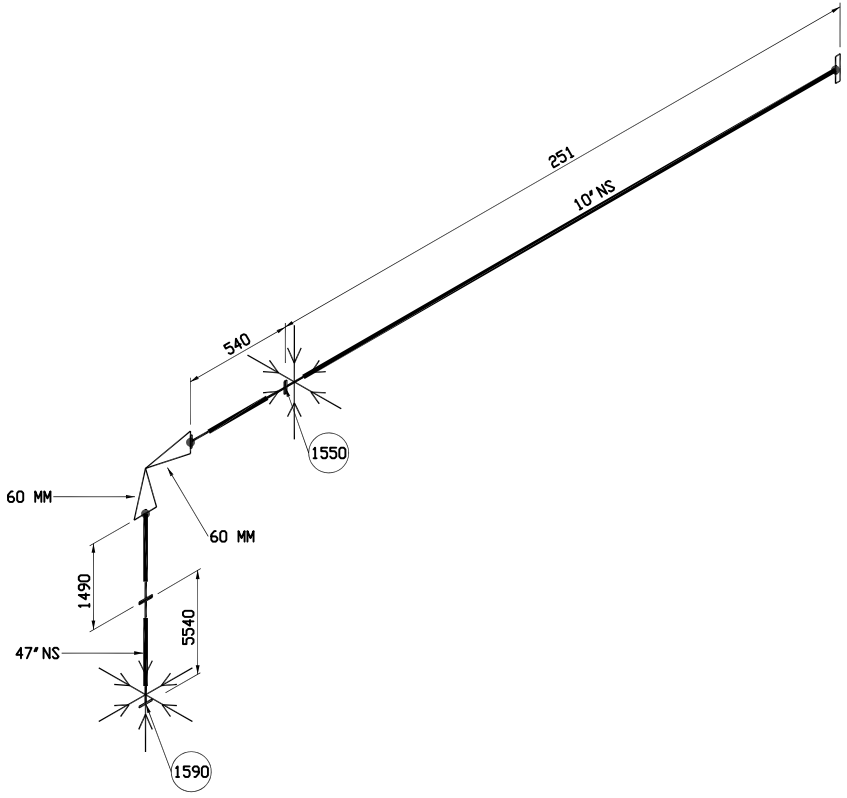

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15+L8
21 (OCC) L21=L16+L8
22 (OCC) L22=L17+L8
23 (OCC) L23=L18+L8
24 (OCC) L24=L19+L8
25 (EXP) L25=L2-L8
26 (EXP) L26=L2-L4
27 (EXP) L27=L6-L8
28 (EXP) L28=L2-L6
29 (EXP) L29=L4-L6

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

INPUT LISTING

PIPE DATA

From 10 To 20 DY= -9.640 mm. DZ= -136.600 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
Element Name= FLANGE_FLG_150
GENERAL
T1= 270 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,483,936 KPa
EH2= 187,335,024 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RIGID Weight= 235.76 N.
RESTRAINTS
Node 10 ANC Cnode 1530
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 20 To 30 DZ= -203.000 mm.
REDUCER
Diam2= 323.850 mm. Wall2= 10.312 mm.

From 30 To 1710 DY= -2.000 mm. DZ= -999.998 mm.
PIPE
Dia= 323.850 mm. Wall= 10.312 mm.
Insul Thk= .000 mm.
BEND at "TO" end
Radius= 457.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1709
Angle/Node @2= .00 1708

From 1710 To 1720 DX= -1,914.000 mm.
BEND at "TO" end
Radius= 457.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1719
Angle/Node @2= .00 1718

From 1720 To 1740 DY= -3.610 mm. DZ= -1,804.998 mm.
RESTRAINTS

INPUT LISTING

```
    Node  1740  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1740  To  35 DY= -3.610 mm.  DZ= -1,804.998 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 34
    Angle/Node @2= .00 33
 ------------------------------------------------------------------------------
 From  35  To  1730  DX= 1,914.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1729
    Angle/Node @2= .00 1728
 ------------------------------------------------------------------------------
 From  1730  To  50 DY= -3,637.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 89.886   Angle/Node @1= 44.94 49
    Angle/Node @2= .00 48
 ------------------------------------------------------------------------------
 From  50  To  60  DX= -1,410.002 mm.  DY= -2.812 mm.
 RESTRAINTS
    Node  60  +Y   Mu = .30
    Node  60  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  60  To  70  DX= -6,999.986 mm.  DY= -14.018 mm.
 RESTRAINTS
    Node  70  +Y   Mu = .30
    Node  70  Z   Gap= 3.000 mm.
    Node  70  X   Gap= .000 mm.
 ------------------------------------------------------------------------------
 From  70  To  80  DX= -5,999.988 mm.  DY= -12.016 mm.
 RESTRAINTS
    Node  80  +Y   Mu = .30
    Node  80  Z   Gap= .000 mm.
 ------------------------------------------------------------------------------
 From  80  To  120  DX= -2,649.999 mm.  DY= -2.091 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 119
    Angle/Node @2= .00 118
 ------------------------------------------------------------------------------
 From  120  To  130 DZ= 4,250.000 mm.
 RESTRAINTS
    Node  130  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  130  To  140 DZ= 4,250.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 139
    Angle/Node @2= .00 138
 ------------------------------------------------------------------------------
 From  140  To  150  DX= -3,349.989 mm.  DY= -10.714 mm.
 RESTRAINTS
    Node  150  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  150  To  160  DX= -3,349.989 mm.  DY= -10.714 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 159
    Angle/Node @2= .00 158
 ------------------------------------------------------------------------------
```

INPUT LISTING

```
 From  160  To  170 DZ= -4,250.000 mm.
 RESTRAINTS
    Node  170  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  170  To  180 DZ= -4,250.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 179
    Angle/Node @2= .00 178
 ------------------------------------------------------------------------------
 From  180  To  190  DX= -2,649.999 mm.  DY= -2.091 mm.
 RESTRAINTS
    Node  190  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  190  To  200  DX= -5,999.988 mm.  DY= -12.016 mm.
 RESTRAINTS
    Node  200  +Y   Mu = .30
    Node  200  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  200  To  202  DX= -5,999.988 mm.  DY= -12.016 mm.
 RESTRAINTS
    Node  202  +Y   Mu = .30
    Node  202  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  202  To  204  DX= -5,999.988 mm.  DY= -12.016 mm.
 RESTRAINTS
    Node  204  +Y   Mu = .30
    Node  204  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  204  To  1750  DX= -2,649.995 mm.  DY= -5.307 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1749
    Angle/Node @2= .00 1748
 ------------------------------------------------------------------------------
 From  1750  To  1760 DZ= 4,250.000 mm.
 RESTRAINTS
    Node  1760  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1760  To  1770 DZ= 4,250.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1769
    Angle/Node @2= .00 1768
 ------------------------------------------------------------------------------
 From  1770  To  1780  DX= -3,349.994 mm.  DY= -6.709 mm.
 RESTRAINTS
    Node  1780  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1780  To  1790  DX= -3,349.993 mm.  DY= -6.709 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1791
    Angle/Node @2= .00 1792
 ------------------------------------------------------------------------------
 From  1790  To  1800  DX= .000 mm.  DY= .000 mm.  DZ= -4,250.000 mm.
 RESTRAINTS
    Node  1800  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1800  To  1810 DZ= -4,250.000 mm.
```

INPUT LISTING

```
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1809
    Angle/Node @2= .00 1808
 ---------------------------------------------------------------------------
 From  1810  To  210  DX= -2,649.995 mm.  DY= -5.307 mm.
 RESTRAINTS
    Node  210  +Y   Mu = .30
    Node  210  Z   Gap= 3.000 mm.   Mu = .00
 ---------------------------------------------------------------------------
 From  210  To  220  DX= -5,999.988 mm.  DY= -12.016 mm.
 RESTRAINTS
    Node  220  +Y   Mu = .30
    Node  220  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  220  To  230  DX= -5,999.988 mm.  DY= -12.016 mm.
 RESTRAINTS
    Node  230  +Y   Mu = .30
    Node  230  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  230  To  240  DX= -5,999.988 mm.  DY= -12.016 mm.
 RESTRAINTS
    Node  240  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  240  To  250  DX= -1,993.996 mm.  DY= -3.993 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 249
    Angle/Node @2= .00 248
 ---------------------------------------------------------------------------
 From  250  To  260 DY= -9.000 mm.  DZ= -4,499.991 mm.
 RESTRAINTS
    Node  260  +Y   Mu = .30
    Node  260  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  260  To  270 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  270  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  270  To  280 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  280  +Y   Mu = .30
    Node  280  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  280  To  290 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  290  +Y   Mu = .30
    Node  290  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  290  To  295 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  295  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  295  To  300 DY= -1.800 mm.  DZ= -899.998 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 299
    Angle/Node @2= .00 298
 ---------------------------------------------------------------------------
```

INPUT LISTING

```
 From  300  To  310  DX= -3,900.000 mm.
 RESTRAINTS
    Node  310  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  310  To  320  DX= -3,900.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 319
    Angle/Node @2= .00 318
 ------------------------------------------------------------------------
 From  320  To  330 DY= -1.800 mm.  DZ= -899.998 mm.
 ------------------------------------------------------------------------
 From  330  To  340 DY= -4.200 mm.  DZ= -2,099.996 mm.
 RESTRAINTS
    Node  340  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  340  To  350 DY= -4.200 mm.  DZ= -2,099.996 mm.
 ------------------------------------------------------------------------
 From  350  To  360 DY= -1.800 mm.  DZ= -899.998 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 359
    Angle/Node @2= .00 358
 ------------------------------------------------------------------------
 From  360  To  370  DX= 3,900.000 mm.
 RESTRAINTS
    Node  370  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  370  To  380  DX= 3,900.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 379
    Angle/Node @2= .00 378
 ------------------------------------------------------------------------
 From  380  To  390 DY= -10.200 mm.  DZ= -5,099.990 mm.
 RESTRAINTS
    Node  390  +Y   Mu = .30
    Node  390  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------
 From  390  To  400 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  400  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  400  To  410 DY= -12.000 mm.  DZ= -5,999.987 mm.
 RESTRAINTS
    Node  410  +Y   Mu = .30
    Node  410  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------
 From  410  To  420 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  420  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  420  To  430 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  430  +Y   Mu = .30
    Node  430  Z   Gap= 3.000 mm.
    Node  430  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------
 From  430  To  440 DY= -12.000 mm.  DZ= -5,999.988 mm.
```

INPUT LISTING

```
 RESTRAINTS
    Node  440  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  440  To  450 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  450  +Y   Mu = .30
    Node  450  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  450  To  460 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  460  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  460  To  470 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  470  +Y   Mu = .30
    Node  470  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  470  To  480 DY= -4.500 mm.  DZ= -2,249.996 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 479
    Angle/Node @2= .00 478
 ------------------------------------------------------------------------------
 From  480  To  490  DX= -4,665.000 mm.
 RESTRAINTS
    Node  490  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  490  To  500  DX= -4,835.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 499
    Angle/Node @2= .00 498
 ------------------------------------------------------------------------------
 From  500  To  510 DY= -7.500 mm.  DZ= -3,749.993 mm.
 RESTRAINTS
    Node  510  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  510  To  520 DY= -7.500 mm.  DZ= -3,749.993 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 519
    Angle/Node @2= .00 518
 ------------------------------------------------------------------------------
 From  520  To  530  DX= 4,850.000 mm.
 RESTRAINTS
    Node  530  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  530  To  540  DX= 4,650.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 539
    Angle/Node @2= .00 538
 ------------------------------------------------------------------------------
 From  540  To  550 DY= -4.500 mm.  DZ= -2,249.996 mm.
 RESTRAINTS
    Node  550  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  550  To  560 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  560  +Y
```

INPUT LISTING

```
    Node  560  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  560  To  570 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  570  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  570  To  580 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  580  +Y   Mu = .30
    Node  580  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  580  To  590 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  590  +Y   Mu = .30
    Node  590  Z   Gap= .000 mm.
 ---------------------------------------------------------------------------
 From  590  To  600 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  600  +Y   Mu = .30
    Node  600  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  600  To  610 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  610  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  610  To  620 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  620  +Y   Mu = .30
    Node  620  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  620  To  630 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  630  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  630  To  640 DY= -4.700 mm.  DZ= -2,349.995 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 639
 ---------------------------------------------------------------------------
 From  640  To  650  DX= -4,665.000 mm.
 RESTRAINTS
    Node  650  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  650  To  660  DX= -4,635.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 659
    Angle/Node @2= .00 658
 ---------------------------------------------------------------------------
 From  660  To  670 DY= -7.300 mm.  DZ= -3,649.993 mm.
 RESTRAINTS
    Node  670  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  670  To  680 DY= -7.300 mm.  DZ= -3,649.993 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 679
    Angle/Node @2= .00 678
 ---------------------------------------------------------------------------
```

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Job:: BINAK-GCS-CN-004-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 From  680  To  690  DX= 4,650.000 mm.
 RESTRAINTS
    Node  690  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  690  To  700  DX= 4,650.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 699
    Angle/Node @2= .00 698
 ------------------------------------------------------------------------------
 From  700  To  710 DY= -4.700 mm.  DZ= -2,349.995 mm.
 RESTRAINTS
    Node  710  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  710  To  720 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  720  +Y   Mu = .30
    Node  720  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  720  To  730 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  730  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  730  To  740 DY= -12.000 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  740  +Y   Mu = .30
    Node  740  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  740  To  750 DY= -8.001 mm.  DZ= -4,000.410 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 749
    Angle/Node @2= .00 748
 ------------------------------------------------------------------------------
 From  750  To  760  DX= -1,999.996 mm.  DY= -4.000 mm.
 RESTRAINTS
    Node  760  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  760  To  770  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  770  +Y   Mu = .30
    Node  770  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  770  To  780  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  780  +Y   Mu = .30
    Node  780  X
    Node  780  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  780  To  790  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  790  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  790  To  800  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  800  +Y   Mu = .30
    Node  800  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
```

INPUT LISTING

```
 From  800  To  810  DX= -3,950.004 mm.  DY= -7.900 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 809
    Angle/Node @2= .00 808
 ------------------------------------------------------------------------------
 From  810  To  820 DZ= 4,000.000 mm.
 RESTRAINTS
    Node  820  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  820  To  830 DZ= 4,000.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 829
    Angle/Node @2= .00 828
 ------------------------------------------------------------------------------
 From  830  To  840  DX= -1,999.996 mm.  DY= -4.000 mm.
 ------------------------------------------------------------------------------
 From  840  To  850  DX= -1,999.996 mm.  DY= -4.000 mm.
 RESTRAINTS
    Node  850  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  850  To  860  DX= -3,000.006 mm.  DY= -6.000 mm.
 ------------------------------------------------------------------------------
 From  860  To  870  DX= -1,006.998 mm.  DY= -2.014 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 869
    Angle/Node @2= .00 868
 ------------------------------------------------------------------------------
 From  870  To  880 DZ= -4,000.000 mm.
 RESTRAINTS
    Node  880  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  880  To  890 DZ= -4,000.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 889
 ------------------------------------------------------------------------------
 From  890  To  900  DX= -5,950.000 mm.  DY= -11.900 mm.
 RESTRAINTS
    Node  900  +Y   Mu = .30
    Node  900  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  900  To  910  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  910  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  910  To  920  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  920  +Y   Mu = .30
    Node  920  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  920  To  930  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  930  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  930  To  940  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  940  +Y   Mu = .30
```

INPUT LISTING

```
    Node  940  X   Gap= 3.000 mm.
    Node  940  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  940  To  950  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  950  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  950  To  960  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  960  +Y   Mu = .30
    Node  960  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  960  To  970  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  970  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  970  To  980  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  980  +Y   Mu = .30
    Node  980  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  980  To  990  DX= -4,999.990 mm.  DY= -10.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 989
    Angle/Node @2= .00 988
 ---------------------------------------------------------------------------
 From  990  To  1000 DZ= 4,000.000 mm.
 RESTRAINTS
    Node  1000  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1000  To  1010 DZ= 4,000.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1009
    Angle/Node @2= .00 1008
 ---------------------------------------------------------------------------
 From  1010  To  1020  DX= -2,000.008 mm.  DY= -4.000 mm.
 ---------------------------------------------------------------------------
 From  1020  To  1030  DX= -2,000.002 mm.  DY= -4.000 mm.
 RESTRAINTS
    Node  1030  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1030  To  1040  DX= -1,999.996 mm.  DY= -4.000 mm.
 ---------------------------------------------------------------------------
 From  1040  To  1050  DX= -1,999.996 mm.  DY= -4.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1049
    Angle/Node @2= .00 1048
 ---------------------------------------------------------------------------
 From  1050  To  1060 DZ= -4,000.000 mm.
 RESTRAINTS
    Node  1060  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1060  To  1070 DZ= -4,000.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1069
    Angle/Node @2= .00 1068
```

INPUT LISTING

```
 ------------------------------------------------------------------------------
 From  1070  To  1080  DX= -4,999.990 mm.  DY= -10.000 mm.
 RESTRAINTS
    Node  1080  +Y   Mu = .30
    Node  1080  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1080  To  1090  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  1090  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1090  To  1100  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  1100  +Y   Mu = .30
    Node  1100  Z   Gap= 3.000 mm.   Mu = .30
    Node  1100  X
 ------------------------------------------------------------------------------
 From  1100  To  1110  DX= -6,000.000 mm.  DY= -12.000 mm.
 RESTRAINTS
    Node  1110  +Y   Mu = .30
    Node  1110  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1110  To  1120  DX= -5,992.988 mm.  DY= -11.986 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 89.885   Angle/Node @1= 44.94 1119
    Angle/Node @2= .00 1118
 ------------------------------------------------------------------------------
 From  1120  To  1130 DY= -2,133.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 89.885   Angle/Node @1= 44.94 1129
    Angle/Node @2= .00 1128
 ------------------------------------------------------------------------------
 From  1130  To  1140 DY= -12.500 mm.  DZ= -6,250.000 mm.
 RESTRAINTS
    Node  1140  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1140  To  1150 DY= -12.500 mm.  DZ= -6,250.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1149
    Angle/Node @2= .00 1148
 ------------------------------------------------------------------------------
 From  1150  To  1160  DX= -5,999.988 mm.  DY= -12.001 mm.
 RESTRAINTS
    Node  1160  +Y   Mu = .30
    Node  1160  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1160  To  1170  DX= -5,999.988 mm.  DY= -12.001 mm.
 RESTRAINTS
    Node  1170  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1170  To  1180  DX= -5,999.988 mm.  DY= -12.001 mm.
 RESTRAINTS
    Node  1180  +Y   Mu = .30
    Node  1180  Z   Gap= 3.000 mm.   Mu = .30
    Node  1180  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  1180  To  1190  DX= -5,999.988 mm.  DY= -12.001 mm.
```

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Job:: BINAK-GCS-CN-004-D03
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INPUT LISTING

```
 RESTRAINTS
    Node  1190  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  1190  To  1200  DX= -5,999.988 mm.  DY= -12.001 mm.
 RESTRAINTS
    Node  1200  +Y   Mu = .30
    Node  1200  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------
 From  1200  To  1210  DX= -1,999.996 mm.  DY= -4.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1209
    Angle/Node @2= .00 1208
 ------------------------------------------------------------------------
 From  1210  To  1220 DZ= -4,000.000 mm.
 RESTRAINTS
    Node  1220  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  1220  To  1230 DZ= -1,000.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1229
    Angle/Node @2= .00 1228
 ------------------------------------------------------------------------
 From  1230  To  1240  DX= -999.998 mm.  DY= -2.000 mm.
 ------------------------------------------------------------------------
 From  1240  To  1250  DX= -2,999.994 mm.  DY= -6.000 mm.
 RESTRAINTS
    Node  1250  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  1250  To  1260  DX= -2,999.994 mm.  DY= -6.000 mm.
 ------------------------------------------------------------------------
 From  1260  To  1270  DX= -1,000.000 mm.  DY= -8.001 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1269
    Angle/Node @2= .00 1268
 ------------------------------------------------------------------------
 From  1270  To  1280 DZ= 1,000.000 mm.
 RESTRAINTS
    Node  1280  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  1280  To  1290 DZ= 4,000.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1289
    Angle/Node @2= .00 1288
 ------------------------------------------------------------------------
 From  1290  To  1300  DX= -1,999.996 mm.  DY= -4.000 mm.
 RESTRAINTS
    Node  1300  +Y   Mu = .30
    Node  1300  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------
 From  1300  To  1310  DX= -5,999.988 mm.  DY= -12.001 mm.
 RESTRAINTS
    Node  1310  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  1310  To  1320  DX= -5,999.988 mm.  DY= -12.001 mm.
 RESTRAINTS
    Node  1320  +Y   Mu = .30
```

INPUT LISTING
```
    Node  1320  Z   Gap= 3.000 mm.   Mu = .30
    Node  1320  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1320  To  1330  DX= -5,999.988 mm.  DY= -12.001 mm.
 RESTRAINTS
    Node  1330  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1330  To  1340  DX= -5,999.988 mm.  DY= -12.001 mm.
 RESTRAINTS
    Node  1340  +Y   Mu = .30
    Node  1340  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1340  To  1350  DX= -6,300.130 mm.  DY= -12.601 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1349
    Angle/Node @2= .00 1348
 ---------------------------------------------------------------------------
 From  1350  To  1355 DY= -13.001 mm.  DZ= -6,499.987 mm.
 RESTRAINTS
    Node  1355  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1355  To  1360 DY= -10.001 mm.  DZ= -4,999.990 mm.
 RESTRAINTS
    Node  1360  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1360  To  1370 DY= -12.001 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  1370  +Y   Mu = .30
    Node  1370  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1370  To  1380 DY= -12.001 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  1380  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1380  To  1390 DY= -12.001 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  1390  +Y   Mu = .30
    Node  1390  Z   Gap= 3.000 mm.   Mu = .30
    Node  1390  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1390  To  1400 DY= -12.001 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  1400  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1400  To  1410 DY= -12.001 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  1410  +Y   Mu = .30
    Node  1410  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1410  To  1420 DY= -12.001 mm.  DZ= -5,999.988 mm.
 RESTRAINTS
    Node  1420  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1420  To  1430 DY= -7.701 mm.  DZ= -3,850.094 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1429
```

INPUT LISTING

```
    Angle/Node @2= .00 1428
 ------------------------------------------------------------------------------
 From  1430  To  1440  DX= -4,849.991 mm.  DY= -9.513 mm.
 RESTRAINTS
    Node  1440  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1440  To  1445  DX= -2,775.005 mm.  DY= -5.443 mm.
 ------------------------------------------------------------------------------
 From  1450  To  1690 DY= -31.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  1690   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  1445  To  1450  DX= -2,775.005 mm.  DY= -5.443 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1449
    Angle/Node @2= .00 1448
 ------------------------------------------------------------------------------
 From  1450  To  1460 DY= -2.120 mm.  DZ= -1,060.000 mm.
 ------------------------------------------------------------------------------
 From  1460  To  1470 DY= -.235 mm.  DZ= -117.475 mm.
 RIGID  Weight= 360.31 N.
 ------------------------------------------------------------------------------
 From  1470  To  1480 DY= -.235 mm.  DZ= -117.475 mm.
 RIGID  Weight= 360.31 N.
 ------------------------------------------------------------------------------
 From  1480  To  1490 DY= -1.710 mm.  DZ= -856.000 mm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 89.886   Angle/Node @1= 44.94 1489
    Angle/Node @2= .00 1488
 ------------------------------------------------------------------------------
 From  1490  To  1500 DY= -1,743.000 mm.
 ------------------------------------------------------------------------------
 From  1500  To  1510 DY= -203.000 mm.
 REDUCER
    Diam2= 273.050 mm.   Wall2= 9.271 mm.
 ------------------------------------------------------------------------------
 From  1510  To  1520 DY= -104.775 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 235.76 N.
 RESTRAINTS
    Node  1520  ANC   Cnode  1600
 ------------------------------------------------------------------------------
 From  1530  To  1540 DZ= 104.775 mm.
 RIGID  Weight= 235.76 N.
 ------------------------------------------------------------------------------
 From  1540  To  1550 DZ= 146.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  1550  ANC   Cnode  1560
 EQUIPMENT LIMITS
    Nozzle Node = 1550
```

INPUT LISTING
```
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 14,000.70 N.   FB= 14,000.70 N.
    FC= 10,500.52 N.   MA= 10,500.45 N.m.   MB= 7,000.30 N.m.
    MC= 9,100.39 N.m.   Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1560  To  1570 DZ= 600.000 mm.
 PIPE
    Dia= 1,200.000 mm.   Wall= 9.271 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1570  To  1580 DY= -1,550.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1580  To  1590 DY= -5,540.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  1590  ANC
 ---------------------------------------------------------------------------
 From  1600  To  1610 DY= -104.775 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 235.76 N.
 ---------------------------------------------------------------------------
 From  1610  To  1620 DY= -174.000 mm.
 RESTRAINTS
    Node  1620  ANC   Cnode  1630
 EQUIPMENT LIMITS
    Nozzle Node = 1620
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 14,000.70 N.   FB= 14,000.70 N.
    FC= 10,500.52 N.   MA= 10,500.45 N.m.   MB= 7,000.30 N.m.
    MC= 9,100.39 N.m.   Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1630  To  1640 DY= -507.000 mm.
 PIPE
    Dia= 1,014.000 mm.   Wall= 9.271 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1640  To  1650  DX= 100.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1650  To  1660 DY= -507.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  1660  +Y
    Node  1660  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1650  To  1670  DX= 2,200.000 mm.  DZ= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1670  To  1680 DY= -507.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
```

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INPUT LISTING
```
    Node  1680  ANC
 ---------------------------------------------------------------------------
 From  1690  To  1700 DZ= 500.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 8.179 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  1700  +Y   Mu = .30
    Node  1700  X   Gap= 3.000 mm.   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
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 MATERIAL Changes:
    10              20              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
  1690            1700              Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
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 JOBNAME: D:\BINAK PRO\NATIVE CAESAR FILE\NATIVE CEASAR FILE-D03\BNK-GCS-CN-004-

 ALLOWABLE STRESS Changes
    10              20              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 129,638 KPa
                                    Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
  1690            1700              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
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 BEND ELEMENTS
    30            1710              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1709   Angle/Node @2= .00 1708
```

INPUT LISTING

```
  1710             1720              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    1719   Angle/Node @2= .00 1718
  1740               35              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00 34
                                     Angle/Node @2= .00 33
    35             1730              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    1729   Angle/Node @2= .00 1728
  1730               50              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 89.886   Angle/Node @1= 44.94 49
                                     Angle/Node @2= .00 48
    80              120              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    119   Angle/Node @2= .00 118
   130              140              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    139   Angle/Node @2= .00 138
   150              160              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    159   Angle/Node @2= .00 158
   170              180              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    179   Angle/Node @2= .00 178
   204             1750              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    1749   Angle/Node @2= .00 1748
  1760             1770              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    1769   Angle/Node @2= .00 1768
  1780             1790              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    1791   Angle/Node @2= .00 1792
  1800             1810              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    1809   Angle/Node @2= .00 1808
   240              250              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    249   Angle/Node @2= .00 248
   295              300              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    299   Angle/Node @2= .00 298
   310              320              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    319   Angle/Node @2= .00 318
   350              360              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    359   Angle/Node @2= .00 358
   370              380              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    379   Angle/Node @2= .00 378
   470              480              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
                                    479   Angle/Node @2= .00 478
   490              500              Radius= 457.200 mm. (LONG)
                                     Bend Angle= 90.000   Angle/Node @1= 45.00
```

INPUT LISTING

```
                                  499   Angle/Node @2= .00 498
   510             520              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  519   Angle/Node @2= .00 518
   530             540              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  539   Angle/Node @2= .00 538
   630             640              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  639
   650             660              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  659   Angle/Node @2= .00 658
   670             680              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  679   Angle/Node @2= .00 678
   690             700              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  699   Angle/Node @2= .00 698
   740             750              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  749   Angle/Node @2= .00 748
   800             810              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  809   Angle/Node @2= .00 808
   820             830              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  829   Angle/Node @2= .00 828
   860             870              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  869   Angle/Node @2= .00 868
   880             890              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  889
   980             990              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  989   Angle/Node @2= .00 988
  1000            1010              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1009   Angle/Node @2= .00 1008
  1040            1050              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1049   Angle/Node @2= .00 1048
  1060            1070              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1069   Angle/Node @2= .00 1068
  1110            1120              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 89.885   Angle/Node @1= 44.94
                                  1119   Angle/Node @2= .00 1118
  1120            1130              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 89.885   Angle/Node @1= 44.94
                                  1129   Angle/Node @2= .00 1128
  1140            1150              Radius= 457.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1149   Angle/Node @2= .00 1148
  1200            1210              Radius= 457.200 mm. (LONG)
```

INPUT LISTING

```
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1209   Angle/Node @2= .00 1208
 1220            1230             Radius= 457.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1229   Angle/Node @2= .00 1228
 1260            1270             Radius= 457.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1269   Angle/Node @2= .00 1268
 1280            1290             Radius= 457.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1289   Angle/Node @2= .00 1288
 1340            1350             Radius= 457.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1349   Angle/Node @2= .00 1348
 1420            1430             Radius= 457.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1429   Angle/Node @2= .00 1428
 1445            1450             Radius= 457.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1449   Angle/Node @2= .00 1448
 1480            1490             Radius= 457.200 mm. (LONG)
                                  Bend Angle= 89.886   Angle/Node @1= 44.94
                                1489   Angle/Node @2= .00 1488
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RIGIDS
   10             20           RIGID  Weight= 235.76 N.
 1450            1690          RIGID  Weight= .00 N.
 1460            1470          RIGID  Weight= 360.31 N.
 1470            1480          RIGID  Weight= 360.31 N.
 1510            1520          RIGID  Weight= 235.76 N.
 1530            1540          RIGID  Weight= 235.76 N.
 1560            1570          RIGID  Weight= .00 N.
 1570            1580          RIGID  Weight= .00 N.
 1580            1590          RIGID  Weight= .00 N.
 1600            1610          RIGID  Weight= 235.76 N.
 1630            1640          RIGID  Weight= .00 N.
 1640            1650          RIGID  Weight= .00 N.
 1650            1660          RIGID  Weight= .00 N.
 1650            1670          RIGID  Weight= .00 N.
 1670            1680          RIGID  Weight= .00 N.
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SIF's & TEE's
 1450            1690             Node  1690   Unreinforced Tee
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REDUCERS
   20             30               Diam2= 323.850 mm.   Wall2= 10.312 mm.
 1500            1510              Diam2= 273.050 mm.   Wall2= 9.271 mm.
```

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Job:: BINAK-GCS-CN-004-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
10	ANC	1530				.000	.000	.000
1740	+Y				.30	.000	1.000	.000
60	+Y				.30	.000	1.000	.000
60	Z			3.00		.000	.000	1.000
70	+Y				.30	.000	1.000	.000
70	Z			3.00		.000	.000	1.000
70	X			.00		1.000	.000	.000
80	+Y				.30	.000	1.000	.000
80	Z			.00		.000	.000	1.000
130	+Y				.30	.000	1.000	.000
150	+Y				.30	.000	1.000	.000
170	+Y				.30	.000	1.000	.000
190	+Y				.30	.000	1.000	.000
200	+Y				.30	.000	1.000	.000
200	Z			3.00		.000	.000	1.000
202	+Y				.30	.000	1.000	.000
202	X			3.00		1.000	.000	.000
204	+Y				.30	.000	1.000	.000
204	Z			3.00		.000	.000	1.000
1760	+Y				.30	.000	1.000	.000
1780	+Y				.30	.000	1.000	.000
1800	+Y				.30	.000	1.000	.000
210	+Y				.30	.000	1.000	.000
210	Z			3.00	.00	.000	.000	1.000
220	+Y				.30	.000	1.000	.000
220	X			3.00		1.000	.000	.000
230	+Y				.30	.000	1.000	.000
230	Z			3.00	.30	.000	.000	1.000
240	+Y				.30	.000	1.000	.000
260	+Y				.30	.000	1.000	.000
260	X			3.00	.30	1.000	.000	.000
270	+Y				.30	.000	1.000	.000
280	+Y				.30	.000	1.000	.000
280	Z			3.00	.30	.000	.000	1.000
290	+Y				.30	.000	1.000	.000
290	X			3.00		1.000	.000	.000
295	+Y				.30	.000	1.000	.000
310	+Y				.30	.000	1.000	.000
340	+Y				.30	.000	1.000	.000
370	+Y				.30	.000	1.000	.000
390	+Y				.30	.000	1.000	.000
390	X			3.00		1.000	.000	.000
400	+Y				.30	.000	1.000	.000
410	+Y				.30	.000	1.000	.000
410	X			3.00	.30	1.000	.000	.000
420	+Y				.30	.000	1.000	.000
430	+Y				.30	.000	1.000	.000
430	Z			3.00		.000	.000	1.000
430	X			3.00	.30	1.000	.000	.000
440	+Y				.30	.000	1.000	.000

INPUT LISTING

450	+Y		.30	.000	1.000	.000
450	X	3.00	.30	1.000	.000	.000
460	+Y		.30	.000	1.000	.000
470	+Y		.30	.000	1.000	.000
470	X	3.00		1.000	.000	.000
490	+Y		.30	.000	1.000	.000
510	+Y		.30	.000	1.000	.000
530	+Y		.30	.000	1.000	.000
550	+Y		.30	.000	1.000	.000
560	+Y			.000	1.000	.000
560	X	3.00	.30	1.000	.000	.000
570	+Y		.30	.000	1.000	.000
580	+Y		.30	.000	1.000	.000
580	X	3.00		1.000	.000	.000
590	+Y		.30	.000	1.000	.000
590	Z	.00		.000	.000	1.000
600	+Y		.30	.000	1.000	.000
600	X	3.00	.30	1.000	.000	.000
610	+Y		.30	.000	1.000	.000
620	+Y		.30	.000	1.000	.000
620	X	3.00	.30	1.000	.000	.000
630	+Y		.30	.000	1.000	.000
650	+Y		.30	.000	1.000	.000
670	+Y		.30	.000	1.000	.000
690	+Y		.30	.000	1.000	.000
710	+Y		.30	.000	1.000	.000
720	+Y		.30	.000	1.000	.000
720	X	3.00		1.000	.000	.000
730	+Y		.30	.000	1.000	.000
740	+Y		.30	.000	1.000	.000
740	X	3.00	.30	1.000	.000	.000
760	+Y		.30	.000	1.000	.000
770	+Y		.30	.000	1.000	.000
770	Z	3.00	.30	.000	.000	1.000
780	+Y		.30	.000	1.000	.000
780	X			1.000	.000	.000
780	Z	3.00		.000	.000	1.000
790	+Y		.30	.000	1.000	.000
800	+Y		.30	.000	1.000	.000
800	Z	3.00		.000	.000	1.000
820	+Y		.30	.000	1.000	.000
850	+Y		.30	.000	1.000	.000
880	+Y		.30	.000	1.000	.000
900	+Y		.30	.000	1.000	.000
900	Z	3.00		.000	.000	1.000
910	+Y		.30	.000	1.000	.000
920	+Y		.30	.000	1.000	.000
920	Z	3.00	.30	.000	.000	1.000
930	+Y		.30	.000	1.000	.000
940	+Y		.30	.000	1.000	.000
940	X	3.00		1.000	.000	.000
940	Z	3.00	.30	.000	.000	1.000
950	+Y		.30	.000	1.000	.000
960	+Y		.30	.000	1.000	.000
960	Z	3.00	.30	.000	.000	1.000
970	+Y		.30	.000	1.000	.000

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INPUT LISTING

980	+Y			.30	.000	1.000	.000
980	Z		3.00	.30	.000	.000	1.000
1000	+Y			.30	.000	1.000	.000
1030	+Y			.30	.000	1.000	.000
1060	+Y			.30	.000	1.000	.000
1080	+Y			.30	.000	1.000	.000
1080	Z		3.00	.30	.000	.000	1.000
1090	+Y			.30	.000	1.000	.000
1100	+Y			.30	.000	1.000	.000
1100	Z		3.00	.30	.000	.000	1.000
1100	X				1.000	.000	.000
1110	+Y			.30	.000	1.000	.000
1110	Z		3.00	.30	.000	.000	1.000
1140	+Y			.30	.000	1.000	.000
1160	+Y			.30	.000	1.000	.000
1160	Z		3.00	.30	.000	.000	1.000
1170	+Y			.30	.000	1.000	.000
1180	+Y			.30	.000	1.000	.000
1180	Z		3.00	.30	.000	.000	1.000
1180	X		3.00		1.000	.000	.000
1190	+Y			.30	.000	1.000	.000
1200	+Y			.30	.000	1.000	.000
1200	Z		3.00	.30	.000	.000	1.000
1220	+Y			.30	.000	1.000	.000
1250	+Y			.30	.000	1.000	.000
1280	+Y			.30	.000	1.000	.000
1300	+Y			.30	.000	1.000	.000
1300	Z		3.00	.30	.000	.000	1.000
1310	+Y			.30	.000	1.000	.000
1320	+Y			.30	.000	1.000	.000
1320	Z		3.00	.30	.000	.000	1.000
1320	X		3.00		1.000	.000	.000
1330	+Y			.30	.000	1.000	.000
1340	+Y			.30	.000	1.000	.000
1340	Z		3.00	.30	.000	.000	1.000
1355	+Y			.30	.000	1.000	.000
1360	+Y			.30	.000	1.000	.000
1370	+Y			.30	.000	1.000	.000
1370	X		3.00	.30	1.000	.000	.000
1380	+Y			.30	.000	1.000	.000
1390	+Y			.30	.000	1.000	.000
1390	Z		3.00	.30	.000	.000	1.000
1390	X		3.00		1.000	.000	.000
1400	+Y			.30	.000	1.000	.000
1410	+Y			.30	.000	1.000	.000
1410	X		3.00		1.000	.000	.000
1420	+Y			.30	.000	1.000	.000
1440	+Y			.30	.000	1.000	.000
1520	ANC	1600			.000	.000	.000
1550	ANC	1560			.000	.000	.000
1590	ANC				.000	.000	.000
1620	ANC	1630			.000	.000	.000
1660	+Y				.000	1.000	.000
1660	Z		3.00	.30	.000	.000	1.000
1680	ANC				.000	.000	.000
1700	+Y			.30	.000	1.000	.000

INPUT LISTING
```
    1700   X                              3.00        .30   1.000   .000   .000
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 EQUIPMENT LIMITS
  1540            1550              Nozzle Node = 1550


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 14,000.70 N.   FB= 14,000.70 N.
    FC= 10,500.52 N.   MA= 10,500.45 N.m.   MB= 7,000.30 N.m.
    MC= 9,100.39 N.m.   Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
  1610            1620              Nozzle Node = 1620


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 14,000.70 N.   FB= 14,000.70 N.
    FC= 10,500.52 N.   MA= 10,500.45 N.m.   MB= 7,000.30 N.m.
    MC= 9,100.39 N.m.   Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
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 UNIFORM LOAD Changes
    10              20             Vector1 in G-s
                                   X1 Dir = .26 g's  Y1 Dir = .00 g's
                                   Z1 Dir = .00 g's
                                   Vector2 in G-s
                                   X2 Dir = .00 g's  Y2 Dir = .12 g's
                                   Z2 Dir = .00 g's
                                   Vector3 in G-s
                                   X3 Dir = .00 g's  Y3 Dir = .00 g's
                                   Z3 Dir = .26 g's
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 INPUT UNITS USED...

 UNITS=    SI (m NOM/SCH INPUT= ON
       LENGTH             inches        x     25.400   =   mm.
       FORCE              pounds        x      4.448   =    N.
       MASS(dynamics)     pounds        x      0.454   =   Kg.
       MOMENTS(INPUT)     inch-pounds   x      0.113   =    N.m.
       MOMENTS(OUTPUT)    inch-pounds   x      0.113   =    N.m.
       STRESS             lbs./sq.in.   x      6.895   =      KPa
       TEMP. SCALE        degrees F.    x      0.556   =   C
       PRESSURE           psig          x      6.895   =      KPa
       ELASTIC MODULUS    lbs./sq.in.   x      6.895   =      KPa
       PIPE DENSITY       lbs./cu.in.   x      0.028   =   kg./cu.cm.
       INSULATION DENS.   lbs./cu.in.   x      0.028   =   kg./cu.cm.
       FLUID DENSITY      lbs./cu.in.   x      0.028   =   kg./cu.cm.
       TRANSL. STIF       lbs./in.      x      1.751   =   N./cm.
       ROTATIONAL STIF    in.lb./deg.   x      0.113   =    N.m./deg
       UNIFORM LOAD       lb./in.       x      1.751   =   N./cm.
       G LOAD             g's           x      1.000   =   g's
       WIND LOAD          lbs./sq.in.   x      6.895   =      KPa
```

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INPUT LISTING

ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS =	NO
MISSING MASS ZPA =	EXTRACTED
MIN WALL MILL TOLERANCE =	12.5000
WRC-107 VERSION =	MAR 79 1B1/2B1
WRC-107 INTERPOLATION =	LAST VALUE
DEFAULT AMBIENT TEMPERATURE=	21.1111 C
BOURDON PRESSURE=	NONE
COEFFICIENT OF FRICTION (MU) =	0.000000
INCLUDE SPRG STIF IN HGR OPE =	NO
INCLUDE INSULATION IN HYDROTEST =	NO
REDUCED INTERSECTION =	B31.1(POST1980)
USE WRC329	NO
NO REDUCED SIF FOR RFT AND WLT	NO
B31.1 REDUCED Z FIX =	YES
CLASS 1 BRANCH FLEX	NO
ALL STRESS CASES CORRODED =	NO
ADD TORSION IN SL STRESS =	DEFAULT
ADD F/A IN STRESS =	DEFAULT
OCCASIONAL LOAD FACTOR =	0.000000
DEFAULT CODE =	B31.3
B31.3 SUS CASE SIF FACTOR =	0.000000
ALLOW USERS BEND SIF =	NO
USE SCHNEIDER	NO

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INPUT LISTING

```
  YIELD CRITERION STRESS =          MAX 3D SHEAR
  USE PD/4T                          NO
  BASE HOOP STRESS ON ? =            ID
  EN13480 USE IN OUTPLANE SIFS=      NO
  LIBERAL EXPANSION ALLOWABLE=      YES
  B31.3 SEC 319.2.3C SAXIAL=        Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178      YES
  IGNORE B31.1/B31.3 Wc FACTOR=     YES
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152730
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
    Uniform Load Option ........    1.000

    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
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 COORDINATE REPORT
          /--------------------(mm.)----------------------/
  NODE           X              Y              Z
    10      6553.000     -5329.350      7060.100
    20      6553.000     -5338.990      6923.500
    30      6553.000     -5338.990      6720.500
  1710      6553.000     -5340.990      5720.502
  1720      4639.000     -5340.990      5720.502
```

INPUT LISTING

1740	4639.000	-5344.600	3915.503
35	4639.000	-5348.210	2110.505
1730	6553.000	-5348.210	2110.505
50	6553.000	-8985.210	2110.505
60	5142.998	-8988.021	2110.505
70	-1856.988	-9002.040	2110.505
80	-7856.976	-9014.056	2110.505
120	-10506.976	-9016.146	2110.505
130	-10506.976	-9016.146	6360.505
140	-10506.976	-9016.146	10610.505
150	-13856.965	-9026.860	10610.505
160	-17206.953	-9037.574	10610.505
170	-17206.953	-9037.574	6360.505
180	-17206.953	-9037.574	2110.505
190	-19856.953	-9039.665	2110.505
200	-25856.941	-9051.681	2110.505
202	-31856.930	-9063.696	2110.505
204	-37856.918	-9075.712	2110.505
1750	-40506.914	-9081.019	2110.505
1760	-40506.914	-9081.019	6360.505
1770	-40506.914	-9081.019	10610.505
1780	-43856.906	-9087.728	10610.505
1790	-47206.898	-9094.437	10610.505
1800	-47206.898	-9094.437	6360.505
1810	-47206.898	-9094.437	2110.505
210	-49856.895	-9099.743	2110.505
220	-55856.883	-9111.759	2110.505
230	-61856.871	-9123.774	2110.505
240	-67856.859	-9135.790	2110.505
250	-69850.859	-9139.783	2110.505
260	-69850.859	-9148.783	-2389.486
270	-69850.859	-9160.783	-8389.475
280	-69850.859	-9172.783	-14389.463
290	-69850.859	-9184.783	-20389.451
295	-69850.859	-9196.783	-26389.439
300	-69850.859	-9198.583	-27289.437
310	-73750.859	-9198.583	-27289.437
320	-77650.859	-9198.583	-27289.437
330	-77650.859	-9200.383	-28189.436
340	-77650.859	-9204.583	-30289.432
350	-77650.859	-9208.783	-32389.428
360	-77650.859	-9210.583	-33289.426
370	-73750.859	-9210.583	-33289.426
380	-69850.859	-9210.583	-33289.426
390	-69850.859	-9220.783	-38389.414
400	-69850.859	-9232.783	-44389.402
410	-69850.859	-9244.783	-50389.391
420	-69850.859	-9256.783	-56389.379
430	-69850.859	-9268.783	-62389.367
440	-69850.859	-9280.783	-68389.352
450	-69850.859	-9292.783	-74389.336
460	-69850.859	-9304.783	-80389.320
470	-69850.859	-9316.783	-86389.305
480	-69850.859	-9321.283	-88639.297
490	-74515.859	-9321.283	-88639.297
500	-79350.859	-9321.283	-88639.297

INPUT LISTING

510	-79350.859	-9328.783	-92389.289
520	-79350.859	-9336.283	-96139.281
530	-74500.859	-9336.283	-96139.281
540	-69850.859	-9336.283	-96139.281
550	-69850.859	-9340.783	-98389.273
560	-69850.859	-9352.783	-104389.266
570	-69850.859	-9364.783	-110389.250
580	-69850.859	-9376.783	-116389.234
590	-69850.859	-9388.783	-122389.219
600	-69850.859	-9400.783	-128389.203
610	-69850.859	-9412.783	-134389.187
620	-69850.859	-9424.783	-140389.172
630	-69850.859	-9436.783	-146389.156
640	-69850.859	-9441.483	-148739.156
650	-74515.859	-9441.483	-148739.156
660	-79150.859	-9441.483	-148739.156
670	-79150.859	-9448.783	-152389.156
680	-79150.859	-9456.083	-156039.156
690	-74500.859	-9456.083	-156039.156
700	-69850.859	-9456.083	-156039.156
710	-69850.859	-9460.783	-158389.156
720	-69850.859	-9472.783	-164389.141
730	-69850.859	-9484.783	-170389.125
740	-69850.859	-9496.783	-176389.109
750	-69850.859	-9504.784	-180389.516
760	-71850.859	-9508.784	-180389.516
770	-77850.859	-9520.784	-180389.516
780	-83850.859	-9532.784	-180389.516
790	-89850.859	-9544.784	-180389.516
800	-95850.859	-9556.784	-180389.516
810	-99800.867	-9564.685	-180389.516
820	-99800.867	-9564.685	-176389.516
830	-99800.867	-9564.685	-172389.516
840	-101800.859	-9568.685	-172389.516
850	-103800.852	-9572.685	-172389.516
860	-106800.859	-9578.685	-172389.516
870	-107807.859	-9580.698	-172389.516
880	-107807.859	-9580.698	-176389.516
890	-107807.859	-9580.698	-180389.516
900	-113757.859	-9592.599	-180389.516
910	-119757.859	-9604.599	-180389.516
920	-125757.859	-9616.599	-180389.516
930	-131757.859	-9628.599	-180389.516
940	-137757.859	-9640.599	-180389.516
950	-143757.859	-9652.599	-180389.516
960	-149757.859	-9664.599	-180389.516
970	-155757.859	-9676.599	-180389.516
980	-161757.859	-9688.599	-180389.516
990	-166757.844	-9698.599	-180389.516
1000	-166757.844	-9698.599	-176389.516
1010	-166757.844	-9698.599	-172389.516
1020	-168757.859	-9702.599	-172389.516
1030	-170757.859	-9706.599	-172389.516
1040	-172757.859	-9710.599	-172389.516
1050	-174757.859	-9714.599	-172389.516
1060	-174757.859	-9714.599	-176389.516

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INPUT LISTING

1070	-174757.859	-9714.599	-180389.516
1080	-179757.844	-9724.599	-180389.516
1090	-185757.844	-9736.599	-180389.516
1100	-191757.844	-9748.599	-180389.516
1110	-197757.844	-9760.599	-180389.516
1120	-203750.828	-9772.585	-180389.516
1130	-203750.828	-11905.585	-180389.516
1140	-203750.828	-11918.085	-186639.516
1150	-203750.828	-11930.585	-192889.516
1160	-209750.812	-11942.586	-192889.516
1170	-215750.797	-11954.587	-192889.516
1180	-221750.781	-11966.588	-192889.516
1190	-227750.766	-11978.589	-192889.516
1200	-233750.750	-11990.590	-192889.516
1210	-235750.750	-11994.590	-192889.516
1220	-235750.750	-11994.590	-196889.516
1230	-235750.750	-11994.590	-197889.516
1240	-236750.750	-11996.590	-197889.516
1250	-239750.750	-12002.590	-197889.516
1260	-242750.750	-12008.590	-197889.516
1270	-243750.750	-12016.591	-197889.516
1280	-243750.750	-12016.591	-196889.516
1290	-243750.750	-12016.591	-192889.516
1300	-245750.750	-12020.591	-192889.516
1310	-251750.734	-12032.592	-192889.516
1320	-257750.719	-12044.593	-192889.516
1330	-263750.719	-12056.594	-192889.516
1340	-269750.719	-12068.595	-192889.516
1350	-276050.844	-12081.196	-192889.516
1355	-276050.844	-12094.197	-199389.500
1360	-276050.844	-12104.198	-204389.484
1370	-276050.844	-12116.199	-210389.469
1380	-276050.844	-12128.200	-216389.453
1390	-276050.844	-12140.201	-222389.437
1400	-276050.844	-12152.202	-228389.422
1410	-276050.844	-12164.203	-234389.406
1420	-276050.844	-12176.204	-240389.391
1430	-276050.844	-12183.905	-244239.484
1440	-280900.844	-12193.419	-244239.484
1445	-283675.844	-12198.862	-244239.484
1450	-286450.844	-12204.306	-244239.484
1690	-286450.844	-12235.706	-244239.484
1445	-283675.844	-12198.862	-244239.484
1450	-286450.844	-12204.306	-244239.484
1460	-286450.844	-12206.426	-245299.484
1470	-286450.844	-12206.661	-245416.953
1480	-286450.844	-12206.896	-245534.422
1490	-286450.844	-12208.606	-246390.422
1500	-286450.844	-13951.606	-246390.422
1510	-286450.844	-14154.606	-246390.422
1520	-286450.844	-14259.382	-246390.422
10	6553.000	-5329.350	7060.100
1540	6553.000	-5329.350	7164.875
1550	6553.000	-5329.350	7310.875
1570	6553.000	-5329.350	7910.875
1580	6553.000	-6879.350	7910.875

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INPUT LISTING

1590	6553.000	-12419.350	7910.875
1520	-286450.844	-14259.382	-246390.422
1610	-286450.844	-14364.157	-246390.422
1620	-286450.844	-14538.157	-246390.422
1640	-286450.844	-15045.157	-246390.422
1650	-286350.844	-15045.157	-246390.422
1660	-286350.844	-15552.157	-246390.422
1650	-286350.844	-15045.157	-246390.422
1670	-284150.844	-15045.157	-246390.422
1680	-284150.844	-15552.157	-246390.422
1690	-286450.844	-12235.706	-244239.484
1700	-286450.844	-12235.706	-243739.484

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15+L8
21 (OCC) L21=L16+L8
22 (OCC) L22=L17+L8
23 (OCC) L23=L18+L8
24 (OCC) L24=L19+L8
25 (EXP) L25=L2-L8
26 (EXP) L26=L2-L4
27 (EXP) L27=L6-L8
28 (EXP) L28=L2-L6
29 (EXP) L29=L4-L6

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1+U3
CASE 14 (OPE) W+T2+P1-U3
CASE 15 (OCC) L15=L10-L4
CASE 16 (OCC) L16=L11-L4
CASE 17 (OCC) L17=L12-L4
CASE 18 (OCC) L18=L13-L4
CASE 19 (OCC) L19=L14-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid ANC;					
	1(HYD)	-444	-3227	-82	-2424	464	73
	2(OPE)	3316	-4508	1966	-11296	-9171	8440
	4(OPE)	3346	-4512	1989	-11359	-9249	8473
	6(OPE)	-1291	532	-2278	2564	-208	-5738
	8(SUS)	-233	-1772	-42	-1276	244	37
	9(SUS)	-233	-1769	-42	-1275	244	37
	10(OPE)	4740	-4463	2065	-11332	-11637	7827
	11(OPE)	1970	-4565	1907	-11390	-6867	9139
	12(OPE)	3374	-4075	1996	-10947	-9329	7950
	13(OPE)	3460	-4384	4184	-11248	-7577	8519
	14(OPE)	3188	-4375	167	-11174	-10543	8218
	15(OCC)	1393	49	76	27	-2388	-645
	16(OCC)	-1377	-54	-82	-32	2382	666
	17(OCC)	27	436	7	412	-80	-522
	18(OCC)	114	127	2195	111	1671	46
	19(OCC)	-158	136	-1822	185	-1294	-254
	MAX	4740/L10	-4565/L11	4184/L13	-11390/L11	-11637/L10	9139/L11
60		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-217	-14054	247	0	0	0
	2(OPE)	2135	-7177	-1328	0	0	0
	4(OPE)	2130	-7159	-1340	0	0	0
	6(OPE)	-1666	-5613	245	0	0	0
	8(SUS)	-114	-7379	129	0	0	0
	9(SUS)	-114	-7369	129	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(OPE)	2237	-7520	-1186	0	0	0
	11(OPE)	2019	-6786	-1356	0	0	0
	12(OPE)	1779	-5980	-1316	0	0	0
	13(OPE)	2172	-7254	-141	0	0	0
	14(OPE)	2200	-7393	-3117	0	0	0
	15(OCC)	107	-361	154	0	0	0
	16(OCC)	-111	373	-16	0	0	0
	17(OCC)	-351	1179	24	0	0	0
	18(OCC)	42	-95	1199	0	0	0
	19(OCC)	70	-234	-1777	0	0	0
	MAX	2237/L10	-14054/L1	-3117/L14			
70		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X;					
	1(HYD)	-369	-8724	-42	0	0	0
	2(OPE)	-204	-6053	-1911	0	0	0
	4(OPE)	-201	-6067	-1951	0	0	0
	6(OPE)	-1204	-4386	-306	0	0	0
	8(SUS)	-194	-4581	-22	0	0	0
	9(SUS)	-194	-4574	-22	0	0	0
	10(OPE)	5833	-5662	-2912	0	0	0
	11(OPE)	-5833	-6483	-1945	0	0	0
	12(OPE)	-141	-5562	-2126	0	0	0
	13(OPE)	-1015	-6097	-1969	0	0	0
	14(OPE)	393	-5920	-1776	0	0	0
	15(OCC)	6035	405	-961	0	0	0
	16(OCC)	-5632	-415	6	0	0	0
	17(OCC)	61	505	-175	0	0	0
	18(OCC)	-814	-30	-18	0	0	0
	19(OCC)	595	147	175	0	0	0
	MAX	6035/L15	-8724/L1	-2912/L10			
80		TYPE=Rigid +Y; Rigid Z;					
	1(HYD)	-1	-9831	18	0	0	0
	2(OPE)	-1844	-6146	-677	0	0	0
	4(OPE)	-1847	-6155	-642	0	0	0
	6(OPE)	1516	-5053	2654	0	0	0
	8(SUS)	-0	-5162	10	0	0	0
	9(SUS)	-0	-5155	10	0	0	0
	10(OPE)	-1881	-6271	-668	0	0	0
	11(OPE)	-1811	-6036	458	0	0	0
	12(OPE)	-1657	-5525	-191	0	0	0
	13(OPE)	-1858	-6192	5136	0	0	0
	14(OPE)	-1879	-6264	-6005	0	0	0
	15(OCC)	-35	-115	-26	0	0	0
	16(OCC)	36	119	1100	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OCC)	189	631	451	0	0	0
	18(OCC)	-11	-37	5778	0	0	0
	19(OCC)	-33	-109	-5363	0	0	0
	MAX	-1881/L10	-9831/L1	-6005/L14			
130		TYPE=Rigid +Y;					
	1(HYD)	6	-9973	-8	0	0	0
	2(OPE)	-407	-4150	1177	0	0	0
	4(OPE)	-404	-4139	1174	0	0	0
	6(OPE)	957	-5358	-1292	0	0	0
	8(SUS)	3	-5237	-4	0	0	0
	9(SUS)	3	-5229	-4	0	0	0
	10(OPE)	115	-4108	1227	0	0	0
	11(OPE)	-721	-4172	1023	0	0	0
	12(OPE)	-327	-3513	1002	0	0	0
	13(OPE)	-171	-4105	1220	0	0	0
	14(OPE)	-519	-4068	1104	0	0	0
	15(OCC)	520	31	53	0	0	0
	16(OCC)	-316	-33	-151	0	0	0
	17(OCC)	78	626	-172	0	0	0
	18(OCC)	233	34	46	0	0	0
	19(OCC)	-115	71	-70	0	0	0
	MAX	957/L6	-9973/L1	-1292/L6			
150		TYPE=Rigid +Y;					
	1(HYD)	-5	-12101	-0	0	0	0
	2(OPE)	190	-6353	1896	0	0	0
	4(OPE)	193	-6353	1896	0	0	0
	6(OPE)	295	-6354	-1883	0	0	0
	8(SUS)	-3	-6354	-0	0	0	0
	9(SUS)	-3	-6345	-0	0	0	0
	10(OPE)	880	-6371	1697	0	0	0
	11(OPE)	-469	-6335	1842	0	0	0
	12(OPE)	198	-5589	1665	0	0	0
	13(OPE)	490	-6348	1840	0	0	0
	14(OPE)	-16	-6365	1909	0	0	0
	15(OCC)	687	-18	-199	0	0	0
	16(OCC)	-662	19	-54	0	0	0
	17(OCC)	5	764	-231	0	0	0
	18(OCC)	297	5	-56	0	0	0
	19(OCC)	-210	-11	13	0	0	0
	MAX	880/L10	-12101/L1	1909/L14			
170		TYPE=Rigid +Y;					
	1(HYD)	5	-9930	2	0	0	0
	2(OPE)	1220	-5389	1061	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	1219	-5390	1063	0	0	0
	6(OPE)	-1504	-5195	-407	0	0	0
	8(SUS)	3	-5214	1	0	0	0
	9(SUS)	3	-5207	1	0	0	0
	10(OPE)	1290	-5380	970	0	0	0
	11(OPE)	1127	-5402	1164	0	0	0
	12(OPE)	1055	-4766	965	0	0	0
	13(OPE)	866	-5399	1369	0	0	0
	14(OPE)	1547	-5390	472	0	0	0
	15(OCC)	71	10	-93	0	0	0
	16(OCC)	-92	-11	102	0	0	0
	17(OCC)	-164	624	-98	0	0	0
	18(OCC)	-353	-9	306	0	0	0
	19(OCC)	328	0	-591	0	0	0
	MAX	1547/L14	-9930/L1	1369/L13			
190		TYPE=Rigid +Y;					
	1(HYD)	-1	-9925	-2	0	0	0
	2(OPE)	1530	-5111	-107	0	0	0
	4(OPE)	1530	-5110	-105	0	0	0
	6(OPE)	-1441	-5227	619	0	0	0
	8(SUS)	-1	-5211	-1	0	0	0
	9(SUS)	-1	-5204	-1	0	0	0
	10(OPE)	1534	-5120	86	0	0	0
	11(OPE)	1512	-5100	-233	0	0	0
	12(OPE)	1344	-4485	-64	0	0	0
	13(OPE)	1457	-5107	474	0	0	0
	14(OPE)	1478	-5111	-410	0	0	0
	15(OCC)	4	-9	190	0	0	0
	16(OCC)	-17	10	-128	0	0	0
	17(OCC)	-186	626	41	0	0	0
	18(OCC)	-72	3	578	0	0	0
	19(OCC)	-52	-1	-305	0	0	0
	MAX	1534/L10	-9925/L1	619/L6			
200		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-1	-8480	0	0	0	0
	2(OPE)	1326	-4490	-2610	0	0	0
	4(OPE)	1326	-4491	-2629	0	0	0
	6(OPE)	-1203	-4450	579	0	0	0
	8(SUS)	-1	-4452	0	0	0	0
	9(SUS)	-1	-4446	0	0	0	0
	10(OPE)	1336	-4491	-992	0	0	0
	11(OPE)	1326	-4491	-3639	0	0	0
	12(OPE)	1169	-3957	-2529	0	0	0
	13(OPE)	1327	-4492	521	0	0	0

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	1326	-4490	-6507	0	0	0
	15(OCC)	10	-0	1637	0	0	0
	16(OCC)	-0	-0	-1009	0	0	0
	17(OCC)	-158	534	100	0	0	0
	18(OCC)	0	-1	3150	0	0	0
	19(OCC)	-0	0	-3878	0	0	0
	MAX	1336/L10	-8480/L1	-6507/L14			
202		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-1	-8478	-0	0	0	0
	2(OPE)	-2321	-4441	-1011	0	0	0
	4(OPE)	-2333	-4441	-1014	0	0	0
	6(OPE)	1259	-4451	445	0	0	0
	8(SUS)	-1	-4451	-0	0	0	0
	9(SUS)	-1	-4445	-0	0	0	0
	10(OPE)	5366	-4428	-1113	0	0	0
	11(OPE)	-10785	-4455	-195	0	0	0
	12(OPE)	-2143	-3906	-915	0	0	0
	13(OPE)	-2338	-4440	-87	0	0	0
	14(OPE)	-2387	-4441	-750	0	0	0
	15(OCC)	7700	13	-99	0	0	0
	16(OCC)	-8452	-14	819	0	0	0
	17(OCC)	190	535	98	0	0	0
	18(OCC)	-5	1	927	0	0	0
	19(OCC)	-54	-0	264	0	0	0
	MAX	-10785/L11	-8478/L1	-1113/L10			
204		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-1	-9929	1	0	0	0
	2(OPE)	-1555	-5229	-342	0	0	0
	4(OPE)	-1555	-5229	-330	0	0	0
	6(OPE)	1449	-5208	583	0	0	0
	8(SUS)	-1	-5213	0	0	0	0
	9(SUS)	-1	-5206	0	0	0	0
	10(OPE)	-1545	-5232	-2442	0	0	0
	11(OPE)	-1556	-5226	197	0	0	0
	12(OPE)	-1371	-4603	-166	0	0	0
	13(OPE)	-1556	-5230	2686	0	0	0
	14(OPE)	-1555	-5229	-4238	0	0	0
	15(OCC)	10	-3	-2112	0	0	0
	16(OCC)	-0	3	527	0	0	0
	17(OCC)	184	626	164	0	0	0
	18(OCC)	-0	-1	3016	0	0	0
	19(OCC)	0	1	-3908	0	0	0
	MAX	-1556/L13	-9929/L1	-4238/L14			

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
210		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-1	-9898	-1	0	0	0
	2(OPE)	1542	-5185	-4558	0	0	0
	4(OPE)	1542	-5185	-4590	0	0	0
	6(OPE)	-1394	-5202	700	0	0	0
	8(SUS)	-1	-5197	-0	0	0	0
	9(SUS)	-1	-5190	-0	0	0	0
	10(OPE)	1543	-5189	-3268	0	0	0
	11(OPE)	1541	-5181	-5689	0	0	0
	12(OPE)	1357	-4561	-4315	0	0	0
	13(OPE)	1554	-5184	63	0	0	0
	14(OPE)	1542	-5185	-9146	0	0	0
	15(OCC)	1	-5	1322	0	0	0
	16(OCC)	-1	3	-1098	0	0	0
	17(OCC)	-185	623	276	0	0	0
	18(OCC)	12	0	4653	0	0	0
	19(OCC)	0	-0	-4556	0	0	0
	MAX	1554/L13	-9898/L1	-9146/L14			
220		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-1	-8475	0	0	0	0
	2(OPE)	24658	-4410	-1276	0	0	0
	4(OPE)	24894	-4409	-1277	0	0	0
	6(OPE)	-1139	-4450	696	0	0	0
	8(SUS)	-1	-4450	0	0	0	0
	9(SUS)	-1	-4444	0	0	0	0
	10(OPE)	30863	-4399	-1271	0	0	0
	11(OPE)	18920	-4419	-1283	0	0	0
	12(OPE)	24953	-3875	-1124	0	0	0
	13(OPE)	25021	-4409	-1262	0	0	0
	14(OPE)	24646	-4410	-1277	0	0	0
	15(OCC)	5968	11	6	0	0	0
	16(OCC)	-5974	-10	-6	0	0	0
	17(OCC)	59	534	153	0	0	0
	18(OCC)	127	0	15	0	0	0
	19(OCC)	-248	-0	-0	0	0	0
	MAX	30863/L10	-8475/L1	-1283/L11			
230		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-1	-8541	-1	0	0	0
	2(OPE)	-5347	-4473	13661	0	0	0
	4(OPE)	-5387	-4473	13791	0	0	0

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	961	-4484	-942	0	0	0
	8(SUS)	-0	-4485	-1	0	0	0
	9(SUS)	-0	-4478	-1	0	0	0
	10(OPE)	-5443	-4477	13974	0	0	0
	11(OPE)	-5321	-4471	13571	0	0	0
	12(OPE)	-5193	-3935	13644	0	0	0
	13(OPE)	-6014	-4475	15879	0	0	0
	14(OPE)	-4851	-4473	12004	0	0	0
	15(OCC)	-56	-3	182	0	0	0
	16(OCC)	67	2	-221	0	0	0
	17(OCC)	195	538	-147	0	0	0
	18(OCC)	-627	-2	2087	0	0	0
	19(OCC)	536	0	-1788	0	0	0
	MAX	-6014/L13	-8541/L1	15879/L13			
240		TYPE=Rigid +Y;					
	1(HYD)	-1	-9704	3	0	0	0
	2(OPE)	-968	-5097	1184	0	0	0
	4(OPE)	-968	-5097	1183	0	0	0
	6(OPE)	952	-5097	-1196	0	0	0
	8(SUS)	-0	-5095	2	0	0	0
	9(SUS)	-0	-5088	2	0	0	0
	10(OPE)	-969	-5098	1183	0	0	0
	11(OPE)	-967	-5094	1184	0	0	0
	12(OPE)	-852	-4486	1042	0	0	0
	13(OPE)	-968	-5096	1183	0	0	0
	14(OPE)	-969	-5095	1182	0	0	0
	15(OCC)	-1	-1	-0	0	0	0
	16(OCC)	1	2	0	0	0	0
	17(OCC)	117	611	-141	0	0	0
	18(OCC)	-0	1	-1	0	0	0
	19(OCC)	-1	1	-1	0	0	0
	MAX	-969/L10	-9704/L1	-1196/L6			
260		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	2	-9141	-1	0	0	0
	2(OPE)	-28298	-4833	9898	0	0	0
	4(OPE)	-28546	-4833	9973	0	0	0
	6(OPE)	1882	-4798	-1567	0	0	0
	8(SUS)	1	-4800	-1	0	0	0
	9(SUS)	1	-4793	-1	0	0	0
	10(OPE)	-25570	-4833	9080	0	0	0
	11(OPE)	-30564	-4836	10579	0	0	0
	12(OPE)	-28484	-4257	9787	0	0	0
	13(OPE)	-25982	-4838	9206	0	0	0
	14(OPE)	-29441	-4830	10241	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	15(OCC)	2976	-0	-893	0	0	0
	16(OCC)	-2018	-2	606	0	0	0
	17(OCC)	62	576	-187	0	0	0
	18(OCC)	2564	-4	-768	0	0	0
	19(OCC)	-895	3	268	0	0	0
	MAX	-30564/L11	-9141/L1	10579/L11			
270		TYPE=Rigid +Y;					
	1(HYD)	-1	-8807	-1	0	0	0
	2(OPE)	961	-4604	992	0	0	0
	4(OPE)	963	-4604	990	0	0	0
	6(OPE)	160	-4629	-1380	0	0	0
	8(SUS)	-0	-4624	-0	0	0	0
	9(SUS)	-0	-4618	-0	0	0	0
	10(OPE)	1020	-4604	931	0	0	0
	11(OPE)	939	-4604	1012	0	0	0
	12(OPE)	842	-4049	875	0	0	0
	13(OPE)	1073	-4606	870	0	0	0
	14(OPE)	907	-4601	1041	0	0	0
	15(OCC)	57	-1	-59	0	0	0
	16(OCC)	-24	-0	22	0	0	0
	17(OCC)	-120	555	-115	0	0	0
	18(OCC)	110	-3	-120	0	0	0
	19(OCC)	-56	2	51	0	0	0
	MAX	1073/L13	-8807/L1	-1380/L6			
280		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	0	-8668	-1	0	0	0
	2(OPE)	5631	-4588	-14982	0	0	0
	4(OPE)	5681	-4588	-15131	0	0	0
	6(OPE)	-546	-4548	1250	0	0	0
	8(SUS)	0	-4551	-0	0	0	0
	9(SUS)	0	-4545	-0	0	0	0
	10(OPE)	5227	-4584	-13423	0	0	0
	11(OPE)	5578	-4587	-14842	0	0	0
	12(OPE)	5540	-4042	-15199	0	0	0
	13(OPE)	2874	-4571	-5363	0	0	0
	14(OPE)	7987	-4602	-23583	0	0	0
	15(OCC)	-454	3	1708	0	0	0
	16(OCC)	-104	1	289	0	0	0
	17(OCC)	-142	546	-68	0	0	0
	18(OCC)	-2807	17	9768	0	0	0
	19(OCC)	2306	-14	-8452	0	0	0
	MAX	7987/L14	-8668/L1	-23583/L14			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
290		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-0	-10113	-1	0	0	0
	2(OPE)	20	-5305	-1591	0	0	0
	4(OPE)	19	-5305	-1591	0	0	0
	6(OPE)	-546	-5308	1496	0	0	0
	8(SUS)	-0	-5310	-0	0	0	0
	9(SUS)	-0	-5303	-0	0	0	0
	10(OPE)	5634	-5305	-1578	0	0	0
	11(OPE)	-4879	-5305	-1578	0	0	0
	12(OPE)	-74	-4668	-1398	0	0	0
	13(OPE)	3294	-5308	-1579	0	0	0
	14(OPE)	-1757	-5303	-1577	0	0	0
	15(OCC)	5615	0	13	0	0	0
	16(OCC)	-4898	-0	13	0	0	0
	17(OCC)	-93	638	193	0	0	0
	18(OCC)	3275	-2	13	0	0	0
	19(OCC)	-1776	3	14	0	0	0
	MAX	5634/L10	-10113/L1	-1591/L2			
295		TYPE=Rigid +Y;					
	1(HYD)	-1	-4999	-2	0	0	0
	2(OPE)	-269	-2646	-747	0	0	0
	4(OPE)	-271	-2646	-746	0	0	0
	6(OPE)	-166	-2620	768	0	0	0
	8(SUS)	-1	-2625	-1	0	0	0
	9(SUS)	-1	-2621	-1	0	0	0
	10(OPE)	-76	-2646	-790	0	0	0
	11(OPE)	-456	-2647	-650	0	0	0
	12(OPE)	-269	-2332	-646	0	0	0
	13(OPE)	-291	-2649	-740	0	0	0
	14(OPE)	-320	-2644	-726	0	0	0
	15(OCC)	195	1	-44	0	0	0
	16(OCC)	-185	-1	96	0	0	0
	17(OCC)	3	315	100	0	0	0
	18(OCC)	-20	-3	7	0	0	0
	19(OCC)	-49	2	20	0	0	0
	MAX	-456/L11	-4999/L1	-790/L10			
310		TYPE=Rigid +Y;					
	1(HYD)	2	-11195	9	0	0	0
	2(OPE)	-1701	-5862	-445	0	0	0
	4(OPE)	-1702	-5862	-442	0	0	0
	6(OPE)	570	-5878	1669	0	0	0
	8(SUS)	1	-5878	4	0	0	0
	9(SUS)	1	-5870	4	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(OPE)	-1654	-5864	-600	0	0	0
	11(OPE)	-1739	-5860	-255	0	0	0
	12(OPE)	-1501	-5156	-374	0	0	0
	13(OPE)	-1759	-5863	-7	0	0	0
	14(OPE)	-1632	-5860	-654	0	0	0
	15(OCC)	48	-2	-158	0	0	0
	16(OCC)	-37	2	187	0	0	0
	17(OCC)	201	706	68	0	0	0
	18(OCC)	-57	-1	435	0	0	0
	19(OCC)	70	2	-212	0	0	0
	MAX	-1759/L13	-11195/L1	1669/L6			
340		TYPE=Rigid +Y;					
	1(HYD)	0	-8437	-9	0	0	0
	2(OPE)	-1269	-4440	406	0	0	0
	4(OPE)	-1269	-4440	405	0	0	0
	6(OPE)	1287	-4428	-328	0	0	0
	8(SUS)	0	-4430	-5	0	0	0
	9(SUS)	0	-4424	-5	0	0	0
	10(OPE)	-1192	-4439	594	0	0	0
	11(OPE)	-1289	-4441	337	0	0	0
	12(OPE)	-1124	-3909	333	0	0	0
	13(OPE)	-1146	-4442	680	0	0	0
	14(OPE)	-1327	-4438	114	0	0	0
	15(OCC)	77	1	189	0	0	0
	16(OCC)	-20	-1	-69	0	0	0
	17(OCC)	144	531	-72	0	0	0
	18(OCC)	123	-2	275	0	0	0
	19(OCC)	-58	2	-292	0	0	0
	MAX	-1327/L14	-8437/L1	680/L13			
370		TYPE=Rigid +Y;					
	1(HYD)	-1	-12031	10	0	0	0
	2(OPE)	-993	-6311	1612	0	0	0
	4(OPE)	-994	-6310	1611	0	0	0
	6(OPE)	162	-6321	-1889	0	0	0
	8(SUS)	-0	-6317	5	0	0	0
	9(SUS)	-0	-6309	5	0	0	0
	10(OPE)	-757	-6310	1735	0	0	0
	11(OPE)	-1258	-6311	1415	0	0	0
	12(OPE)	-897	-5552	1404	0	0	0
	13(OPE)	-1013	-6314	1600	0	0	0
	14(OPE)	-1084	-6307	1551	0	0	0
	15(OCC)	237	0	124	0	0	0
	16(OCC)	-264	-1	-196	0	0	0
	17(OCC)	97	758	-208	0	0	0
	18(OCC)	-19	-3	-11	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	19(OCC)	-90	3	-60	0	0	0
	MAX	-1258/L11	-12031/L1	-1889/L6			
390		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-13227	-2	0	0	0
	2(OPE)	749	-6928	2077	0	0	0
	4(OPE)	728	-6928	2077	0	0	0
	6(OPE)	-859	-6952	-2033	0	0	0
	8(SUS)	0	-6945	-1	0	0	0
	9(SUS)	0	-6936	-1	0	0	0
	10(OPE)	5777	-6928	2077	0	0	0
	11(OPE)	-4573	-6928	2077	0	0	0
	12(OPE)	377	-6095	1827	0	0	0
	13(OPE)	-202	-6931	2078	0	0	0
	14(OPE)	2190	-6924	2076	0	0	0
	15(OCC)	5049	-0	0	0	0	0
	16(OCC)	-5301	-0	0	0	0	0
	17(OCC)	-351	833	-250	0	0	0
	18(OCC)	-930	-3	1	0	0	0
	19(OCC)	1462	4	-1	0	0	0
	MAX	5777/L10	-13227/L1	2078/L13			
400		TYPE=Rigid +Y;					
	1(HYD)	-0	-6402	-2	0	0	0
	2(OPE)	124	-3368	1003	0	0	0
	4(OPE)	124	-3368	1003	0	0	0
	6(OPE)	-183	-3361	-992	0	0	0
	8(SUS)	-0	-3361	-1	0	0	0
	9(SUS)	-0	-3357	-1	0	0	0
	10(OPE)	90	-3369	1007	0	0	0
	11(OPE)	64	-3369	1009	0	0	0
	12(OPE)	113	-2966	882	0	0	0
	13(OPE)	74	-3371	1009	0	0	0
	14(OPE)	118	-3367	1003	0	0	0
	15(OCC)	-34	-1	4	0	0	0
	16(OCC)	-59	-0	6	0	0	0
	17(OCC)	-11	403	-120	0	0	0
	18(OCC)	-50	-3	6	0	0	0
	19(OCC)	-5	1	0	0	0	0
	MAX	-183/L6	-6402/L1	1009/L13			
410		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-9594	-1	0	0	0
	2(OPE)	1357	-5031	1874	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	1380	-5031	1881	0	0	0
	6(OPE)	-135	-5041	-1506	0	0	0
	8(SUS)	0	-5038	-0	0	0	0
	9(SUS)	0	-5031	-0	0	0	0
	10(OPE)	3372	-5031	2481	0	0	0
	11(OPE)	-18	-5032	1510	0	0	0
	12(OPE)	1510	-4427	1744	0	0	0
	13(OPE)	1123	-5034	1812	0	0	0
	14(OPE)	1227	-5029	1835	0	0	0
	15(OCC)	1993	1	599	0	0	0
	16(OCC)	-1398	-1	-372	0	0	0
	17(OCC)	130	604	-137	0	0	0
	18(OCC)	-256	-3	-70	0	0	0
	19(OCC)	-153	3	-47	0	0	0
	MAX	3372/L10	-9594/L1	2481/L10			
420		TYPE=Rigid +Y;					
	1(HYD)	-0	-8753	-0	0	0	0
	2(OPE)	14	-4594	1378	0	0	0
	4(OPE)	13	-4594	1378	0	0	0
	6(OPE)	-22	-4598	-1379	0	0	0
	8(SUS)	-0	-4596	-0	0	0	0
	9(SUS)	-0	-4589	-0	0	0	0
	10(OPE)	234	-4594	1358	0	0	0
	11(OPE)	-248	-4594	1356	0	0	0
	12(OPE)	4	-4042	1213	0	0	0
	13(OPE)	40	-4596	1378	0	0	0
	14(OPE)	26	-4591	1377	0	0	0
	15(OCC)	221	-0	-20	0	0	0
	16(OCC)	-260	-0	-22	0	0	0
	17(OCC)	-8	551	-165	0	0	0
	18(OCC)	27	-2	0	0	0	0
	19(OCC)	13	2	-1	0	0	0
	MAX	-260/L16	-8753/L1	-1379/L6			
430		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	1(HYD)	-0	-8981	-0	0	0	0
	2(OPE)	-290	-4719	-2039	0	0	0
	4(OPE)	-292	-4719	-2054	0	0	0
	6(OPE)	153	-4714	522	0	0	0
	8(SUS)	-0	-4715	-0	0	0	0
	9(SUS)	-0	-4709	-0	0	0	0
	10(OPE)	1247	-4717	-669	0	0	0
	11(OPE)	-2720	-4717	-962	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	-250	-4153	-1998	0	0	0
	13(OPE)	-302	-4690	13741	0	0	0
	14(OPE)	-158	-4747	-17188	0	0	0
	15(OCC)	1539	3	1385	0	0	0
	16(OCC)	-2428	2	1092	0	0	0
	17(OCC)	42	566	56	0	0	0
	18(OCC)	-10	29	15795	0	0	0
	19(OCC)	134	-28	-15134	0	0	0
	MAX	-2720/L11	-8981/L1	-17188/L14			
440		TYPE=Rigid +Y;					
	1(HYD)	0	-8895	-0	0	0	0
	2(OPE)	-1	-4673	-1402	0	0	0
	4(OPE)	-1	-4673	-1402	0	0	0
	6(OPE)	-49	-4668	1400	0	0	0
	8(SUS)	0	-4671	-0	0	0	0
	9(SUS)	0	-4664	-0	0	0	0
	10(OPE)	151	-4673	-1394	0	0	0
	11(OPE)	-150	-4673	-1394	0	0	0
	12(OPE)	9	-4112	-1234	0	0	0
	13(OPE)	-47	-4675	-1402	0	0	0
	14(OPE)	30	-4671	-1401	0	0	0
	15(OCC)	151	-0	8	0	0	0
	16(OCC)	-149	-0	8	0	0	0
	17(OCC)	10	561	168	0	0	0
	18(OCC)	-47	-2	0	0	0	0
	19(OCC)	30	2	1	0	0	0
	MAX	151/L15	-8895/L1	-1402/L2			
450		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-0	-9014	-0	0	0	0
	2(OPE)	1977	-4739	-1981	0	0	0
	4(OPE)	1988	-4739	-1984	0	0	0
	6(OPE)	-185	-4729	1407	0	0	0
	8(SUS)	-0	-4733	-0	0	0	0
	9(SUS)	-0	-4726	-0	0	0	0
	10(OPE)	4644	-4741	-2781	0	0	0
	11(OPE)	59	-4738	-1420	0	0	0
	12(OPE)	1872	-4170	-1783	0	0	0
	13(OPE)	2497	-4741	-2132	0	0	0
	14(OPE)	1510	-4736	-1840	0	0	0
	15(OCC)	2656	-2	-796	0	0	0
	16(OCC)	-1929	1	564	0	0	0
	17(OCC)	-116	568	201	0	0	0
	18(OCC)	509	-3	-147	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OCC)	-478	3	144	0	0	0
	MAX	4644/L10	-9014/L1	-2781/L10			
460		TYPE=Rigid +Y;					
	1(HYD)	0	-8618	-1	0	0	0
	2(OPE)	153	-4520	-1347	0	0	0
	4(OPE)	151	-4520	-1348	0	0	0
	6(OPE)	-315	-4524	1320	0	0	0
	8(SUS)	0	-4525	-0	0	0	0
	9(SUS)	0	-4519	-0	0	0	0
	10(OPE)	173	-4520	-1345	0	0	0
	11(OPE)	133	-4521	-1350	0	0	0
	12(OPE)	116	-3977	-1187	0	0	0
	13(OPE)	220	-4523	-1339	0	0	0
	14(OPE)	116	-4518	-1350	0	0	0
	15(OCC)	21	0	3	0	0	0
	16(OCC)	-18	-1	-2	0	0	0
	17(OCC)	-35	543	160	0	0	0
	18(OCC)	69	-3	9	0	0	0
	19(OCC)	-35	2	-3	0	0	0
	MAX	-315/L6	-8618/L1	-1350/L14			
470		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-1	-9571	-1	0	0	0
	2(OPE)	-13	-5044	-1513	0	0	0
	4(OPE)	-16	-5044	-1513	0	0	0
	6(OPE)	-782	-5020	1468	0	0	0
	8(SUS)	-1	-5025	-0	0	0	0
	9(SUS)	-1	-5019	-0	0	0	0
	10(OPE)	4868	-5045	-1512	0	0	0
	11(OPE)	-5433	-5042	-1512	0	0	0
	12(OPE)	-90	-4440	-1331	0	0	0
	13(OPE)	790	-5046	-1513	0	0	0
	14(OPE)	-1205	-5041	-1511	0	0	0
	15(OCC)	4884	-1	1	0	0	0
	16(OCC)	-5416	2	1	0	0	0
	17(OCC)	-74	604	182	0	0	0
	18(OCC)	806	-2	0	0	0	0
	19(OCC)	-1189	3	2	0	0	0
	MAX	-5433/L11	-9571/L1	-1513/L4			
490		TYPE=Rigid +Y;					
	1(HYD)	1	-10454	4	0	0	0
	2(OPE)	-943	-5485	-1348	0	0	0
	4(OPE)	-948	-5484	-1345	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	157	-5487	1639	0	0	0
	8(SUS)	1	-5489	2	0	0	0
	9(SUS)	1	-5482	2	0	0	0
	10(OPE)	-781	-5483	-1448	0	0	0
	11(OPE)	-1104	-5487	-1221	0	0	0
	12(OPE)	-882	-4825	-1148	0	0	0
	13(OPE)	-1156	-5487	-1172	0	0	0
	14(OPE)	-826	-5483	-1422	0	0	0
	15(OCC)	167	1	-103	0	0	0
	16(OCC)	-156	-2	124	0	0	0
	17(OCC)	66	659	197	0	0	0
	18(OCC)	-208	-2	173	0	0	0
	19(OCC)	122	2	-78	0	0	0
	MAX	-1156/L13	-10454/L1	1639/L6			
510		TYPE=Rigid +Y;					
	1(HYD)	0	-14314	-4	0	0	0
	2(OPE)	-2254	-7515	65	0	0	0
	4(OPE)	-2254	-7515	64	0	0	0
	6(OPE)	2252	-7515	115	0	0	0
	8(SUS)	0	-7515	-2	0	0	0
	9(SUS)	0	-7505	-2	0	0	0
	10(OPE)	-2254	-7517	-69	0	0	0
	11(OPE)	-2229	-7511	330	0	0	0
	12(OPE)	-1983	-6613	45	0	0	0
	13(OPE)	-2045	-7517	950	0	0	0
	14(OPE)	-2128	-7512	-741	0	0	0
	15(OCC)	-1	-2	-133	0	0	0
	16(OCC)	24	3	266	0	0	0
	17(OCC)	270	902	-20	0	0	0
	18(OCC)	208	-2	885	0	0	0
	19(OCC)	125	3	-805	0	0	0
	MAX	-2254/L10	-14314/L1	950/L13			
530		TYPE=Rigid +Y;					
	1(HYD)	-1	-10639	5	0	0	0
	2(OPE)	-1055	-5592	1304	0	0	0
	4(OPE)	-1059	-5592	1301	0	0	0
	6(OPE)	-21	-5588	-1676	0	0	0
	8(SUS)	-1	-5586	2	0	0	0
	9(SUS)	-1	-5579	2	0	0	0
	10(OPE)	-598	-5589	1566	0	0	0
	11(OPE)	-1323	-5596	1034	0	0	0
	12(OPE)	-972	-4922	1111	0	0	0
	13(OPE)	-942	-5595	1389	0	0	0
	14(OPE)	-1185	-5590	1187	0	0	0
	15(OCC)	461	3	265	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OCC)	-264	-4	-268	0	0	0
	17(OCC)	87	670	-190	0	0	0
	18(OCC)	117	-3	88	0	0	0
	19(OCC)	-126	2	-114	0	0	0
	MAX	-1323/L11	-10639/L1	-1676/L6			
550		TYPE=Rigid +Y;					
	1(HYD)	1	-9346	-1	0	0	0
	2(OPE)	-98	-4888	1463	0	0	0
	4(OPE)	-100	-4888	1463	0	0	0
	6(OPE)	-400	-4913	-1419	0	0	0
	8(SUS)	0	-4907	-1	0	0	0
	9(SUS)	0	-4901	-1	0	0	0
	10(OPE)	115	-4890	1462	0	0	0
	11(OPE)	-390	-4886	1413	0	0	0
	12(OPE)	-114	-4300	1285	0	0	0
	13(OPE)	-153	-4891	1459	0	0	0
	14(OPE)	-45	-4885	1465	0	0	0
	15(OCC)	216	-2	-1	0	0	0
	16(OCC)	-289	2	-50	0	0	0
	17(OCC)	-13	589	-178	0	0	0
	18(OCC)	-53	-3	-4	0	0	0
	19(OCC)	55	3	2	0	0	0
	MAX	-400/L6	-9346/L1	1465/L14			
560		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-8696	0	0	0	0
	2(OPE)	2031	-4572	609	0	0	0
	4(OPE)	2030	-4572	609	0	0	0
	6(OPE)	-338	-4565	-101	0	0	0
	8(SUS)	0	-4566	0	0	0	0
	9(SUS)	0	-4560	0	0	0	0
	10(OPE)	7304	-4569	2191	0	0	0
	11(OPE)	-2799	-4573	840	0	0	0
	12(OPE)	1717	-4025	515	0	0	0
	13(OPE)	570	-4575	171	0	0	0
	14(OPE)	3406	-4569	1022	0	0	0
	15(OCC)	5273	4	1582	0	0	0
	16(OCC)	-4830	-0	231	0	0	0
	17(OCC)	-313	548	-94	0	0	0
	18(OCC)	-1460	-3	-438	0	0	0
	19(OCC)	1376	3	413	0	0	0
	MAX	7304/L10	-8696/L1	2191/L10			
570		TYPE=Rigid +Y;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	1(HYD)	-0	-8991	-0	0	0	0
	2(OPE)	112	-4716	1410	0	0	0
	4(OPE)	113	-4716	1410	0	0	0
	6(OPE)	-247	-4724	-1395	0	0	0
	8(SUS)	-0	-4721	-0	0	0	0
	9(SUS)	-0	-4714	-0	0	0	0
	10(OPE)	72	-4716	1413	0	0	0
	11(OPE)	-23	-4716	1415	0	0	0
	12(OPE)	116	-4150	1240	0	0	0
	13(OPE)	166	-4718	1406	0	0	0
	14(OPE)	62	-4713	1413	0	0	0
	15(OCC)	-41	-0	3	0	0	0
	16(OCC)	-136	0	4	0	0	0
	17(OCC)	3	566	-171	0	0	0
	18(OCC)	53	-3	-4	0	0	0
	19(OCC)	-51	3	2	0	0	0
	MAX	-247/L6	-8991/L1	1415/L11			
580		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-8911	-0	0	0	0
	2(OPE)	91	-4676	1400	0	0	0
	4(OPE)	92	-4676	1400	0	0	0
	6(OPE)	-74	-4681	-1402	0	0	0
	8(SUS)	0	-4679	-0	0	0	0
	9(SUS)	0	-4672	-0	0	0	0
	10(OPE)	1217	-4677	1387	0	0	0
	11(OPE)	-434	-4677	1387	0	0	0
	12(OPE)	99	-4115	1231	0	0	0
	13(OPE)	170	-4679	1393	0	0	0
	14(OPE)	18	-4674	1402	0	0	0
	15(OCC)	1124	-0	-13	0	0	0
	16(OCC)	-526	-0	-13	0	0	0
	17(OCC)	7	561	-169	0	0	0
	18(OCC)	78	-2	-7	0	0	0
	19(OCC)	-74	2	2	0	0	0
	MAX	1217/L10	-8911/L1	-1402/L6			
590		TYPE=Rigid +Y; Rigid Z;					
	1(HYD)	-0	-8941	-1	0	0	0
	2(OPE)	368	-4691	1535	0	0	0
	4(OPE)	379	-4691	1541	0	0	0
	6(OPE)	208	-4697	-1124	0	0	0
	8(SUS)	-0	-4694	-0	0	0	0
	9(SUS)	-0	-4688	-0	0	0	0
	10(OPE)	1407	-4689	2844	0	0	0
	11(OPE)	-1408	-4692	1278	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	12(OPE)	523	-4128	1380	0	0	0
	13(OPE)	360	-4662	17639	0	0	0
	14(OPE)	366	-4720	-14245	0	0	0
	15(OCC)	1027	3	1303	0	0	0
	16(OCC)	-1787	-1	-263	0	0	0
	17(OCC)	143	563	-161	0	0	0
	18(OCC)	-20	30	16098	0	0	0
	19(OCC)	-13	-29	-15786	0	0	0
	MAX	-1787/L16	-8941/L1	17639/L13			
600		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-8900	-0	0	0	0
	2(OPE)	45	-4675	-1402	0	0	0
	4(OPE)	46	-4675	-1402	0	0	0
	6(OPE)	-55	-4670	1400	0	0	0
	8(SUS)	0	-4673	-0	0	0	0
	9(SUS)	0	-4666	-0	0	0	0
	10(OPE)	505	-4675	-1475	0	0	0
	11(OPE)	-300	-4675	-1414	0	0	0
	12(OPE)	48	-4114	-1233	0	0	0
	13(OPE)	-38	-4677	-1403	0	0	0
	14(OPE)	116	-4673	-1397	0	0	0
	15(OCC)	460	-0	-74	0	0	0
	16(OCC)	-345	-0	-12	0	0	0
	17(OCC)	3	561	169	0	0	0
	18(OCC)	-83	-2	-1	0	0	0
	19(OCC)	70	2	5	0	0	0
	MAX	505/L10	-8900/L1	-1475/L10			
610		TYPE=Rigid +Y;					
	1(HYD)	-0	-9037	-0	0	0	0
	2(OPE)	81	-4750	-1423	0	0	0
	4(OPE)	81	-4750	-1423	0	0	0
	6(OPE)	-227	-4742	1404	0	0	0
	8(SUS)	-0	-4745	-0	0	0	0
	9(SUS)	-0	-4739	-0	0	0	0
	10(OPE)	37	-4750	-1425	0	0	0
	11(OPE)	-17	-4750	-1425	0	0	0
	12(OPE)	82	-4180	-1251	0	0	0
	13(OPE)	23	-4752	-1426	0	0	0
	14(OPE)	129	-4748	-1418	0	0	0
	15(OCC)	-45	-0	-2	0	0	0
	16(OCC)	-98	0	-2	0	0	0
	17(OCC)	1	570	171	0	0	0
	18(OCC)	-58	-2	-3	0	0	0
	19(OCC)	48	3	4	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-227/L6	-9037/L1	-1426/L13			
620		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-8519	-1	0	0	0
	2(OPE)	2291	-4469	-2006	0	0	0
	4(OPE)	2298	-4469	-2008	0	0	0
	6(OPE)	-386	-4471	1285	0	0	0
	8(SUS)	0	-4473	-0	0	0	0
	9(SUS)	0	-4467	-0	0	0	0
	10(OPE)	8407	-4473	-3842	0	0	0
	11(OPE)	-3133	-4470	-2259	0	0	0
	12(OPE)	2049	-3932	-1775	0	0	0
	13(OPE)	3712	-4472	-2433	0	0	0
	14(OPE)	1024	-4466	-1625	0	0	0
	15(OCC)	6109	-4	-1834	0	0	0
	16(OCC)	-5430	-1	-251	0	0	0
	17(OCC)	-249	537	233	0	0	0
	18(OCC)	1414	-3	-425	0	0	0
	19(OCC)	-1274	3	383	0	0	0
	MAX	8407/L10	-8519/L1	-3842/L10			
630		TYPE=Rigid +Y;					
	1(HYD)	-1	-9702	-1	0	0	0
	2(OPE)	-52	-5113	-1533	0	0	0
	4(OPE)	-53	-5114	-1533	0	0	0
	6(OPE)	-455	-5089	1457	0	0	0
	8(SUS)	-1	-5094	-1	0	0	0
	9(SUS)	-0	-5087	-1	0	0	0
	10(OPE)	229	-5113	-1517	0	0	0
	11(OPE)	-424	-5114	-1475	0	0	0
	12(OPE)	-66	-4502	-1349	0	0	0
	13(OPE)	15	-5116	-1535	0	0	0
	14(OPE)	-105	-5111	-1530	0	0	0
	15(OCC)	282	1	16	0	0	0
	16(OCC)	-370	-0	59	0	0	0
	17(OCC)	-12	612	184	0	0	0
	18(OCC)	68	-3	-2	0	0	0
	19(OCC)	-51	3	3	0	0	0
	MAX	-455/L6	-9702/L1	-1535/L13			
650		TYPE=Rigid +Y;					
	1(HYD)	1	-10455	5	0	0	0
	2(OPE)	-918	-5483	-1365	0	0	0
	4(OPE)	-920	-5483	-1363	0	0	0
	6(OPE)	-187	-5488	1636	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	8(SUS)	1	-5489	2	0	0	0
	9(SUS)	1	-5482	2	0	0	0
	10(OPE)	-247	-5485	-1627	0	0	0
	11(OPE)	-1302	-5481	-1004	0	0	0
	12(OPE)	-837	-4824	-1181	0	0	0
	13(OPE)	-996	-5486	-1310	0	0	0
	14(OPE)	-838	-5480	-1415	0	0	0
	15(OCC)	673	-2	-263	0	0	0
	16(OCC)	-382	2	360	0	0	0
	17(OCC)	84	659	183	0	0	0
	18(OCC)	-76	-3	53	0	0	0
	19(OCC)	83	3	-51	0	0	0
	MAX	-1302/L11	-10455/L1	1636/L6			
670		TYPE=Rigid +Y;					
	1(HYD)	0	-13645	-5	0	0	0
	2(OPE)	-2117	-7167	-375	0	0	0
	4(OPE)	-2117	-7167	-377	0	0	0
	6(OPE)	2110	-7164	409	0	0	0
	8(SUS)	0	-7165	-2	0	0	0
	9(SUS)	0	-7155	-2	0	0	0
	10(OPE)	-2005	-7167	-778	0	0	0
	11(OPE)	-2122	-7167	-347	0	0	0
	12(OPE)	-1862	-6307	-336	0	0	0
	13(OPE)	-2103	-7169	452	0	0	0
	14(OPE)	-1853	-7165	-1089	0	0	0
	15(OCC)	112	-1	-401	0	0	0
	16(OCC)	-5	-0	29	0	0	0
	17(OCC)	255	860	40	0	0	0
	18(OCC)	14	-2	829	0	0	0
	19(OCC)	264	2	-713	0	0	0
	MAX	-2122/L11	-13645/L1	-1089/L14			
690		TYPE=Rigid +Y;					
	1(HYD)	-1	-10416	4	0	0	0
	2(OPE)	-1137	-5473	1185	0	0	0
	4(OPE)	-1139	-5473	1183	0	0	0
	6(OPE)	353	-5471	-1603	0	0	0
	8(SUS)	-1	-5469	2	0	0	0
	9(SUS)	-1	-5461	2	0	0	0
	10(OPE)	7	-5471	1641	0	0	0
	11(OPE)	-1505	-5475	658	0	0	0
	12(OPE)	-1035	-4817	1009	0	0	0
	13(OPE)	-998	-5475	1304	0	0	0
	14(OPE)	-1347	-5471	937	0	0	0
	15(OCC)	1145	2	459	0	0	0
	16(OCC)	-366	-2	-525	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OCC)	104	656	-174	0	0	0
	18(OCC)	140	-2	121	0	0	0
	19(OCC)	-209	2	-246	0	0	0
	MAX	-1505/L11	-10416/L1	1641/L10			
710		TYPE=Rigid +Y;					
	1(HYD)	1	-9733	-1	0	0	0
	2(OPE)	0	-5094	1528	0	0	0
	4(OPE)	-0	-5094	1528	0	0	0
	6(OPE)	-600	-5116	-1413	0	0	0
	8(SUS)	0	-5110	-1	0	0	0
	9(SUS)	0	-5104	-1	0	0	0
	10(OPE)	445	-5094	1462	0	0	0
	11(OPE)	-408	-5094	1473	0	0	0
	12(OPE)	-20	-4481	1344	0	0	0
	13(OPE)	-65	-5097	1528	0	0	0
	14(OPE)	87	-5090	1525	0	0	0
	15(OCC)	445	-0	-66	0	0	0
	16(OCC)	-408	-0	-56	0	0	0
	17(OCC)	-20	613	-184	0	0	0
	18(OCC)	-65	-3	-0	0	0	0
	19(OCC)	87	3	-3	0	0	0
	MAX	-600/L6	-9733/L1	1528/L2			
720		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-8530	-1	0	0	0
	2(OPE)	-4091	-4479	1340	0	0	0
	4(OPE)	-4160	-4479	1340	0	0	0
	6(OPE)	-259	-4481	-1319	0	0	0
	8(SUS)	0	-4479	-0	0	0	0
	9(SUS)	0	-4473	-0	0	0	0
	10(OPE)	214	-4479	1340	0	0	0
	11(OPE)	-10469	-4479	1339	0	0	0
	12(OPE)	-4408	-3942	1179	0	0	0
	13(OPE)	-5667	-4481	1340	0	0	0
	14(OPE)	-2427	-4477	1339	0	0	0
	15(OCC)	4374	0	-0	0	0	0
	16(OCC)	-6310	0	-1	0	0	0
	17(OCC)	-248	538	-161	0	0	0
	18(OCC)	-1507	-2	0	0	0	0
	19(OCC)	1733	2	-1	0	0	0
	MAX	-10469/L11	-8530/L1	1340/L13			
730		TYPE=Rigid +Y;					
	1(HYD)	-1	-8965	-1	0	0	0

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	-905	-4719	1089	0	0	0
	4(OPE)	-905	-4720	1089	0	0	0
	6(OPE)	308	-4703	1377	0	0	0
	8(SUS)	-0	-4707	-0	0	0	0
	9(SUS)	-0	-4701	-0	0	0	0
	10(OPE)	-860	-4719	1125	0	0	0
	11(OPE)	-881	-4720	1109	0	0	0
	12(OPE)	-793	-4155	961	0	0	0
	13(OPE)	-909	-4722	1087	0	0	0
	14(OPE)	-967	-4717	1033	0	0	0
	15(OCC)	45	0	36	0	0	0
	16(OCC)	24	-0	20	0	0	0
	17(OCC)	112	565	-128	0	0	0
	18(OCC)	-4	-3	-2	0	0	0
	19(OCC)	-62	3	-56	0	0	0
	MAX	-967/L14	-8965/L1	1377/L6			
740		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	1	-8603	-1	0	0	0
	2(OPE)	32935	-4473	-1476	0	0	0
	4(OPE)	33256	-4473	-1425	0	0	0
	6(OPE)	-3611	-4519	1988	0	0	0
	8(SUS)	1	-4517	-1	0	0	0
	9(SUS)	1	-4511	-1	0	0	0
	10(OPE)	34813	-4476	-2800	0	0	0
	11(OPE)	34359	-4466	-10682	0	0	0
	12(OPE)	33457	-3930	-1127	0	0	0
	13(OPE)	34094	-4459	-10209	0	0	0
	14(OPE)	32859	-4485	-10096	0	0	0
	15(OCC)	1557	-3	-1376	0	0	0
	16(OCC)	1103	6	-9257	0	0	0
	17(OCC)	201	543	298	0	0	0
	18(OCC)	838	14	-8785	0	0	0
	19(OCC)	-398	-12	-8672	0	0	0
	MAX	34813/L10	-8603/L1	-10682/L11			
760		TYPE=Rigid +Y;					
	1(HYD)	-0	-9300	3	0	0	0
	2(OPE)	1349	-4861	-554	0	0	0
	4(OPE)	1349	-4861	-554	0	0	0
	6(OPE)	-1061	-4885	1011	0	0	0
	8(SUS)	-0	-4883	1	0	0	0
	9(SUS)	-0	-4877	1	0	0	0
	10(OPE)	1349	-4862	-555	0	0	0
	11(OPE)	1330	-4858	-595	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	1186	-4275	-487	0	0	0
	13(OPE)	1342	-4862	-571	0	0	0
	14(OPE)	1333	-4860	-590	0	0	0
	15(OCC)	-0	-1	-1	0	0	0
	16(OCC)	-19	3	-41	0	0	0
	17(OCC)	-163	586	67	0	0	0
	18(OCC)	-7	-1	-17	0	0	0
	19(OCC)	-16	1	-36	0	0	0
	MAX	1349/L4	-9300/L1	1011/L6			
770		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-0	-8514	-1	0	0	0
	2(OPE)	4118	-4483	-9500	0	0	0
	4(OPE)	4158	-4483	-9628	0	0	0
	6(OPE)	-1091	-4471	780	0	0	0
	8(SUS)	-0	-4470	-1	0	0	0
	9(SUS)	-0	-4464	-1	0	0	0
	10(OPE)	4094	-4486	-9414	0	0	0
	11(OPE)	4461	-4482	-10640	0	0	0
	12(OPE)	4047	-3947	-9765	0	0	0
	13(OPE)	3640	-4484	-7902	0	0	0
	14(OPE)	4730	-4481	-11540	0	0	0
	15(OCC)	-63	-3	214	0	0	0
	16(OCC)	303	2	-1012	0	0	0
	17(OCC)	-111	536	-137	0	0	0
	18(OCC)	-518	-1	1726	0	0	0
	19(OCC)	573	2	-1912	0	0	0
	MAX	4730/L14	-8514/L1	-11540/L14			
780		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	1(HYD)	-2	-9208	0	0	0	0
	2(OPE)	-22614	-4878	368	0	0	0
	4(OPE)	-22881	-4879	421	0	0	0
	6(OPE)	212	-4834	347	0	0	0
	8(SUS)	-1	-4835	0	0	0	0
	9(SUS)	-1	-4828	0	0	0	0
	10(OPE)	-15007	-4866	101	0	0	0
	11(OPE)	-32544	-4895	1469	0	0	0
	12(OPE)	-23054	-4299	539	0	0	0
	13(OPE)	-23719	-4880	1464	0	0	0
	14(OPE)	-22952	-4879	-763	0	0	0
	15(OCC)	7874	13	-319	0	0	0
	16(OCC)	-9663	-17	1048	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OCC)	-173	580	118	0	0	0
	18(OCC)	-837	-2	1043	0	0	0
	19(OCC)	-70	-0	-1184	0	0	0
	MAX	-32544/L11	-9208/L1	1469/L11			
790		TYPE=Rigid +Y;					
	1(HYD)	-1	-8208	-0	0	0	0
	2(OPE)	-1262	-4299	-264	0	0	0
	4(OPE)	-1263	-4299	-261	0	0	0
	6(OPE)	1275	-4310	216	0	0	0
	8(SUS)	-1	-4310	-0	0	0	0
	9(SUS)	-1	-4304	-0	0	0	0
	10(OPE)	-1250	-4301	-321	0	0	0
	11(OPE)	-1280	-4297	-152	0	0	0
	12(OPE)	-1116	-3781	-202	0	0	0
	13(OPE)	-1280	-4299	-157	0	0	0
	14(OPE)	-1254	-4299	-302	0	0	0
	15(OCC)	13	-2	-60	0	0	0
	16(OCC)	-17	2	109	0	0	0
	17(OCC)	147	518	59	0	0	0
	18(OCC)	-17	-0	104	0	0	0
	19(OCC)	9	0	-41	0	0	0
	MAX	-1280/L11	-8208/L1	-321/L10			
800		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-2	-10108	0	0	0	0
	2(OPE)	-1600	-5335	-31	0	0	0
	4(OPE)	-1600	-5335	-28	0	0	0
	6(OPE)	1515	-5300	482	0	0	0
	8(SUS)	-1	-5307	0	0	0	0
	9(SUS)	-1	-5300	0	0	0	0
	10(OPE)	-1597	-5339	-1229	0	0	0
	11(OPE)	-1595	-5331	781	0	0	0
	12(OPE)	-1409	-4698	28	0	0	0
	13(OPE)	-1596	-5335	4976	0	0	0
	14(OPE)	-1596	-5335	-4641	0	0	0
	15(OCC)	3	-4	-1201	0	0	0
	16(OCC)	5	4	809	0	0	0
	17(OCC)	191	637	56	0	0	0
	18(OCC)	4	-0	5004	0	0	0
	19(OCC)	4	-0	-4612	0	0	0
	MAX	-1600/L4	-10108/L1	5004/L18			
820		TYPE=Rigid +Y;					
	1(HYD)	12	-13253	-1	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	-677	-6945	1971	0	0	0
	4(OPE)	-707	-6945	1960	0	0	0
	6(OPE)	2011	-6958	-559	0	0	0
	8(SUS)	6	-6959	-0	0	0	0
	9(SUS)	6	-6949	-0	0	0	0
	10(OPE)	-225	-6947	2072	0	0	0
	11(OPE)	-1032	-6942	1809	0	0	0
	12(OPE)	-596	-6109	1733	0	0	0
	13(OPE)	-483	-6944	2027	0	0	0
	14(OPE)	-876	-6945	1890	0	0	0
	15(OCC)	483	-2	112	0	0	0
	16(OCC)	-325	2	-151	0	0	0
	17(OCC)	112	835	-226	0	0	0
	18(OCC)	224	1	67	0	0	0
	19(OCC)	-169	-0	-70	0	0	0
	MAX	2011/L6	-13253/L1	2072/L10			
850		TYPE=Rigid +Y;					
	1(HYD)	-13	-9620	0	0	0	0
	2(OPE)	543	-5056	1417	0	0	0
	4(OPE)	522	-5056	1424	0	0	0
	6(OPE)	-397	-5051	-1462	0	0	0
	8(SUS)	-7	-5051	0	0	0	0
	9(SUS)	-7	-5044	0	0	0	0
	10(OPE)	824	-5058	1275	0	0	0
	11(OPE)	110	-5054	1512	0	0	0
	12(OPE)	436	-4451	1262	0	0	0
	13(OPE)	489	-5056	1436	0	0	0
	14(OPE)	606	-5056	1391	0	0	0
	15(OCC)	301	-2	-150	0	0	0
	16(OCC)	-412	2	88	0	0	0
	17(OCC)	-87	606	-162	0	0	0
	18(OCC)	-34	0	12	0	0	0
	19(OCC)	83	-0	-33	0	0	0
	MAX	824/L10	-9620/L1	1512/L11			
880		TYPE=Rigid +Y;					
	1(HYD)	14	-14108	0	0	0	0
	2(OPE)	1887	-7409	1175	0	0	0
	4(OPE)	1889	-7408	1171	0	0	0
	6(OPE)	-2219	-7411	-144	0	0	0
	8(SUS)	7	-7407	0	0	0	0
	9(SUS)	7	-7397	0	0	0	0
	10(OPE)	1956	-7412	1058	0	0	0
	11(OPE)	1787	-7404	1319	0	0	0
	12(OPE)	1649	-6519	1051	0	0	0
	13(OPE)	1673	-7409	1464	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	2041	-7407	879	0	0	0
	15(OCC)	67	-4	-113	0	0	0
	16(OCC)	-102	4	148	0	0	0
	17(OCC)	-240	889	-120	0	0	0
	18(OCC)	-216	-1	293	0	0	0
	19(OCC)	152	1	-292	0	0	0
	MAX	-2219/L6	-14108/L1	1464/L13			
900		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-3	-13960	-0	0	0	0
	2(OPE)	2190	-7305	-1330	0	0	0
	4(OPE)	2190	-7305	-1600	0	0	0
	6(OPE)	-2146	-7337	925	0	0	0
	8(SUS)	-1	-7330	-0	0	0	0
	9(SUS)	-1	-7320	-0	0	0	0
	10(OPE)	2191	-7309	-288	0	0	0
	11(OPE)	2189	-7302	-3076	0	0	0
	12(OPE)	1926	-6426	-1413	0	0	0
	13(OPE)	2190	-7304	3218	0	0	0
	14(OPE)	2190	-7306	-6632	0	0	0
	15(OCC)	1	-4	1313	0	0	0
	16(OCC)	-1	3	-1475	0	0	0
	17(OCC)	-263	879	187	0	0	0
	18(OCC)	-0	1	4819	0	0	0
	19(OCC)	0	-1	-5031	0	0	0
	MAX	2191/L10	-13960/L1	-6632/L14			
910		TYPE=Rigid +Y;					
	1(HYD)	-3	-6059	0	0	0	0
	2(OPE)	953	-3194	-100	0	0	0
	4(OPE)	953	-3194	-98	0	0	0
	6(OPE)	-942	-3180	154	0	0	0
	8(SUS)	-1	-3181	0	0	0	0
	9(SUS)	-1	-3177	0	0	0	0
	10(OPE)	953	-3196	-101	0	0	0
	11(OPE)	953	-3192	-96	0	0	0
	12(OPE)	839	-2812	-89	0	0	0
	13(OPE)	958	-3194	-20	0	0	0
	14(OPE)	956	-3193	-67	0	0	0
	15(OCC)	0	-2	-3	0	0	0
	16(OCC)	-0	2	2	0	0	0
	17(OCC)	-114	382	9	0	0	0
	18(OCC)	5	-1	78	0	0	0
	19(OCC)	3	0	31	0	0	0
	MAX	958/L13	-6059/L1	154/L6			

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
920		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-1	-9687	-0	0	0	0
	2(OPE)	1820	-5079	-1116	0	0	0
	4(OPE)	1796	-5078	-1037	0	0	0
	6(OPE)	-1523	-5090	108	0	0	0
	8(SUS)	-1	-5086	-0	0	0	0
	9(SUS)	-1	-5079	-0	0	0	0
	10(OPE)	1850	-5081	-1207	0	0	0
	11(OPE)	1705	-5076	-748	0	0	0
	12(OPE)	1638	-4468	-1106	0	0	0
	13(OPE)	1521	-5079	95	0	0	0
	14(OPE)	2355	-5078	-2891	0	0	0
	15(OCC)	55	-3	-169	0	0	0
	16(OCC)	-91	2	289	0	0	0
	17(OCC)	-158	610	-69	0	0	0
	18(OCC)	-275	-0	1133	0	0	0
	19(OCC)	559	1	-1853	0	0	0
	MAX	2355/L14	-9687/L1	-2891/L14			
930		TYPE=Rigid +Y;					
	1(HYD)	-1	-8721	0	0	0	0
	2(OPE)	1373	-4578	-39	0	0	0
	4(OPE)	1372	-4577	-48	0	0	0
	6(OPE)	-1374	-4581	13	0	0	0
	8(SUS)	-0	-4579	0	0	0	0
	9(SUS)	-0	-4573	0	0	0	0
	10(OPE)	1374	-4580	-19	0	0	0
	11(OPE)	1371	-4575	-56	0	0	0
	12(OPE)	1208	-4028	-37	0	0	0
	13(OPE)	1345	-4578	279	0	0	0
	14(OPE)	1359	-4577	-194	0	0	0
	15(OCC)	1	-2	29	0	0	0
	16(OCC)	-1	2	-8	0	0	0
	17(OCC)	-165	549	11	0	0	0
	18(OCC)	-28	-0	327	0	0	0
	19(OCC)	-13	0	-146	0	0	0
	MAX	-1374/L6	-8721/L1	327/L18			
940		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	-0	-9019	0	0	0	0
	2(OPE)	1388	-4731	296	0	0	0
	4(OPE)	-515	-4735	294	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	-942	-4738	-130	0	0	0
	8(SUS)	-0	-4735	0	0	0	0
	9(SUS)	-0	-4729	0	0	0	0
	10(OPE)	16221	-4704	214	0	0	0
	11(OPE)	-16344	-4764	6	0	0	0
	12(OPE)	-1197	-4168	360	0	0	0
	13(OPE)	177	-4733	3051	0	0	0
	14(OPE)	1223	-4731	-1773	0	0	0
	15(OCC)	16736	31	-80	0	0	0
	16(OCC)	-15830	-29	-287	0	0	0
	17(OCC)	-682	567	67	0	0	0
	18(OCC)	691	2	2757	0	0	0
	19(OCC)	1738	3	-2067	0	0	0
	MAX	16736/L15	-9019/L1	3051/L13			
950		TYPE=Rigid +Y;					
	1(HYD)	-1	-8772	-0	0	0	0
	2(OPE)	-1384	-4615	-29	0	0	0
	4(OPE)	-1384	-4614	-29	0	0	0
	6(OPE)	1381	-4602	13	0	0	0
	8(SUS)	-0	-4606	-0	0	0	0
	9(SUS)	-0	-4600	-0	0	0	0
	10(OPE)	-1385	-4616	-18	0	0	0
	11(OPE)	-1383	-4612	-50	0	0	0
	12(OPE)	-1218	-4061	-16	0	0	0
	13(OPE)	-1370	-4615	202	0	0	0
	14(OPE)	-1365	-4614	-231	0	0	0
	15(OCC)	-1	-2	11	0	0	0
	16(OCC)	1	3	-21	0	0	0
	17(OCC)	166	553	13	0	0	0
	18(OCC)	14	-0	231	0	0	0
	19(OCC)	19	0	-202	0	0	0
	MAX	-1385/L10	-8772/L1	-231/L14			
960		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-1	-9476	0	0	0	0
	2(OPE)	-1852	-4959	-1346	0	0	0
	4(OPE)	-1895	-4958	-1484	0	0	0
	6(OPE)	1488	-4975	111	0	0	0
	8(SUS)	-0	-4975	0	0	0	0
	9(SUS)	-0	-4969	0	0	0	0
	10(OPE)	-1846	-4962	-1329	0	0	0
	11(OPE)	-1775	-4957	-1077	0	0	0
	12(OPE)	-1768	-4361	-1643	0	0	0
	13(OPE)	-1487	-4956	10	0	0	0
	14(OPE)	-2439	-4961	-3306	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	15(OCC)	49	-3	155	0	0	0
	16(OCC)	119	1	406	0	0	0
	17(OCC)	126	597	-159	0	0	0
	18(OCC)	408	2	1494	0	0	0
	19(OCC)	-544	-3	-1822	0	0	0
	MAX	-2439/L14	-9476/L1	-3306/L14			
970		TYPE=Rigid +Y;					
	1(HYD)	-2	-6864	-0	0	0	0
	2(OPE)	-1097	-3683	-128	0	0	0
	4(OPE)	-1098	-3684	-129	0	0	0
	6(OPE)	1062	-3591	182	0	0	0
	8(SUS)	-1	-3604	-0	0	0	0
	9(SUS)	-1	-3599	-0	0	0	0
	10(OPE)	-1097	-3683	-134	0	0	0
	11(OPE)	-1100	-3677	-79	0	0	0
	12(OPE)	-968	-3252	-118	0	0	0
	13(OPE)	-1105	-3690	-66	0	0	0
	14(OPE)	-1098	-3677	-105	0	0	0
	15(OCC)	1	0	-4	0	0	0
	16(OCC)	-3	7	50	0	0	0
	17(OCC)	129	432	11	0	0	0
	18(OCC)	-7	-6	63	0	0	0
	19(OCC)	-1	7	24	0	0	0
	MAX	-1105/L13	-6864/L1	182/L6			
980		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-2	-12590	0	0	0	0
	2(OPE)	-2288	-6489	-1218	0	0	0
	4(OPE)	-2208	-6487	-952	0	0	0
	6(OPE)	2075	-6624	900	0	0	0
	8(SUS)	-1	-6610	0	0	0	0
	9(SUS)	-1	-6601	0	0	0	0
	10(OPE)	-2610	-6496	-2285	0	0	0
	11(OPE)	-1946	-6492	70	0	0	0
	12(OPE)	-1801	-5692	-381	0	0	0
	13(OPE)	-3111	-6479	3969	0	0	0
	14(OPE)	-3702	-6501	-5919	0	0	0
	15(OCC)	-401	-8	-1333	0	0	0
	16(OCC)	262	-4	1022	0	0	0
	17(OCC)	407	795	571	0	0	0
	18(OCC)	-903	8	4921	0	0	0
	19(OCC)	-1493	-14	-4968	0	0	0
	MAX	-3702/L14	-12590/L1	-5919/L14			

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1000		TYPE=Rigid +Y;					
	1(HYD)	12	-13215	-0	0	0	0
	2(OPE)	-1826	-7182	1144	0	0	0
	4(OPE)	-1825	-7185	1147	0	0	0
	6(OPE)	2065	-6899	-146	0	0	0
	8(SUS)	6	-6939	-0	0	0	0
	9(SUS)	6	-6929	-0	0	0	0
	10(OPE)	-1684	-7181	1344	0	0	0
	11(OPE)	-1807	-7167	1165	0	0	0
	12(OPE)	-1603	-6353	1030	0	0	0
	13(OPE)	-1600	-7201	1451	0	0	0
	14(OPE)	-1920	-7166	967	0	0	0
	15(OCC)	141	3	197	0	0	0
	16(OCC)	18	17	18	0	0	0
	17(OCC)	221	831	-117	0	0	0
	18(OCC)	224	-17	304	0	0	0
	19(OCC)	-96	19	-181	0	0	0
	MAX	2065/L6	-13215/L1	1451/L13			
1030		TYPE=Rigid +Y;					
	1(HYD)	-11	-9907	-0	0	0	0
	2(OPE)	-427	-4985	1433	0	0	0
	4(OPE)	-443	-4983	1428	0	0	0
	6(OPE)	352	-5233	-1530	0	0	0
	8(SUS)	-6	-5202	-0	0	0	0
	9(SUS)	-6	-5195	-0	0	0	0
	10(OPE)	5	-4990	1497	0	0	0
	11(OPE)	-760	-4993	1291	0	0	0
	12(OPE)	-391	-4357	1247	0	0	0
	13(OPE)	-356	-4967	1447	0	0	0
	14(OPE)	-465	-5000	1426	0	0	0
	15(OCC)	448	-7	69	0	0	0
	16(OCC)	-317	-11	-137	0	0	0
	17(OCC)	52	626	-180	0	0	0
	18(OCC)	87	16	19	0	0	0
	19(OCC)	-21	-17	-1	0	0	0
	MAX	-760/L11	-9907/L1	-1530/L6			
1060		TYPE=Rigid +Y;					
	1(HYD)	6	-13862	-29	0	0	0
	2(OPE)	880	-6806	1842	0	0	0
	4(OPE)	851	-6801	1854	0	0	0
	6(OPE)	-2172	-7354	-389	0	0	0
	8(SUS)	3	-7278	-15	0	0	0
	9(SUS)	3	-7268	-15	0	0	0
	10(OPE)	1061	-6824	1751	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	11(OPE)	305	-6816	2022	0	0	0
	12(OPE)	685	-5925	1640	0	0	0
	13(OPE)	566	-6770	1951	0	0	0
	14(OPE)	1111	-6836	1724	0	0	0
	15(OCC)	209	-23	-103	0	0	0
	16(OCC)	-546	-15	168	0	0	0
	17(OCC)	-166	876	-214	0	0	0
	18(OCC)	-286	31	96	0	0	0
	19(OCC)	259	-36	-130	0	0	0
	MAX	-2172/L6	-13862/L1	2022/L11			
1080		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	0	-11328	130	0	0	0
	2(OPE)	2230	-6978	-636	0	0	0
	4(OPE)	2218	-6989	-582	0	0	0
	6(OPE)	-1639	-5789	573	0	0	0
	8(SUS)	0	-5948	68	0	0	0
	9(SUS)	0	-5940	68	0	0	0
	10(OPE)	2077	-6941	148	0	0	0
	11(OPE)	2593	-6958	-1862	0	0	0
	12(OPE)	1881	-6282	-119	0	0	0
	13(OPE)	3361	-7056	4326	0	0	0
	14(OPE)	3803	-6908	-5946	0	0	0
	15(OCC)	-141	48	730	0	0	0
	16(OCC)	375	31	-1280	0	0	0
	17(OCC)	-337	707	463	0	0	0
	18(OCC)	1143	-67	4908	0	0	0
	19(OCC)	1585	81	-5363	0	0	0
	MAX	3803/L14	-11328/L1	-5946/L14			
1090		TYPE=Rigid +Y;					
	1(HYD)	0	-9006	-142	0	0	0
	2(OPE)	1050	-3666	-327	0	0	0
	4(OPE)	1047	-3655	-327	0	0	0
	6(OPE)	-1425	-4922	388	0	0	0
	8(SUS)	0	-4729	-75	0	0	0
	9(SUS)	0	-4722	-75	0	0	0
	10(OPE)	1109	-3764	-212	0	0	0
	11(OPE)	1032	-3608	-326	0	0	0
	12(OPE)	883	-3088	-281	0	0	0
	13(OPE)	1053	-3593	-232	0	0	0
	14(OPE)	1076	-3724	-299	0	0	0
	15(OCC)	62	-109	115	0	0	0
	16(OCC)	-15	47	0	0	0	0
	17(OCC)	-164	567	46	0	0	0
	18(OCC)	6	62	95	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
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	19(OCC)	30	-69	27	0	0	0
	MAX	-1425/L6	-9006/L1	388/L6			
1100		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X;					
	1(HYD)	-424	-3029	-909	0	0	0
	2(OPE)	-2020	-3804	-4794	0	0	0
	4(OPE)	-1949	-3827	-4904	0	0	0
	6(OPE)	1788	-1131	-125	0	0	0
	8(SUS)	-222	-1591	-477	0	0	0
	9(SUS)	-222	-1588	-477	0	0	0
	10(OPE)	7848	-3457	-4196	0	0	0
	11(OPE)	-12124	-4112	-4603	0	0	0
	12(OPE)	-1564	-3619	-4980	0	0	0
	13(OPE)	-1141	-3931	-4361	0	0	0
	14(OPE)	-5262	-3715	-4742	0	0	0
	15(OCC)	9797	370	708	0	0	0
	16(OCC)	-10175	-285	301	0	0	0
	17(OCC)	386	207	-76	0	0	0
	18(OCC)	808	-105	542	0	0	0
	19(OCC)	-3313	111	162	0	0	0
	MAX	-12124/L11	-4112/L11	-4980/L12			
1110		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-210	-19369	1999	0	0	0
	2(OPE)	-5092	-6293	11036	0	0	0
	4(OPE)	-5125	-6252	11181	0	0	0
	6(OPE)	3219	-10802	-376	0	0	0
	8(SUS)	-110	-10170	1050	0	0	0
	9(SUS)	-110	-10156	1048	0	0	0
	10(OPE)	-5055	-6416	10794	0	0	0
	11(OPE)	-4892	-6285	10375	0	0	0
	12(OPE)	-4782	-5016	11207	0	0	0
	13(OPE)	-5991	-6101	14213	0	0	0
	14(OPE)	-4094	-6431	7578	0	0	0
	15(OCC)	70	-164	-387	0	0	0
	16(OCC)	233	-33	-807	0	0	0
	17(OCC)	342	1236	25	0	0	0
	18(OCC)	-867	151	3032	0	0	0
	19(OCC)	1030	-179	-3604	0	0	0
	MAX	-5991/L13	-19369/L1	14213/L13			
1140		TYPE=Rigid +Y;					
	1(HYD)	1470	-21112	-904	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	3893	-13529	1148	0	0	0
	4(OPE)	3901	-13555	1149	0	0	0
	6(OPE)	-635	-10773	-533	0	0	0
	8(SUS)	772	-11085	-475	0	0	0
	9(SUS)	771	-11070	-474	0	0	0
	10(OPE)	4033	-13739	849	0	0	0
	11(OPE)	3554	-13245	1777	0	0	0
	12(OPE)	3522	-12257	1056	0	0	0
	13(OPE)	3181	-13614	2562	0	0	0
	14(OPE)	4018	-13478	-448	0	0	0
	15(OCC)	132	-183	-300	0	0	0
	16(OCC)	-347	311	627	0	0	0
	17(OCC)	-379	1298	-93	0	0	0
	18(OCC)	-720	-58	1412	0	0	0
	19(OCC)	118	78	-1597	0	0	0
	MAX	4033/L10	-21112/L1	2562/L13			
1160		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-422	-14420	-169	0	0	0
	2(OPE)	5109	-6713	-10477	0	0	0
	4(OPE)	5138	-6705	-10579	0	0	0
	6(OPE)	-2121	-7616	849	0	0	0
	8(SUS)	-222	-7571	-88	0	0	0
	9(SUS)	-221	-7561	-88	0	0	0
	10(OPE)	5009	-6408	-10439	0	0	0
	11(OPE)	5333	-7023	-10948	0	0	0
	12(OPE)	4833	-5771	-10477	0	0	0
	13(OPE)	4176	-6732	-7347	0	0	0
	14(OPE)	6194	-6680	-14126	0	0	0
	15(OCC)	-129	297	140	0	0	0
	16(OCC)	195	-318	-369	0	0	0
	17(OCC)	-304	934	103	0	0	0
	18(OCC)	-962	-27	3233	0	0	0
	19(OCC)	1057	25	-3546	0	0	0
	MAX	6194/L14	-14420/L1	-14126/L14			
1170		TYPE=Rigid +Y;					
	1(HYD)	-212	-5990	45	0	0	0
	2(OPE)	1161	-3915	176	0	0	0
	4(OPE)	1164	-3923	177	0	0	0
	6(OPE)	-895	-3127	282	0	0	0
	8(SUS)	-111	-3145	24	0	0	0
	9(SUS)	-111	-3141	24	0	0	0
	10(OPE)	1255	-4227	183	0	0	0
	11(OPE)	1050	-3580	225	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	1061	-3575	157	0	0	0
	13(OPE)	1166	-3912	133	0	0	0
	14(OPE)	1163	-3930	195	0	0	0
	15(OCC)	91	-304	6	0	0	0
	16(OCC)	-114	343	49	0	0	0
	17(OCC)	-103	349	-20	0	0	0
	18(OCC)	2	11	-44	0	0	0
	19(OCC)	-1	-7	19	0	0	0
	MAX	1255/L10	-5990/L1	282/L6			
1180		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	1(HYD)	-108	-9816	-11	0	0	0
	2(OPE)	2198	-4955	4146	0	0	0
	4(OPE)	2228	-4953	4200	0	0	0
	6(OPE)	-666	-5160	-401	0	0	0
	8(SUS)	-57	-5154	-6	0	0	0
	9(SUS)	-56	-5147	-6	0	0	0
	10(OPE)	11623	-4860	4490	0	0	0
	11(OPE)	-6941	-5055	4292	0	0	0
	12(OPE)	2475	-4327	4303	0	0	0
	13(OPE)	3620	-4953	6659	0	0	0
	14(OPE)	1377	-4952	2246	0	0	0
	15(OCC)	9394	93	290	0	0	0
	16(OCC)	-9169	-103	92	0	0	0
	17(OCC)	247	626	103	0	0	0
	18(OCC)	1392	-0	2459	0	0	0
	19(OCC)	-851	0	-1954	0	0	0
	MAX	11623/L10	-9816/L1	6659/L13			
1190		TYPE=Rigid +Y;					
	1(HYD)	-59	-8264	3	0	0	0
	2(OPE)	-1237	-4360	424	0	0	0
	4(OPE)	-1238	-4360	424	0	0	0
	6(OPE)	1152	-4337	-606	0	0	0
	8(SUS)	-31	-4339	2	0	0	0
	9(SUS)	-31	-4333	2	0	0	0
	10(OPE)	-1228	-4373	461	0	0	0
	11(OPE)	-1265	-4347	315	0	0	0
	12(OPE)	-1086	-3840	384	0	0	0
	13(OPE)	-1153	-4359	617	0	0	0
	14(OPE)	-1249	-4361	391	0	0	0
	15(OCC)	9	-12	37	0	0	0
	16(OCC)	-28	13	-109	0	0	0
	17(OCC)	151	520	-40	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	18(OCC)	85	1	193	0	0	0
	19(OCC)	-11	-1	-32	0	0	0
	MAX	-1265/L11	-8264/L1	617/L13			
1200		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-39	-9639	-2	0	0	0
	2(OPE)	-1808	-5166	-1005	0	0	0
	4(OPE)	-1819	-5167	-1039	0	0	0
	6(OPE)	1399	-5055	-585	0	0	0
	8(SUS)	-21	-5061	-1	0	0	0
	9(SUS)	-21	-5054	-1	0	0	0
	10(OPE)	-1788	-5204	-899	0	0	0
	11(OPE)	-1939	-5123	-1461	0	0	0
	12(OPE)	-1774	-4563	-1476	0	0	0
	13(OPE)	-2047	-5168	1798	0	0	0
	14(OPE)	-2922	-5167	-4718	0	0	0
	15(OCC)	31	-37	140	0	0	0
	16(OCC)	-120	44	-422	0	0	0
	17(OCC)	45	604	-437	0	0	0
	18(OCC)	-228	-1	2837	0	0	0
	19(OCC)	-1104	0	-3679	0	0	0
	MAX	-2922/L14	-9639/L1	-4718/L14			
1220		TYPE=Rigid +Y;					
	1(HYD)	3	-7267	1	0	0	0
	2(OPE)	150	-3729	-1109	0	0	0
	4(OPE)	150	-3728	-1108	0	0	0
	6(OPE)	-866	-3816	749	0	0	0
	8(SUS)	1	-3816	1	0	0	0
	9(SUS)	1	-3810	1	0	0	0
	10(OPE)	313	-3690	-1062	0	0	0
	11(OPE)	-187	-3773	-1116	0	0	0
	12(OPE)	137	-3266	-970	0	0	0
	13(OPE)	217	-3727	-1097	0	0	0
	14(OPE)	157	-3730	-1108	0	0	0
	15(OCC)	163	38	47	0	0	0
	16(OCC)	-336	-46	-8	0	0	0
	17(OCC)	-13	462	138	0	0	0
	18(OCC)	68	0	11	0	0	0
	19(OCC)	7	-2	0	0	0	0
	MAX	-866/L6	-7267/L1	-1116/L11			
1250		TYPE=Rigid +Y;					
	1(HYD)	15	-7642	-2	0	0	0
	2(OPE)	16	-3991	-1197	0	0	0

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Various Load Cases

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	4(OPE)	16	-3991	-1197	0	0	0
	6(OPE)	-23	-4023	1207	0	0	0
	8(SUS)	8	-4013	-1	0	0	0
	9(SUS)	8	-4007	-1	0	0	0
	10(OPE)	171	-4005	-1189	0	0	0
	11(OPE)	-237	-3974	-1168	0	0	0
	12(OPE)	20	-3510	-1053	0	0	0
	13(OPE)	37	-3989	-1196	0	0	0
	14(OPE)	26	-3991	-1197	0	0	0
	15(OCC)	155	-14	8	0	0	0
	16(OCC)	-253	16	29	0	0	0
	17(OCC)	4	480	144	0	0	0
	18(OCC)	21	2	1	0	0	0
	19(OCC)	11	-0	0	0	0	0
	MAX	-253/L16	-7642/L1	1207/L6			
1280		TYPE=Rigid +Y;					
	1(HYD)	-20	-6413	2	0	0	0
	2(OPE)	-82	-3418	-1022	0	0	0
	4(OPE)	-83	-3419	-1022	0	0	0
	6(OPE)	773	-3355	645	0	0	0
	8(SUS)	-11	-3367	1	0	0	0
	9(SUS)	-11	-3363	1	0	0	0
	10(OPE)	106	-3417	-1019	0	0	0
	11(OPE)	-397	-3423	-947	0	0	0
	12(OPE)	-65	-3014	-902	0	0	0
	13(OPE)	-87	-3419	-1022	0	0	0
	14(OPE)	-70	-3419	-1023	0	0	0
	15(OCC)	188	2	3	0	0	0
	16(OCC)	-314	-4	75	0	0	0
	17(OCC)	17	404	120	0	0	0
	18(OCC)	-4	-0	0	0	0	0
	19(OCC)	12	-0	-1	0	0	0
	MAX	773/L6	-6413/L1	-1023/L14			
1300		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	1	-10580	0	0	0	0
	2(OPE)	1653	-5511	6	0	0	0
	4(OPE)	1653	-5511	4	0	0	0
	6(OPE)	-1532	-5564	-663	0	0	0
	8(SUS)	1	-5555	0	0	0	0
	9(SUS)	1	-5548	0	0	0	0
	10(OPE)	1667	-5514	-173	0	0	0
	11(OPE)	1649	-5506	97	0	0	0
	12(OPE)	1453	-4845	-31	0	0	0
	13(OPE)	2698	-5511	3624	0	0	0

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Various Load Cases

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	14(OPE)	2475	-5508	-2883	0	0	0
	15(OCC)	14	-3	-177	0	0	0
	16(OCC)	-4	5	93	0	0	0
	17(OCC)	-200	666	-36	0	0	0
	18(OCC)	1045	0	3620	0	0	0
	19(OCC)	822	3	-2887	0	0	0
	MAX	2698/L13	-10580/L1	3624/L13			
1310		TYPE=Rigid +Y;					
	1(HYD)	-0	-7816	-1	0	0	0
	2(OPE)	1115	-4121	534	0	0	0
	4(OPE)	1115	-4121	535	0	0	0
	6(OPE)	-1060	-4103	-625	0	0	0
	8(SUS)	-0	-4104	-0	0	0	0
	9(SUS)	-0	-4098	-0	0	0	0
	10(OPE)	1162	-4123	424	0	0	0
	11(OPE)	1030	-4120	683	0	0	0
	12(OPE)	987	-3629	460	0	0	0
	13(OPE)	1076	-4121	609	0	0	0
	14(OPE)	1146	-4121	465	0	0	0
	15(OCC)	47	-2	-110	0	0	0
	16(OCC)	-85	1	148	0	0	0
	17(OCC)	-128	492	-75	0	0	0
	18(OCC)	-39	0	74	0	0	0
	19(OCC)	31	0	-70	0	0	0
	MAX	1162/L10	-7816/L1	683/L11			
1320		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	1(HYD)	-1	-10735	3	0	0	0
	2(OPE)	1679	-5622	-5513	0	0	0
	4(OPE)	1694	-5622	-5575	0	0	0
	6(OPE)	-368	-5637	448	0	0	0
	8(SUS)	-0	-5636	2	0	0	0
	9(SUS)	-0	-5629	2	0	0	0
	10(OPE)	9901	-5608	-5912	0	0	0
	11(OPE)	-8668	-5639	-5158	0	0	0
	12(OPE)	1595	-4946	-5640	0	0	0
	13(OPE)	493	-5625	-3124	0	0	0
	14(OPE)	-686	-5626	-8358	0	0	0
	15(OCC)	8207	14	-338	0	0	0
	16(OCC)	-10362	-17	417	0	0	0
	17(OCC)	-99	676	-65	0	0	0
	18(OCC)	-1201	-3	2451	0	0	0
	19(OCC)	-2379	-4	-2783	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-10362/L16	-10735/L1	-8358/L14			
1330		TYPE=Rigid +Y;					
	1(HYD)	-3	-2703	-11	0	0	0
	2(OPE)	-287	-1446	-326	0	0	0
	4(OPE)	-287	-1447	-326	0	0	0
	6(OPE)	409	-1420	121	0	0	0
	8(SUS)	-2	-1419	-6	0	0	0
	9(SUS)	-2	-1418	-6	0	0	0
	10(OPE)	-269	-1448	-341	0	0	0
	11(OPE)	-315	-1445	-298	0	0	0
	12(OPE)	-255	-1277	-286	0	0	0
	13(OPE)	-296	-1444	-316	0	0	0
	14(OPE)	-293	-1449	-321	0	0	0
	15(OCC)	17	-1	-15	0	0	0
	16(OCC)	-28	1	28	0	0	0
	17(OCC)	31	170	40	0	0	0
	18(OCC)	-9	2	10	0	0	0
	19(OCC)	-6	-2	4	0	0	0
	MAX	409/L6	-2703/L1	-341/L10			
1340		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-1	-18692	16	0	0	0
	2(OPE)	-10578	-9778	25740	0	0	0
	4(OPE)	-10651	-9778	25980	0	0	0
	6(OPE)	3226	-9816	-3040	0	0	0
	8(SUS)	-1	-9814	8	0	0	0
	9(SUS)	-1	-9801	8	0	0	0
	10(OPE)	-10870	-9782	26723	0	0	0
	11(OPE)	-10508	-9770	25487	0	0	0
	12(OPE)	-10299	-8600	25953	0	0	0
	13(OPE)	-11276	-9779	28057	0	0	0
	14(OPE)	-10096	-9774	24128	0	0	0
	15(OCC)	-219	-4	743	0	0	0
	16(OCC)	143	8	-494	0	0	0
	17(OCC)	352	1178	-28	0	0	0
	18(OCC)	-625	-2	2077	0	0	0
	19(OCC)	555	4	-1852	0	0	0
	MAX	-11276/L13	-18692/L1	28057/L13			
1355		TYPE=Rigid +Y;					
	1(HYD)	18	-19190	-1	0	0	0
	2(OPE)	-1872	-10075	2373	0	0	0
	4(OPE)	-1872	-10075	2373	0	0	0
	6(OPE)	1516	-10065	-2611	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	8(SUS)	10	-10076	-1	0	0	0
	9(SUS)	10	-10062	-1	0	0	0
	10(OPE)	-1760	-10076	2458	0	0	0
	11(OPE)	-1978	-10074	2285	0	0	0
	12(OPE)	-1657	-8864	2080	0	0	0
	13(OPE)	-1877	-10083	2372	0	0	0
	14(OPE)	-1880	-10067	2363	0	0	0
	15(OCC)	112	-2	85	0	0	0
	16(OCC)	-106	0	-88	0	0	0
	17(OCC)	215	1211	-293	0	0	0
	18(OCC)	-5	-8	-1	0	0	0
	19(OCC)	-8	8	-10	0	0	0
	MAX	-1978/L11	-19190/L1	-2611/L6			
1360		TYPE=Rigid +Y;					
	1(HYD)	-13	-752	-4	0	0	0
	2(OPE)	-60	-403	105	0	0	0
	4(OPE)	-60	-404	105	0	0	0
	6(OPE)	36	-405	-116	0	0	0
	8(SUS)	-7	-395	-2	0	0	0
	9(SUS)	-7	-394	-2	0	0	0
	10(OPE)	-53	-402	108	0	0	0
	11(OPE)	-65	-403	102	0	0	0
	12(OPE)	-53	-358	93	0	0	0
	13(OPE)	-59	-402	105	0	0	0
	14(OPE)	-60	-405	106	0	0	0
	15(OCC)	6	1	3	0	0	0
	16(OCC)	-5	0	-3	0	0	0
	17(OCC)	6	46	-12	0	0	0
	18(OCC)	0	2	-0	0	0	0
	19(OCC)	-0	-2	0	0	0	0
	MAX	-65/L11	-752/L1	-116/L6			
1370		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	3	-10683	-1	0	0	0
	2(OPE)	-5117	-5595	3166	0	0	0
	4(OPE)	-5173	-5595	3184	0	0	0
	6(OPE)	112	-5610	-1679	0	0	0
	8(SUS)	1	-5609	-1	0	0	0
	9(SUS)	1	-5601	-1	0	0	0
	10(OPE)	-1614	-5597	2117	0	0	0
	11(OPE)	-8770	-5593	4262	0	0	0
	12(OPE)	-5262	-4922	3014	0	0	0
	13(OPE)	-5167	-5599	3183	0	0	0
	14(OPE)	-5255	-5591	3207	0	0	0
	15(OCC)	3559	-2	-1067	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OCC)	-3597	2	1078	0	0	0
	17(OCC)	-89	673	-170	0	0	0
	18(OCC)	6	-4	-1	0	0	0
	19(OCC)	-82	4	23	0	0	0
	MAX	-8770/L11	-10683/L1	4262/L11			
1380		TYPE=Rigid +Y;					
	1(HYD)	-1	-8503	-1	0	0	0
	2(OPE)	374	-4486	1293	0	0	0
	4(OPE)	375	-4486	1292	0	0	0
	6(OPE)	-106	-4470	-1337	0	0	0
	8(SUS)	-0	-4465	-1	0	0	0
	9(SUS)	-0	-4459	-1	0	0	0
	10(OPE)	348	-4486	1300	0	0	0
	11(OPE)	346	-4484	1300	0	0	0
	12(OPE)	339	-3952	1136	0	0	0
	13(OPE)	364	-4487	1296	0	0	0
	14(OPE)	358	-4485	1297	0	0	0
	15(OCC)	-28	-0	8	0	0	0
	16(OCC)	-29	2	8	0	0	0
	17(OCC)	-36	534	-156	0	0	0
	18(OCC)	-12	-1	3	0	0	0
	19(OCC)	-17	1	5	0	0	0
	MAX	375/L4	-8503/L1	-1337/L6			
1390		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	1(HYD)	-0	-8906	-1	0	0	0
	2(OPE)	4346	-4619	-15611	0	0	0
	4(OPE)	4391	-4619	-15765	0	0	0
	6(OPE)	-283	-4664	2249	0	0	0
	8(SUS)	-0	-4676	-1	0	0	0
	9(SUS)	-0	-4670	-1	0	0	0
	10(OPE)	2336	-4619	-15945	0	0	0
	11(OPE)	-5001	-4627	-16517	0	0	0
	12(OPE)	4489	-4054	-15931	0	0	0
	13(OPE)	-865	-4604	-4121	0	0	0
	14(OPE)	-8049	-4635	-27798	0	0	0
	15(OCC)	-2054	0	-180	0	0	0
	16(OCC)	-9392	-8	-752	0	0	0
	17(OCC)	98	564	-166	0	0	0
	18(OCC)	-5255	15	11644	0	0	0
	19(OCC)	-12440	-16	-12033	0	0	0
	MAX	-12440/L19	-8906/L1	-27798/L14			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1400		TYPE=Rigid +Y;					
	1(HYD)	1	-9447	-1	0	0	0
	2(OPE)	-277	-5297	-1565	0	0	0
	4(OPE)	-279	-5301	-1566	0	0	0
	6(OPE)	-196	-4988	1483	0	0	0
	8(SUS)	1	-4960	-1	0	0	0
	9(SUS)	1	-4953	-1	0	0	0
	10(OPE)	-254	-5303	-1571	0	0	0
	11(OPE)	-358	-5278	-1542	0	0	0
	12(OPE)	-253	-4719	-1393	0	0	0
	13(OPE)	-288	-5281	-1558	0	0	0
	14(OPE)	-295	-5321	-1569	0	0	0
	15(OCC)	25	-2	-5	0	0	0
	16(OCC)	-78	23	23	0	0	0
	17(OCC)	27	582	173	0	0	0
	18(OCC)	-9	20	8	0	0	0
	19(OCC)	-15	-20	-3	0	0	0
	MAX	-358/L11	-9447/L1	-1571/L10			
1410		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-5	-6847	-3	0	0	0
	2(OPE)	5728	-2326	-696	0	0	0
	4(OPE)	5781	-2311	-692	0	0	0
	6(OPE)	-298	-3479	1000	0	0	0
	8(SUS)	-3	-3595	-2	0	0	0
	9(SUS)	-3	-3590	-2	0	0	0
	10(OPE)	8437	-2304	-690	0	0	0
	11(OPE)	3082	-2401	-718	0	0	0
	12(OPE)	5786	-1827	-547	0	0	0
	13(OPE)	5867	-2399	-718	0	0	0
	14(OPE)	5630	-2225	-666	0	0	0
	15(OCC)	2656	7	2	0	0	0
	16(OCC)	-2698	-89	-27	0	0	0
	17(OCC)	5	484	145	0	0	0
	18(OCC)	87	-88	-26	0	0	0
	19(OCC)	-151	87	26	0	0	0
	MAX	8437/L10	-6847/L1	1000/L6			
1420		TYPE=Rigid +Y;					
	1(HYD)	9	-12557	-4	0	0	0
	2(OPE)	1072	-9595	-2672	0	0	0
	4(OPE)	1075	-9626	-2680	0	0	0
	6(OPE)	-734	-6518	1812	0	0	0
	8(SUS)	4	-6593	-2	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(SUS)	4	-6584	-2	0	0	0
	10(OPE)	1119	-9577	-2646	0	0	0
	11(OPE)	1043	-9531	-2662	0	0	0
	12(OPE)	998	-8901	-2477	0	0	0
	13(OPE)	1063	-9514	-2649	0	0	0
	14(OPE)	1089	-9735	-2710	0	0	0
	15(OCC)	44	48	34	0	0	0
	16(OCC)	-32	95	18	0	0	0
	17(OCC)	-77	725	203	0	0	0
	18(OCC)	-12	112	31	0	0	0
	19(OCC)	14	-110	-30	0	0	0
	MAX	1119/L10	-12557/L1	-2710/L14			
1440		TYPE=Rigid +Y;					
	1(HYD)	216	-12287	32	0	0	0
	2(OPE)	212	-1811	-500	0	0	0
	4(OPE)	207	-1768	-488	0	0	0
	6(OPE)	-714	-6831	1921	0	0	0
	8(SUS)	113	-6453	17	0	0	0
	9(SUS)	113	-6444	17	0	0	0
	10(OPE)	271	-2142	-582	0	0	0
	11(OPE)	194	-1718	-477	0	0	0
	12(OPE)	111	-944	-261	0	0	0
	13(OPE)	219	-1867	-515	0	0	0
	14(OPE)	195	-1671	-462	0	0	0
	15(OCC)	65	-374	-94	0	0	0
	16(OCC)	-12	49	11	0	0	0
	17(OCC)	-96	824	228	0	0	0
	18(OCC)	12	-99	-27	0	0	0
	19(OCC)	-12	97	27	0	0	0
	MAX	-714/L6	-12287/L1	1921/L6			
1520		TYPE=Rigid ANC;					
	1(HYD)	-114	-5811	-472	-292	-161	-135
	2(OPE)	-5598	-7666	-4667	-2718	8419	6273
	4(OPE)	-5635	-7691	-4712	-2777	8505	6306
	6(OPE)	1117	-1169	1170	-827	-1146	-2052
	8(SUS)	-60	-3297	-274	-169	-84	-70
	9(SUS)	-60	-3294	-274	-169	-84	-70
	10(OPE)	-1965	-7369	-4406	-2603	12334	769
	11(OPE)	-7453	-8221	-5171	-2798	7248	9091
	12(OPE)	-5471	-7114	-4794	-3293	8783	5989
	13(OPE)	-5724	-7641	-2674	655	7865	6519
	14(OPE)	-5545	-7740	-6718	-6147	9121	6087
	15(OCC)	3671	321	306	174	3829	-5536
	16(OCC)	-1818	-530	-459	-21	-1257	2786
	17(OCC)	165	577	-82	-516	278	-316

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	18(OCC)	-88	50	2038	3432	-640	213
	19(OCC)	91	-49	-2006	-3370	616	-218
	MAX	-7453/L11	-8221/L11	-6718/L14	-6147/L14	12334/L10	9091/L11
1550		TYPE=Rigid ANC;					
	1(HYD)	-444	-3674	-82	-3302	576	73
	2(OPE)	3316	-4831	1966	-12480	-10003	8440
	4(OPE)	3346	-4834	1989	-12543	-10088	8473
	6(OPE)	-1291	210	-2278	2644	115	-5738
	8(SUS)	-233	-2094	-42	-1774	302	37
	9(SUS)	-233	-2091	-42	-1771	302	37
	10(OPE)	4823	-4785	2065	-12504	-12839	7827
	11(OPE)	1886	-4887	1907	-12588	-7347	9139
	12(OPE)	3374	-4359	1996	-12016	-10175	7950
	13(OPE)	3460	-4706	4268	-12401	-8445	8519
	14(OPE)	3188	-4698	84	-12324	-11343	8218
	15(OCC)	1477	49	76	39	-2751	-645
	16(OCC)	-1461	-54	-82	-45	2741	666
	17(OCC)	27	475	7	528	-87	-522
	18(OCC)	114	127	2279	143	1643	46
	19(OCC)	-158	136	-1905	219	-1254	-254
	MAX	4823/L10	-4887/L11	4268/L13	-12588/L11	-12839/L10	9139/L11
1590		TYPE=Rigid ANC;					
	1(HYD)	-444	-3674	-82	-6086	842	3223
	2(OPE)	3316	-4831	1966	-1441	-11992	-15069
	4(OPE)	3346	-4834	1989	-1342	-12096	-15253
	6(OPE)	-1291	210	-2278	-13378	890	3416
	8(SUS)	-233	-2094	-42	-3329	442	1689
	9(SUS)	-233	-2091	-42	-3325	442	1687
	10(OPE)	4823	-4785	2065	-735	-15733	-26370
	11(OPE)	1886	-4887	1907	-1999	-8478	-4232
	12(OPE)	3374	-4359	1996	-481	-12199	-15968
	13(OPE)	3460	-4706	4268	15036	-10521	-16015
	14(OPE)	3188	-4698	84	-14550	-13255	-14385
	15(OCC)	1477	49	76	607	-3637	-11117
	16(OCC)	-1461	-54	-82	-657	3617	11021
	17(OCC)	27	475	7	861	-103	-715
	18(OCC)	114	127	2279	16378	1574	-762
	19(OCC)	-158	136	-1905	-13208	-1159	868
	MAX	4823/L10	-4887/L11	4268/L13	16378/L18	-15733/L10	-26370/L10
1620		TYPE=Rigid ANC;					
	1(HYD)	-114	-6288	-472	-424	-161	-103

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	-5598	-8005	-4667	-4019	8419	7834
	4(OPE)	-5635	-8029	-4712	-4090	8505	7877
	6(OPE)	1117	-1507	1170	-501	-1146	-2363
	8(SUS)	-60	-3636	-274	-246	-84	-54
	9(SUS)	-60	-3632	-274	-246	-84	-54
	10(OPE)	-1877	-7708	-4406	-3831	12334	1301
	11(OPE)	-7541	-8559	-5171	-4239	7248	11185
	12(OPE)	-5471	-7412	-4794	-4629	8783	7515
	13(OPE)	-5724	-7979	-2586	-74	7865	8114
	14(OPE)	-5545	-8078	-6806	-8036	9121	7633
	15(OCC)	3759	321	306	260	3829	-6576
	16(OCC)	-1906	-530	-459	-149	-1257	3309
	17(OCC)	165	618	-82	-539	278	-362
	18(OCC)	-88	50	2126	4017	-640	238
	19(OCC)	91	-49	-2094	-3946	616	-243
	MAX	-7541/L11	-8559/L11	-6806/L14	-8036/L14	12334/L10	11185/L11
1660		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	0	-6495	0	0	0	0
	2(OPE)	0	-13303	0	0	0	0
	4(OPE)	0	-13358	0	0	0	0
	6(OPE)	0	-199	0	0	0	0
	8(SUS)	0	-3756	0	0	0	0
	9(SUS)	0	-3752	0	0	0	0
	10(OPE)	0	-9065	0	0	0	0
	11(OPE)	0	-15903	0	0	0	0
	12(OPE)	0	-12511	0	0	0	0
	13(OPE)	0	-13437	0	0	0	0
	14(OPE)	0	-13275	0	0	0	0
	15(OCC)	0	4293	0	0	0	0
	16(OCC)	0	-2545	0	0	0	0
	17(OCC)	0	846	0	0	0	0
	18(OCC)	0	-79	0	0	0	0
	19(OCC)	0	83	0	0	0	0
	MAX		-15903/L11				
1680		TYPE=Rigid ANC;					
	1(HYD)	-114	207	-472	-903	-1247	187
	2(OPE)	-5598	5298	-4667	-8750	-2314	2655
	4(OPE)	-5635	5328	-4712	-8868	-2333	2672
	6(OPE)	1117	-1308	1170	686	1546	-468
	8(SUS)	-60	121	-274	-524	-714	105
	9(SUS)	-60	120	-274	-523	-713	105
	10(OPE)	-1877	1357	-4406	-8299	2199	990
	11(OPE)	-7541	7344	-5171	-9483	-4645	3532

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 13, 2024 Time: 11:9
Job:: BINAK-GCS-CN-004-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	-5471	5099	-4794	-9490	-2243	2584
	13(OPE)	-5724	5457	-2586	-2696	1917	2710
	14(OPE)	-5545	5196	-6806	-14938	-6533	2632
	15(OCC)	3759	-3972	306	570	4532	-1682
	16(OCC)	-1906	2015	-459	-614	-2313	861
	17(OCC)	165	-229	-82	-622	90	-88
	18(OCC)	-88	129	2126	6173	4250	39
	19(OCC)	91	-132	-2094	-6069	-4200	-40
	MAX	-7541/L11	7344/L11	-6806/L14	-14938/L14	-6533/L14	3532/L11
1700		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-106	-3041	450	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	567	-3617	-925	0	0	0
	8(SUS)	-56	-1708	262	0	0	0
	9(SUS)	-56	-1706	262	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	-1914	466	335	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OCC)	0	0	0	0	0	0
	16(OCC)	-1914	466	335	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	MAX	-1914/L11	-3617/L6	-925/L6			
1740		TYPE=Rigid +Y;					
	1(HYD)	1028	-7659	-134	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	1270	-8287	2137	0	0	0
	8(SUS)	540	-4022	-71	0	0	0
	9(SUS)	539	-4017	-71	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OCC)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 13, 2024 Time: 11:9
Job:: BINAK-GCS-CN-004-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OCC)	0	0	0	0	0	0
	MAX	1270/L6	-8287/L6	2137/L6			
1760		TYPE=Rigid +Y;					
	1(HYD)	5	-9924	-1	0	0	0
	2(OPE)	-879	-5207	1292	0	0	0
	4(OPE)	-876	-5207	1293	0	0	0
	6(OPE)	1556	-5209	-150	0	0	0
	8(SUS)	3	-5211	-1	0	0	0
	9(SUS)	3	-5204	-1	0	0	0
	10(OPE)	-101	-5208	1559	0	0	0
	11(OPE)	-989	-5205	1208	0	0	0
	12(OPE)	-756	-4582	1148	0	0	0
	13(OPE)	-630	-5206	1429	0	0	0
	14(OPE)	-968	-5208	1226	0	0	0
	15(OCC)	775	-1	266	0	0	0
	16(OCC)	-113	2	-85	0	0	0
	17(OCC)	120	626	-145	0	0	0
	18(OCC)	247	1	136	0	0	0
	19(OCC)	-92	-1	-67	0	0	0
	MAX	1556/L6	-9924/L1	1559/L10			
1780		TYPE=Rigid +Y;					
	1(HYD)	-5	-12108	0	0	0	0
	2(OPE)	-3	-6357	1907	0	0	0
	4(OPE)	-3	-6357	1907	0	0	0
	6(OPE)	56	-6357	-1906	0	0	0
	8(SUS)	-3	-6358	0	0	0	0
	9(SUS)	-3	-6349	0	0	0	0
	10(OPE)	634	-6359	1799	0	0	0
	11(OPE)	-670	-6355	1785	0	0	0
	12(OPE)	-11	-5594	1678	0	0	0
	13(OPE)	-52	-6357	1906	0	0	0
	14(OPE)	-4	-6356	1907	0	0	0
	15(OCC)	637	-3	-108	0	0	0
	16(OCC)	-667	2	-122	0	0	0
	17(OCC)	-7	763	-229	0	0	0
	18(OCC)	-48	-0	-1	0	0	0
	19(OCC)	-0	0	-0	0	0	0
	MAX	-670/L11	-12108/L1	1907/L2			
1800		TYPE=Rigid +Y;					
	1(HYD)	5	-9953	1	0	0	0
	2(OPE)	712	-5229	1398	0	0	0
	4(OPE)	709	-5229	1399	0	0	0
	6(OPE)	-1567	-5228	-70	0	0	0

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 13, 2024 Time: 11:9
Job:: BINAK-GCS-CN-004-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	8(SUS)	3	-5226	1	0	0	0
	9(SUS)	3	-5219	1	0	0	0
	10(OPE)	1047	-5229	1169	0	0	0
	11(OPE)	181	-5228	1558	0	0	0
	12(OPE)	613	-4602	1237	0	0	0
	13(OPE)	516	-5230	1481	0	0	0
	14(OPE)	759	-5229	1372	0	0	0
	15(OCC)	338	-0	-231	0	0	0
	16(OCC)	-528	1	159	0	0	0
	17(OCC)	-96	627	-162	0	0	0
	18(OCC)	-193	-1	82	0	0	0
	19(OCC)	51	0	-27	0	0	0
	MAX	-1567/L6	-9953/L1	1558/L11			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15+L8
21 (OCC) L21=L16+L8
22 (OCC) L22=L17+L8
23 (OCC) L23=L18+L8
24 (OCC) L24=L19+L8
25 (EXP) L25=L2-L8
26 (EXP) L26=L2-L4
27 (EXP) L27=L6-L8
28 (EXP) L28=L2-L6
29 (EXP) L29=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 13, 2024 Time: 11:9
Job:: BINAK-GCS-CN-004-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 20 (OCC) L20=L15+L8
CASE 21 (OCC) L21=L16+L8
CASE 22 (OCC) L22=L17+L8
CASE 23 (OCC) L23=L18+L8
CASE 24 (OCC) L24=L19+L8
CASE 25 (EXP) L25=L2-L8
CASE 26 (EXP) L26=L2-L4
CASE 27 (EXP) L27=L6-L8
CASE 28 (EXP) L28=L2-L6
CASE 29 (EXP) L29=L4-L6

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	21.3	@Node	1140
Code Stress:	51453.7	Allowable Stress:	241316.5
Axial Stress:	6527.2	@Node	1119
Bending Stress:	44847.4	@Node	1140
Torsion Stress:	2370.7	@Node	1130
Hoop Stress:	13232.1	@Node	30
Max Stress Intensity:	51568.5	@Node	1140

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	49.7	@Node	1140
Code Stress:	64295.2	Allowable Stress:	129365.3
Axial Stress:	12088.7	@Node	20
Bending Stress:	53245.0	@Node	1140
Torsion Stress:	2814.6	@Node	1148
Hoop Stress:	24443.4	@Node	20
Max Stress Intensity:	64436.7	@Node	1140

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	41.4	@Node	1140
Code Stress:	53596.5	Allowable Stress:	129365.3
Axial Stress:	1310.1	@Node	1620
Bending Stress:	53172.6	@Node	1140
Torsion Stress:	2810.8	@Node	1130
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	53596.5	@Node	1140

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

CODE STRESS CHECK PASSED : LOADCASE 20 (OCC) L20=L15+L8

Highest Stresses: (KPa) LOADCASE 20 (OCC) L20=L15+L8			
Ratio (%):	41.7	@Node	1140
Code Stress:	71776.4	Allowable Stress:	172055.9
Axial Stress:	12744.5	@Node	940
Bending Stress:	60323.0	@Node	1140
Torsion Stress:	10134.2	@Node	1510
Hoop Stress:	24443.4	@Node	20
Max Stress Intensity:	79168.6	@Node	639

CODE STRESS CHECK PASSED : LOADCASE 21 (OCC) L21=L16+L8

Highest Stresses: (KPa) LOADCASE 21 (OCC) L21=L16+L8			
Ratio (%):	42.8	@Node	1140
Code Stress:	73691.7	Allowable Stress:	172055.9
Axial Stress:	12715.5	@Node	940
Bending Stress:	64661.5	@Node	699
Torsion Stress:	3629.3	@Node	1510
Hoop Stress:	24443.4	@Node	20
Max Stress Intensity:	85065.8	@Node	699

CODE STRESS CHECK PASSED : LOADCASE 22 (OCC) L22=L17+L8

Highest Stresses: (KPa) LOADCASE 22 (OCC) L22=L17+L8			
Ratio (%):	41.4	@Node	1140
Code Stress:	71203.5	Allowable Stress:	172055.9
Axial Stress:	12086.2	@Node	20
Bending Stress:	60118.8	@Node	1140
Torsion Stress:	2603.9	@Node	1148
Hoop Stress:	24443.4	@Node	20
Max Stress Intensity:	71324.9	@Node	1140

CODE STRESS CHECK PASSED : LOADCASE 23 (OCC) L23=L18+L8

Highest Stresses: (KPa) LOADCASE 23 (OCC) L23=L18+L8			
Ratio (%):	41.3	@Node	1110
Code Stress:	71144.1	Allowable Stress:	172055.9
Axial Stress:	12710.3	@Node	430
Bending Stress:	63274.2	@Node	539
Torsion Stress:	3989.5	@Node	1129
Hoop Stress:	24443.4	@Node	20
Max Stress Intensity:	83180.8	@Node	539

CODE STRESS CHECK PASSED : LOADCASE 24 (OCC) L24=L19+L8

Highest Stresses: (KPa) LOADCASE 24 (OCC) L24=L19+L8			
Ratio (%):	42.0	@Node	1110
Code Stress:	72214.0	Allowable Stress:	172055.9
Axial Stress:	12776.0	@Node	1550
Bending Stress:	61007.4	@Node	1110
Torsion Stress:	2694.5	@Node	1130
Hoop Stress:	24443.4	@Node	20

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Max Stress Intensity:       77570.7       @Node    539

 CODE STRESS CHECK PASSED      : LOADCASE 25 (EXP) L25=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 25 (EXP) L25=L2-L8
Ratio (%):                    53.7       @Node    249
Code Stress:                173322.1       Allowable Stress:     322980.9
Axial Stress:                 3140.6       @Node    780
Bending Stress:             170889.5       @Node    249
Torsion Stress:              15926.8       @Node   1120
Hoop Stress:                     0.0       @Node     20
Max Stress Intensity:       392119.1       @Node    249

 CODE STRESS CHECK PASSED      : LOADCASE 26 (EXP) L26=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 26 (EXP) L26=L2-L4
Ratio (%):                    0.9       @Node    889
Code Stress:                 2784.3       Allowable Stress:     309815.9
Axial Stress:                  90.7       @Node    940
Bending Stress:              2747.9       @Node    889
Torsion Stress:               150.1       @Node   1120
Hoop Stress:                     0.0       @Node     20
Max Stress Intensity:        6298.8       @Node    889

 CODE STRESS CHECK PASSED      : LOADCASE 27 (EXP) L27=L6-L8

Highest Stresses: (   KPa    ) LOADCASE 27 (EXP) L27=L6-L8
Ratio (%):                    7.7       @Node   1349
Code Stress:                25404.3       Allowable Stress:     327867.0
Axial Stress:                 896.8       @Node    950
Bending Stress:             25131.5       @Node   1349
Torsion Stress:              5893.1       @Node   1550
Hoop Stress:                     0.0       @Node     20
Max Stress Intensity:       57466.8       @Node   1349

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L2-L6

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L2-L6
Ratio (%):                    58.9       @Node    249
Code Stress:                190251.1       Allowable Stress:     322980.9
Axial Stress:                 3625.8       @Node    780
Bending Stress:             187564.3       @Node    249
Torsion Stress:              18046.4       @Node   1120
Hoop Stress:                     0.0       @Node     20
Max Stress Intensity:       430420.2       @Node    249

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L4-L6

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L4-L6
Ratio (%):                    59.5       @Node    249
Code Stress:                191912.8       Allowable Stress:     322639.7
Axial Stress:                 3653.3       @Node    780
Bending Stress:             189203.8       @Node    249
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 13, 2024 Time: 11:9
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Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Torsion Stress:	18196.5	@Node	1120
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	434179.3	@Node	249

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS..... 2
Nozzle Check : Multiple..... 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15+L8
21 (OCC) L21=L16+L8
22 (OCC) L22=L17+L8
23 (OCC) L23=L18+L8
24 (OCC) L24=L19+L8
25 (EXP) L25=L2-L8
26 (EXP) L26=L2-L4
27 (EXP) L27=L6-L8
28 (EXP) L28=L2-L6
29 (EXP) L29=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 13, 2024 Time: 11:9
Job:: BINAK-GCS-CN-004-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

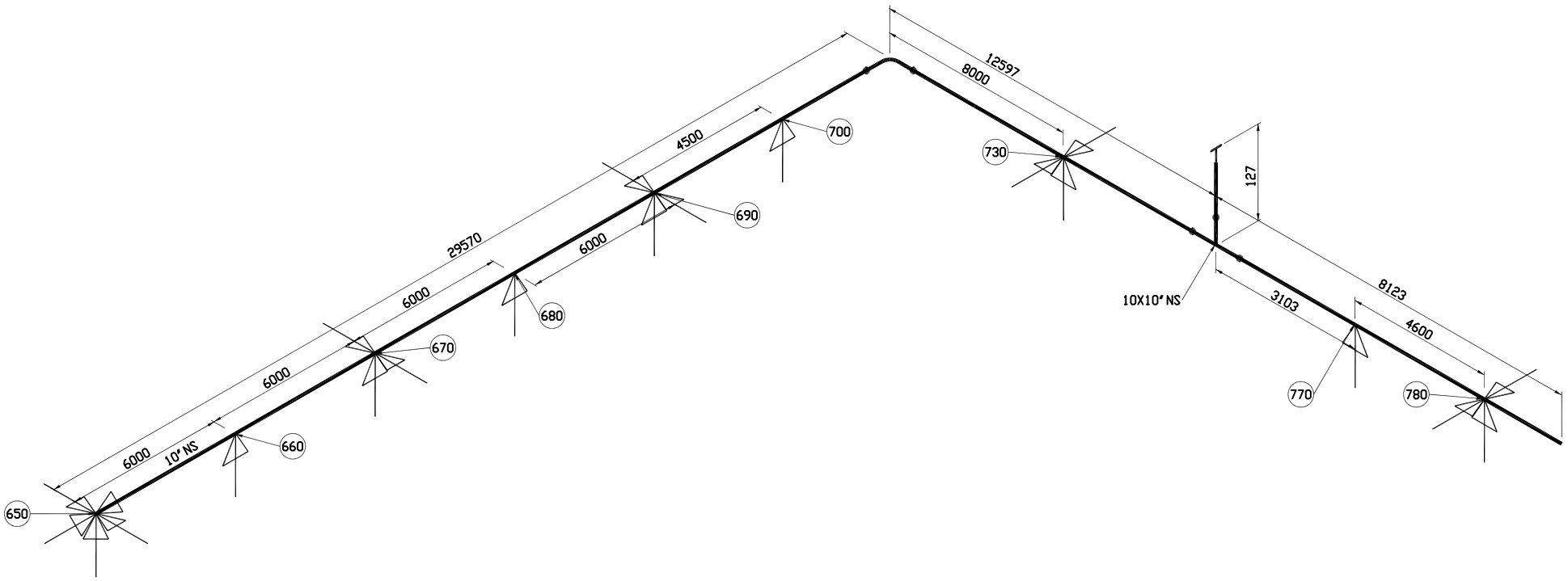
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
1550		Absolute Method								
	Limits	14001	14001	10501		10500	7000	9100		
	2(OPE)	1966	-4831	-3316	0.345	8440	-10003	12480	1.429	*
	4(OPE)	1989	-4834	-3346	0.345	8473	-10088	12543	1.441	*
	6(OPE)	-2278	210	1291	0.163	-5738	115	-2644	0.546	
	8(SUS)	-42	-2094	233	0.150	37	302	1774	0.195	
	9(SUS)	-42	-2091	233	0.149	37	302	1771	0.195	
1620		Absolute Method								
	Limits	14001	14001	10501		10500	7000	9100		
	2(OPE)	8005	-4667	5598	0.572	-8419	7834	4019	1.119	*
	4(OPE)	8029	-4712	5635	0.573	-8505	7877	4090	1.125	*
	6(OPE)	1507	1170	-1117	0.108	1146	-2363	501	0.338	
	8(SUS)	3636	-274	60	0.260	84	-54	246	0.027	
	9(SUS)	3632	-274	60	0.259	84	-54	246	0.027	

BNK-GCS-CN-005

1. GAS-111-0013-AN07-8"-PT
2. GAS-111-0014-AN07-8"-PT
3. FL-112-0005-AN07-10"-PT
4. FL-112-0006-AN07-10"-PT



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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 3

REV.	CHANGE	DATE
		13 MAY 2024

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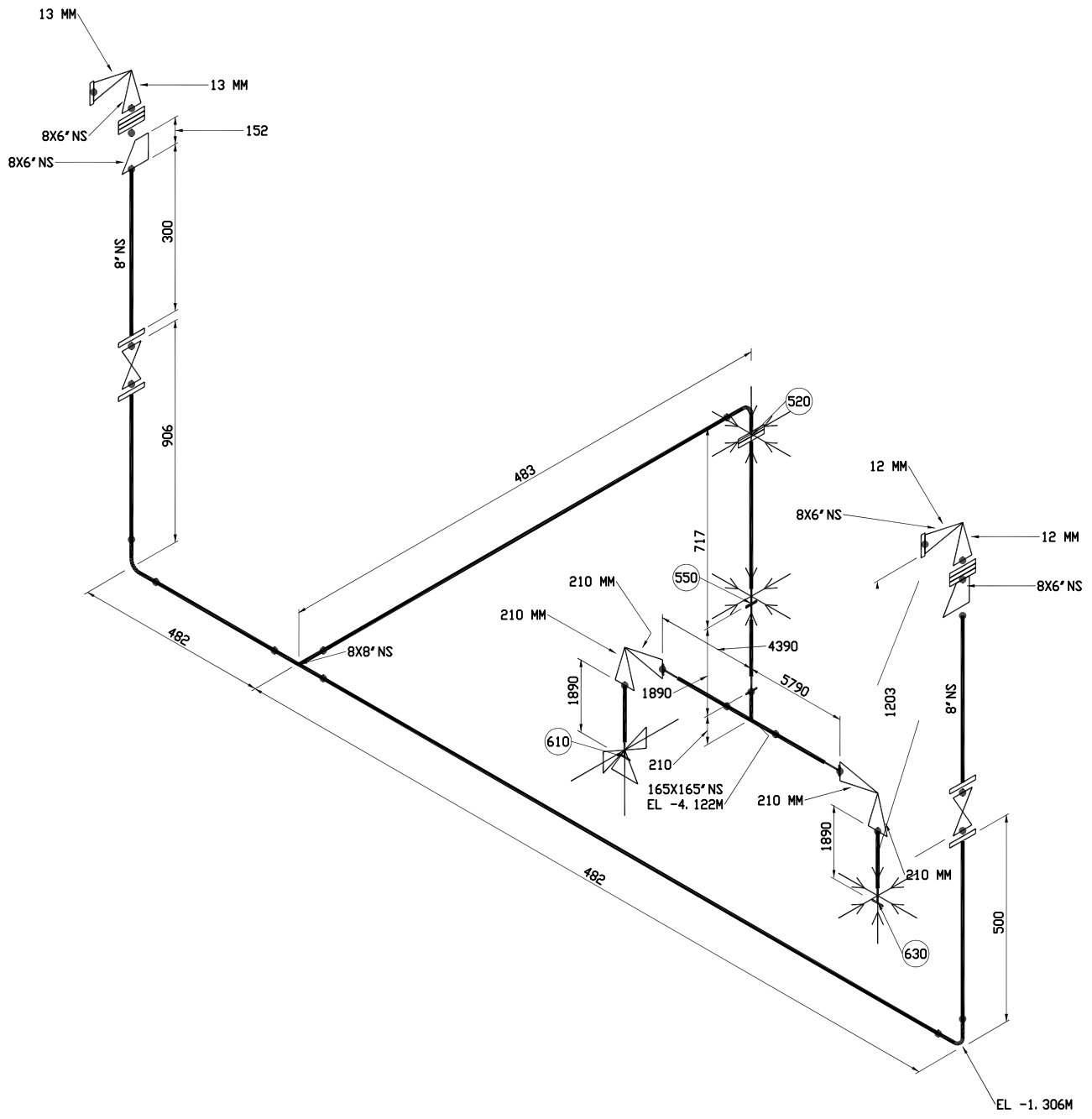

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

2 OF 3

REV.	CHANGE	DATE
		13 MAY 2024

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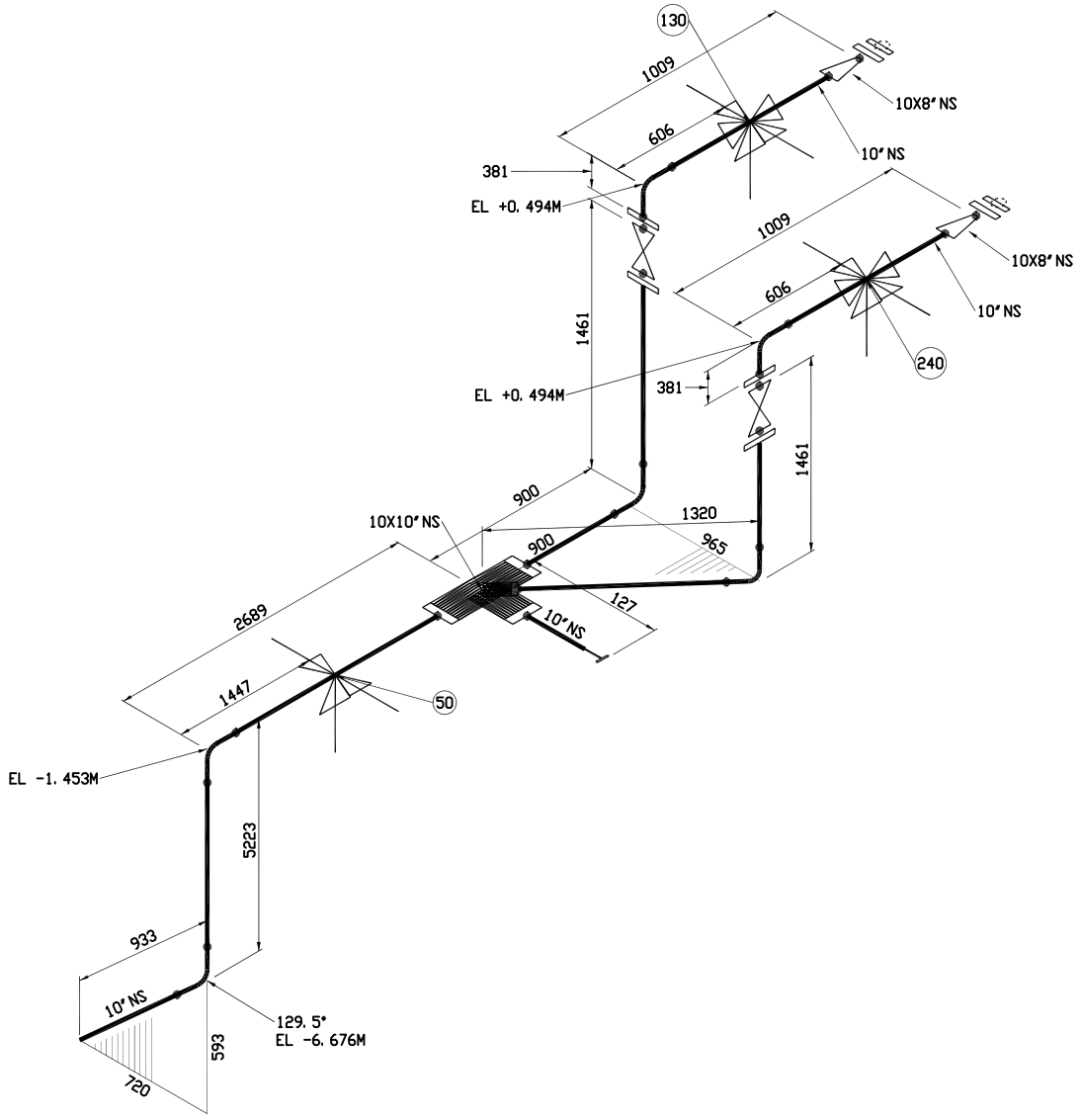

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

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REV.	CHANGE	DATE
		13 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

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Job:: BNK-GCS-CN-005-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 13,2024 13: 3:42

PIPE DATA

From 10 To 20 DY= 127.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
GENERAL
T1= 272 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,335,024 KPa
EH2= 187,335,024 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0001362 kg./cu.cm.
RIGID Weight= .00 N.
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 20 To 30 DX= 720.000 mm. DY= 593.000 mm.
GENERAL
T1= 272 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 50.525 Angle/Node @1= 25.26 29
Angle/Node @2= .00 28
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 30 To 40 DY= 5,223.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 39
Angle/Node @2= .00 38

From 40 To 50 DZ= -1,447.000 mm.
RESTRAINTS
Node 50 +Y Mu = .30
Node 50 X Gap= 3.000 mm.

INPUT LISTING

```
 From  50  To  60 DZ= -1,242.000 mm.
 ------------------------------------------------------------------------------
 From  60  To  70 DZ= -900.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 69
    Angle/Node @2= .00 68
 ------------------------------------------------------------------------------
 From  70  To  80 DY= 1,017.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  80  To  90 DY= 104.775 mm.
 RIGID  Weight= 235.76 N.
 ------------------------------------------------------------------------------
 From  90  To  100 DY= 339.000 mm.
 RIGID  Weight= 3,563.03 N.
 ------------------------------------------------------------------------------
 From  100  To  110 DY= 104.775 mm.
 RIGID  Weight= 235.76 N.
 ------------------------------------------------------------------------------
 From  110  To  120 DY= 381.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 119
 ------------------------------------------------------------------------------
 From  120  To  130 DZ= -606.000 mm.
 RESTRAINTS
    Node  130  +Y   Cnode  580
    Node  130  X   Cnode  580   Gap= 3.000 mm.
    Node  130  Z   Cnode  580   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  130  To  140 DZ= -225.000 mm.
 ------------------------------------------------------------------------------
 From  140  To  150 DZ= -178.000 mm.
 REDUCER
    Diam2= 219.075 mm.   Wall2= 10.312 mm.
 ------------------------------------------------------------------------------
 From  150  To  160 DZ= -104.775 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  60  To  170  DX= 127.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  170   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  60  To  180  DX= 965.000 mm.  DZ= -900.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 179
```

INPUT LISTING
```
    Angle/Node @2= .00 178
 SIF's & TEE's
    Node  60   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  180  To  190 DY= 1,017.000 mm.
 ---------------------------------------------------------------------------
 From  190  To  200 DY= 104.775 mm.
 RIGID  Weight= 235.76 N.
 ---------------------------------------------------------------------------
 From  200  To  210 DY= 339.000 mm.
 RIGID  Weight= 3,563.03 N.
 ---------------------------------------------------------------------------
 From  210  To  220 DY= 104.775 mm.
 RIGID  Weight= 235.76 N.
 ---------------------------------------------------------------------------
 From  220  To  230 DY= 381.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 229
 ---------------------------------------------------------------------------
 From  230  To  240 DZ= -606.000 mm.
 RESTRAINTS
    Node  240  +Y   Cnode  590
    Node  240  X   Cnode  590   Gap= 3.000 mm.
    Node  240  Z   Cnode  590   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  240  To  250 DZ= -225.000 mm.
 ---------------------------------------------------------------------------
 From  250  To  260 DZ= -178.000 mm.
 REDUCER
    Diam2= 219.075 mm.   Wall2= 10.312 mm.
 ---------------------------------------------------------------------------
 From  260  To  270 DZ= -104.775 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 177.93 N.
 ---------------------------------------------------------------------------
 From  270  To  280 DZ= -105.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
 GENERAL
    T1= 85 C   T2= 32 C   T3= 32 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Fluid Den= .0000060 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 177.93 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  280  To  290 DZ= -136.000 mm.
 RIGID  Weight= 200.01 N.
 FORCES & MOMENTS
    Node  290   FY1= 2,000.10 N.   FZ1= -3,000.15 N.
 ---------------------------------------------------------------------------
 From  290  To  300 DY= -122.500 mm.
```

INPUT LISTING
```
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 200.01 N.
 ------------------------------------------------------------------------------
 From  300  To  310 DY= -122.500 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  310  To  320 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  320  To  330 DY= -152.000 mm.
 REDUCER
    Diam2= 219.075 mm.   Wall2= 10.312 mm.
 ------------------------------------------------------------------------------
 From  330  To  340 DY= -300.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  340  To  350 DY= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  350  To  360 DY= -301.000 mm.
 RIGID  Weight= 2,259.70 N.
 ------------------------------------------------------------------------------
 From  360  To  370 DY= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  370  To  380 DY= -500.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 379
    Angle/Node @2= .00 378
 ------------------------------------------------------------------------------
 From  380  To  390  DX= -482.000 mm.
 ------------------------------------------------------------------------------
 From  160  To  400 DZ= -105.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 85 C   T2= 32 C   T3= 32 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 199,086,608 KPa
    EH2= 202,494,736 KPa   EH3= 202,494,736 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000060 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0001362 kg./cu.cm.
 RIGID  Weight= 177.93 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  400  To  410 DZ= -136.000 mm.
 RIGID  Weight= 200.01 N.
```

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```
 FORCES & MOMENTS
    Node  410   FY1= 2,000.10 N.   FZ1= -3,000.15 N.
 ------------------------------------------------------------------------------
 From  410  To  420 DY= -148.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 200.01 N.
 ------------------------------------------------------------------------------
 From  420  To  430 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  430  To  440 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  440  To  450 DY= -152.000 mm.
 REDUCER
    Diam2= 219.075 mm.   Wall2= 10.312 mm.
 ------------------------------------------------------------------------------
 From  450  To  460 DY= -300.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  460  To  470 DY= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  470  To  480 DY= -301.000 mm.
 RIGID  Weight= 2,259.70 N.
 ------------------------------------------------------------------------------
 From  480  To  490 DY= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  490  To  500 DY= -500.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 499
    Angle/Node @2= .00 498
 ------------------------------------------------------------------------------
 From  500  To  390  DX= 482.000 mm.
 ------------------------------------------------------------------------------
 From  390  To  800 DZ= -483.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 799
    Angle/Node @2= .00 798
 ------------------------------------------------------------------------------
 From  800  To  510 DY= -305.000 mm.
 ------------------------------------------------------------------------------
 From  510  To  520 DY= -104.775 mm.
 RIGID  Weight= 177.93 N.
 RESTRAINTS
    Node  520  ANC   Cnode  530
 ------------------------------------------------------------------------------
 From  530  To  540 DY= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  540  To  550 DY= -202.000 mm.
```

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INPUT LISTING

```
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  550  ANC   Cnode  560
 EQUIPMENT LIMITS
    Nozzle Node = 550
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,480.19 N.m.   MC= 5,820.25 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  560  To  570 DY= -2,100.000 mm.
 PIPE
    Dia= 4,200.000 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  560  To  580  DX= -483.000 mm.  DY= 2,516.175 mm.  DZ= 1,231.773 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  560  To  590  DX= 482.000 mm.  DY= 2,516.175 mm.  DZ= 1,231.773 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  570  To  600  DX= -4,600.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  600  To  610 DY= -2,100.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  610  +Y   Mu = .30
    Node  610  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  570  To  620  DX= 6,000.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  620  To  630 DY= -2,100.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  630  ANC
 ---------------------------------------------------------------------------
 From  650  To  660 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0001362 kg./cu.cm.
 RESTRAINTS
    Node  660  +Y   Mu = .30
    Node  650  +Y   Mu = .30
    Node  650  X   Gap= 3.000 mm.   Mu = .30
```

INPUT LISTING
```
    Node  650  Z   Gap= 3.000 mm.   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  660  To  670 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  670  +Y   Mu = .30
    Node  670  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  670  To  680 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  680  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  680  To  690 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  690  +Y   Mu = .30
    Node  690  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  690  To  700 DZ= -4,500.000 mm.
 RESTRAINTS
    Node  700  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  700  To  710 DZ= -1,070.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 709
    Angle/Node @2= .00 708
 ------------------------------------------------------------------------------
 From  710  To  720  DX= 3,500.000 mm.
 ------------------------------------------------------------------------------
 From  720  To  730  DX= 4,500.000 mm.
 RESTRAINTS
    Node  730  +Y   Mu = .30
    Node  730  Z
 ------------------------------------------------------------------------------
 From  730  To  740  DX= 4,500.000 mm.
 ------------------------------------------------------------------------------
 From  740  To  750  DX= 97.000 mm.
 ------------------------------------------------------------------------------
 From  750  To  20 DY= 127.000 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  20   Welding Tee
 ------------------------------------------------------------------------------
 From  750  To  770  DX= 3,103.000 mm.
 RESTRAINTS
    Node  770  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  770  To  780  DX= 4,600.000 mm.
 RESTRAINTS
    Node  780  +Y   Mu = .00
    Node  780  Z
 ------------------------------------------------------------------------------
 From  780  To  790  DX= 420.000 mm.
```

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MATERIAL Changes:

10	20	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
160	400	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
650	660	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.

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ALLOWABLE STRESS Changes

10	20	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,365 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
20	30	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,365 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
70	80	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,365 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
270	280	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
160	400	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
650	660	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa

INPUT LISTING

```
                                    Sy= 241,316 KPa
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 BEND ELEMENTS
    20              30              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 50.525   Angle/Node @1= 25.26 29
                                    Angle/Node @2= .00 28
    30              40              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 39
                                    Angle/Node @2= .00 38
    60              70              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 69
                                    Angle/Node @2= .00 68
   110             120              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   119
    60             180              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   179   Angle/Node @2= .00 178
   220             230              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   229
   370             380              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   379   Angle/Node @2= .00 378
   490             500              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   499   Angle/Node @2= .00 498
   390             800              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   799   Angle/Node @2= .00 798
   700             710              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   709   Angle/Node @2= .00 708
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 RIGIDS
    10              20          RIGID  Weight= .00 N.
    80              90          RIGID  Weight= 235.76 N.
    90             100          RIGID  Weight= 3,563.03 N.
   100             110          RIGID  Weight= 235.76 N.
   150             160          RIGID  Weight= 177.93 N.
    60             170          RIGID  Weight= .00 N.
   190             200          RIGID  Weight= 235.76 N.
   200             210          RIGID  Weight= 3,563.03 N.
   210             220          RIGID  Weight= 235.76 N.
   260             270          RIGID  Weight= 177.93 N.
   270             280          RIGID  Weight= 177.93 N.
   280             290          RIGID  Weight= 200.01 N.
   290             300          RIGID  Weight= 200.01 N.
   300             310          RIGID  Weight= 111.21 N.
   310             320          RIGID  Weight= 111.21 N.
```

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INPUT LISTING

340	350	RIGID	Weight= 177.93 N.
350	360	RIGID	Weight= 2,259.70 N.
360	370	RIGID	Weight= 177.93 N.
160	400	RIGID	Weight= 177.93 N.
400	410	RIGID	Weight= 200.01 N.
410	420	RIGID	Weight= 200.01 N.
420	430	RIGID	Weight= 111.21 N.
430	440	RIGID	Weight= 111.21 N.
460	470	RIGID	Weight= 177.93 N.
470	480	RIGID	Weight= 2,259.70 N.
480	490	RIGID	Weight= 177.93 N.
510	520	RIGID	Weight= 177.93 N.
530	540	RIGID	Weight= 177.93 N.
560	570	RIGID	Weight= .00 N.
560	580	RIGID	Weight= .00 N.
560	590	RIGID	Weight= .00 N.
570	600	RIGID	Weight= .00 N.
600	610	RIGID	Weight= .00 N.
570	620	RIGID	Weight= .00 N.
620	630	RIGID	Weight= .00 N.
750	20	RIGID	Weight= .00 N.

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SIF's & TEE's

60	170	Node 170	Unreinforced Tee
60	180	Node 60	Unreinforced Tee
750	20	Node 20	Welding Tee

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REDUCERS

140	150	Diam2= 219.075 mm.	Wall2= 10.312 mm.
250	260	Diam2= 219.075 mm.	Wall2= 10.312 mm.
320	330	Diam2= 219.075 mm.	Wall2= 10.312 mm.
440	450	Diam2= 219.075 mm.	Wall2= 10.312 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
50	+Y				.30	.000	1.000	.000
50	X			3.00		1.000	.000	.000
130	+Y	580				.000	1.000	.000
130	X	580		3.00		1.000	.000	.000
130	Z	580		3.00		.000	.000	1.000
240	+Y	590				.000	1.000	.000
240	X	590		3.00		1.000	.000	.000
240	Z	590		3.00		.000	.000	1.000
520	ANC	530				.000	.000	.000
550	ANC	560				.000	.000	.000
610	+Y				.30	.000	1.000	.000
610	Z			3.00	.30	.000	.000	1.000

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INPUT LISTING

630	ANC				.000	.000	.000
660	+Y			.30	.000	1.000	.000
650	+Y			.30	.000	1.000	.000
650	X		3.00	.30	1.000	.000	.000
650	Z		3.00	.30	.000	.000	1.000
670	+Y			.30	.000	1.000	.000
670	X		3.00		1.000	.000	.000
680	+Y			.30	.000	1.000	.000
690	+Y			.30	.000	1.000	.000
690	X		3.00		1.000	.000	.000
700	+Y			.30	.000	1.000	.000
730	+Y			.30	.000	1.000	.000
730	Z				.000	.000	1.000
770	+Y			.30	.000	1.000	.000
780	+Y			.00	.000	1.000	.000
780	Z				.000	.000	1.000

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EQUIPMENT LIMITS
540 550 Nozzle Node = 550

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 11,200.56 N. FB= 11,200.56 N.
FC= 8,400.42 N. MA= 6,720.29 N.m. MB= 4,480.19 N.m. MC= 5,820.25 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute

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FORCES AND MOMENTS
280 290 Node 290 FY1= 2,000.10 N.
FZ1= -3,000.15 N.
400 410 Node 410 FY1= 2,000.10 N.
FZ1= -3,000.15 N.

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UNIFORM LOAD Changes
10 20 Vector1 in G-s
X1 Dir = .26 g's Y1 Dir = .00 g's
Z1 Dir = .00 g's
Vector2 in G-s
X2 Dir = .00 g's Y2 Dir = .12 g's
Z2 Dir = .00 g's
Vector3 in G-s
X3 Dir = .00 g's Y3 Dir = .00 g's
Z3 Dir = .26 g's

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INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

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INPUT LISTING

LENGTH	inches	x	25.400	= mm.
FORCE	pounds	x	4.448	= N.
MASS(dynamics)	pounds	x	0.454	= Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	= N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	= N.m.
STRESS	lbs./sq.in.	x	6.895	= KPa
TEMP. SCALE	degrees F.	x	0.556	= C
PRESSURE	psig	x	6.895	= KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	= KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	= kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	= kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	= kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	= N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	= N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	= N./cm.
G LOAD	g's	x	1.000	= g's
WIND LOAD	lbs./sq.in.	x	6.895	= KPa
ELEVATION	inches	x	0.025	= m.
COMPOUND LENGTH	inches	x	25.400	= mm.
DIAMETER	inches	x	25.400	= mm.
WALL THICKNESS	inches	x	25.400	= mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS =	NO
MISSING MASS ZPA =	EXTRACTED
MIN WALL MILL TOLERANCE =	12.5000
WRC-107 VERSION =	MAR 79 1B1/2B1
WRC-107 INTERPOLATION =	LAST VALUE
DEFAULT AMBIENT TEMPERATURE=	21.1111 C

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INPUT LISTING

```
  BOURDON PRESSURE=                  NONE
  COEFFICIENT OF FRICTION (MU) =          0.000000
  INCLUDE SPRG STIF IN HGR OPE =     NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =             B31.1(POST1980)
  USE WRC329                         NO
  NO REDUCED SIF FOR RFT AND WLT     NO
  B31.1 REDUCED Z FIX =              YES
  CLASS 1 BRANCH FLEX                NO
  ALL STRESS CASES CORRODED =        NO
  ADD TORSION IN SL STRESS =         DEFAULT
  ADD F/A IN STRESS =                DEFAULT
  OCCASIONAL LOAD FACTOR =                0.000000
  DEFAULT CODE =                     B31.3
  B31.3 SUS CASE SIF FACTOR =             0.000000
  ALLOW USERS BEND SIF =             NO
  USE SCHNEIDER                      NO
  YIELD CRITERION STRESS =           MAX 3D SHEAR
  USE PD/4T                           NO
  BASE HOOP STRESS ON ? =             ID
  EN13480 USE IN OUTPLANE SIFS=       NO
  LIBERAL EXPANSION ALLOWABLE=       YES
  B31.3 SEC 319.2.3C SAXIAL=         Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=    DEFAULT
  IMPLEMENT B313 APP-P                NO
  IMPLEMENT B313 CODE CASE 178       YES
  IGNORE B31.1/B31.3 Wc FACTOR=      YES
  USE FRP SIF =                      YES
  USE FRP FLEX =                     YES
  BS 7159 Pressure Stiffening=       Design Strain
  FRP Property Data File=            CAESAR.FRP
  FRP Emod (axial) =                  0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =       0.250000
  FRP Ea/Eh*Vh/a =                    0.152730
  FRP Laminate Type =                THREE
  FRP Alpha =                          21.6000              C
  FRP Density =                       0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =    NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
    Uniform Load Option ........    1.000

    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
```

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INPUT LISTING

```
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
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```

COORDINATE REPORT

NODE	X (mm.)	Y (mm.)	Z (mm.)
10	-2503.080	-7395.683	-35745.781
20	-2503.080	-7268.683	-35745.781
30	-1783.080	-6675.683	-35745.781
40	-1783.080	-1452.683	-35745.781
50	-1783.080	-1452.683	-37192.781
60	-1783.080	-1452.683	-38434.781
70	-1783.080	-1452.683	-39334.781
80	-1783.080	-435.683	-39334.781
90	-1783.080	-330.908	-39334.781
100	-1783.080	8.092	-39334.781
110	-1783.080	112.867	-39334.781
120	-1783.080	493.867	-39334.781
130	-1783.080	493.867	-39940.781
140	-1783.080	493.867	-40165.781
150	-1783.080	493.867	-40343.781
160	-1783.080	493.867	-40448.555
60	-1783.080	-1452.683	-38434.781
170	-1656.080	-1452.683	-38434.781
60	-1783.080	-1452.683	-38434.781
180	-818.080	-1452.683	-39334.781
190	-818.080	-435.683	-39334.781
200	-818.080	-330.908	-39334.781
210	-818.080	8.092	-39334.781
220	-818.080	112.867	-39334.781
230	-818.080	493.867	-39334.781
240	-818.080	493.867	-39940.781
250	-818.080	493.867	-40165.781
260	-818.080	493.867	-40343.781
270	-818.080	493.867	-40448.555
280	-818.080	493.867	-40553.555
290	-818.080	493.867	-40689.555
300	-818.080	371.367	-40689.555
310	-818.080	248.867	-40689.555
320	-818.080	156.792	-40689.555
330	-818.080	4.792	-40689.555
340	-818.080	-295.208	-40689.555
350	-818.080	-399.983	-40689.555
360	-818.080	-700.983	-40689.555
370	-818.080	-805.758	-40689.555
380	-818.080	-1305.758	-40689.555
390	-1300.080	-1305.758	-40689.555
160	-1783.080	493.867	-40448.555
400	-1783.080	493.867	-40553.555
410	-1783.080	493.867	-40689.555

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INPUT LISTING

420	-1783.080	345.867	-40689.555
430	-1783.080	253.792	-40689.555
440	-1783.080	161.717	-40689.555
450	-1783.080	9.717	-40689.555
460	-1783.080	-290.283	-40689.555
470	-1783.080	-395.058	-40689.555
480	-1783.080	-696.058	-40689.555
490	-1783.080	-800.833	-40689.555
500	-1783.080	-1300.833	-40689.555
500	-1782.080	-1305.758	-40689.555
390	-1300.080	-1305.758	-40689.555
800	-1300.080	-1305.758	-41172.555
510	-1300.080	-1610.758	-41172.555
520	-1300.080	-1715.533	-41172.555
540	-1300.080	-1820.308	-41172.555
550	-1300.080	-2022.308	-41172.555
570	-1300.080	-4122.308	-41172.555
550	-1300.080	-2022.308	-41172.555
130	-1783.080	493.867	-39940.781
550	-1300.080	-2022.308	-41172.555
240	-818.080	493.867	-39940.781
570	-1300.080	-4122.308	-41172.555
600	-5900.080	-4122.308	-41172.555
610	-5900.080	-6222.308	-41172.555
570	-1300.080	-4122.308	-41172.555
620	4699.920	-4122.308	-41172.555
630	4699.920	-6222.308	-41172.555
650	-15100.080	-7395.683	-6175.781
660	-15100.080	-7395.683	-12175.781
670	-15100.080	-7395.683	-18175.781
680	-15100.080	-7395.683	-24175.781
690	-15100.080	-7395.683	-30175.781
700	-15100.080	-7395.683	-34675.781
710	-15100.080	-7395.683	-35745.781
720	-11600.080	-7395.683	-35745.781
730	-7100.080	-7395.683	-35745.781
740	-2600.080	-7395.683	-35745.781
750	-2503.080	-7395.683	-35745.781
20	-2503.080	-7268.683	-35745.781
750	-2503.080	-7395.683	-35745.781
770	599.920	-7395.683	-35745.781
780	5199.920	-7395.683	-35745.781
790	5619.920	-7395.683	-35745.781

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1+U3
CASE 14 (OPE) W+T2+P1-U3
CASE 15 (OPE) W+T2+P1+F1
CASE 16 (OCC) L16=L10-L4
CASE 17 (OCC) L17=L11-L4
CASE 18 (OCC) L18=L12-L4
CASE 19 (OCC) L19=L13-L4
CASE 20 (OCC) L20=L14-L4
CASE 21 (OCC) L21=L15-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
50		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	6	-12562	-102	0	0	0
	2(OPE)	948	0	0	0	0	0
	4(OPE)	1764	0	0	0	0	0
	6(OPE)	-355	-10916	-3255	0	0	0
	8(SUS)	37	-6853	-322	0	0	0
	9(SUS)	37	-6844	-323	0	0	0
	10(OPE)	6037	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	1945	0	0	0	0	0
	13(OPE)	2037	0	0	0	0	0
	14(OPE)	1388	0	0	0	0	0
	15(OPE)	1493	0	0	0	0	0
	16(OCC)	4273	0	0	0	0	0
	17(OCC)	-1764	0	0	0	0	0
	18(OCC)	181	0	0	0	0	0
	19(OCC)	273	0	0	0	0	0
	20(OCC)	-376	0	0	0	0	0
	21(OCC)	-271	0	0	0	0	0
	MAX	6037/L10	-12562/L1	-3255/L6			
130		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	1(HYD)	0	-8349	0	0	0	0
	2(OPE)	0	-737	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	-9255	0	0	0	0
	8(SUS)	0	-7659	0	0	0	0
	9(SUS)	0	-7656	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	-1730	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	-3403	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	-1730	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	-3403	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-1730/L11	-9255/L6				
240		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	0	-11392	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	-13112	0	0	0	0
	8(SUS)	0	-9327	0	0	0	0
	9(SUS)	0	-9323	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	-1697	0	0	0
	15(OPE)	0	0	-3543	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	-1697	0	0	0
	21(OCC)	0	0	-3543	0	0	0
	MAX		-13112/L6	-3543/L15			
520		TYPE=Rigid ANC;					
	1(HYD)	-10	-2537	396	518	71	221
	2(OPE)	1497	-14229	-1901	1063	4365	1340

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	760	-14359	-2116	-35	2403	1718
	6(OPE)	-235	3052	3514	752	259	369
	8(SUS)	-39	-1757	481	434	31	134
	9(SUS)	-39	-1751	481	433	31	134
	10(OPE)	4082	-14362	-2112	-58	2956	-1368
	11(OPE)	-2221	-14339	-2130	-52	452	3995
	12(OPE)	712	-12257	-2031	-1127	2384	2043
	13(OPE)	672	-10864	4144	2964	2327	847
	14(OPE)	1026	-14555	-6659	-3036	2391	1617
	15(OPE)	1133	-11357	-4369	-2988	2332	2296
	16(OCC)	3322	-3	4	-23	552	-3086
	17(OCC)	-2981	20	-14	-17	-1951	2277
	18(OCC)	-48	2102	85	-1092	-19	325
	19(OCC)	-89	3495	6261	2999	-77	-871
	20(OCC)	266	-197	-4543	-3001	-13	-101
	21(OCC)	373	3002	-2252	-2953	-71	578
	MAX	4082/L10	-14555/L14	-6659/L14	-3036/L14	4365/L2	3995/L11
550		TYPE=Rigid ANC;					
	1(HYD)	-10	-2913	396	640	71	224
	2(OPE)	1497	-14513	-1901	479	4365	881
	4(OPE)	760	-14642	-2116	-684	2403	1485
	6(OPE)	-235	2768	3514	1830	259	441
	8(SUS)	-39	-2040	481	582	31	146
	9(SUS)	-39	-2033	481	581	31	146
	10(OPE)	4156	-14645	-2112	-706	2956	-2635
	11(OPE)	-2295	-14622	-2130	-705	452	4691
	12(OPE)	712	-12506	-2031	-1750	2384	1824
	13(OPE)	672	-11147	4218	4250	2327	641
	14(OPE)	1026	-14839	-6732	-5093	2391	1303
	15(OPE)	1133	-11641	-4369	-4328	2332	1948
	16(OCC)	3395	-3	4	-21	552	-4120
	17(OCC)	-3055	20	-14	-21	-1951	3206
	18(OCC)	-48	2136	85	-1066	-19	339
	19(OCC)	-89	3495	6334	4934	-77	-844
	20(OCC)	266	-197	-4616	-4409	-13	-182
	21(OCC)	373	3002	-2252	-3644	-71	463
	MAX	4156/L10	-14839/L14	-6732/L14	-5093/L14	4365/L2	4691/L11
610		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-97	-10683	-65	0	0	0
	2(OPE)	-2243	-7476	-0	0	0	0
	4(OPE)	-2193	-7309	-2	0	0	0
	6(OPE)	-2921	-9736	3	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	8(SUS)	-82	-9013	-45	0	0	0
	9(SUS)	-82	-9007	-45	0	0	0
	10(OPE)	-1848	-6160	-1	0	0	0
	11(OPE)	-2747	-9156	-3	0	0	0
	12(OPE)	-1881	-6269	-1	0	0	0
	13(OPE)	-2208	-7359	4	0	0	0
	14(OPE)	-2192	-7306	-7	0	0	0
	15(OPE)	-1746	-5821	-5	0	0	0
	16(OCC)	345	1148	0	0	0	0
	17(OCC)	-554	-1848	-1	0	0	0
	18(OCC)	312	1040	0	0	0	0
	19(OCC)	-15	-51	6	0	0	0
	20(OCC)	1	3	-6	0	0	0
	21(OCC)	446	1487	-3	0	0	0
	MAX	-2921/L6	-10683/L1	-65/L1			
630		TYPE=Rigid ANC;					
	1(HYD)	87	-11971	461	26618	3134	21492
	2(OPE)	3937	-7774	-1901	-6599	-7041	7200
	4(OPE)	2860	-7334	-2115	-9572	-10278	8674
	6(OPE)	2466	-9863	3511	44139	21313	13969
	8(SUS)	43	-10013	526	23525	3391	18131
	9(SUS)	43	-10006	526	23517	3391	18118
	10(OPE)	6016	-8485	-2111	-9576	-9702	2483
	11(OPE)	-1136	-5466	-2127	-9651	-14427	16626
	12(OPE)	2455	-6237	-2030	-10280	-9789	7423
	13(OPE)	2796	-7191	4214	26157	27593	8755
	14(OPE)	3006	-7533	-8423	-44766	-47299	8581
	15(OPE)	3126	-5819	-7906	-46475	-43372	5327
	16(OCC)	3156	-1151	4	-3	576	-6191
	17(OCC)	-3996	1868	-12	-79	-4149	7952
	18(OCC)	-406	1096	85	-708	489	-1250
	19(OCC)	-64	143	6329	35730	37871	82
	20(OCC)	146	-199	-6308	-35194	-37021	-93
	21(OCC)	265	1514	-5792	-36903	-33094	-3347
	MAX	6016/L10	-11971/L1	-8423/L14	-46475/L15	-47299/L14	21492/L1
650		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	0	-2575	0	0	0	0
	2(OPE)	-131	-1398	12657	0	0	0
	4(OPE)	-141	-1398	12726	0	0	0
	6(OPE)	-1786	-1397	-6356	0	0	0
	8(SUS)	0	-1397	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(SUS)	0	-1396	0	0	0	0
	10(OPE)	660	-1398	12265	0	0	0
	11(OPE)	-3863	-1398	13050	0	0	0
	12(OPE)	-130	-1231	12002	0	0	0
	13(OPE)	-140	-1398	17463	0	0	0
	14(OPE)	-2320	-1398	8091	0	0	0
	15(OPE)	-133	-1398	12697	0	0	0
	16(OCC)	800	-0	-461	0	0	0
	17(OCC)	-3723	0	324	0	0	0
	18(OCC)	11	168	-724	0	0	0
	19(OCC)	1	-0	4737	0	0	0
	20(OCC)	-2179	0	-4635	0	0	0
	21(OCC)	8	0	-29	0	0	0
	MAX	-3863/L11	-2575/L1	17463/L13			
660		TYPE=Rigid +Y;					
	1(HYD)	-0	-7423	0	0	0	0
	2(OPE)	21	-4023	-1207	0	0	0
	4(OPE)	14	-4023	-1207	0	0	0
	6(OPE)	-68	-4029	1207	0	0	0
	8(SUS)	-0	-4029	0	0	0	0
	9(SUS)	-0	-4023	0	0	0	0
	10(OPE)	136	-4023	-1199	0	0	0
	11(OPE)	-274	-4023	-1175	0	0	0
	12(OPE)	19	-3540	-1062	0	0	0
	13(OPE)	15	-4023	-1207	0	0	0
	14(OPE)	6	-4024	-1207	0	0	0
	15(OPE)	19	-4024	-1207	0	0	0
	16(OCC)	121	0	8	0	0	0
	17(OCC)	-289	-0	31	0	0	0
	18(OCC)	4	483	145	0	0	0
	19(OCC)	1	0	0	0	0	0
	20(OCC)	-8	-0	-0	0	0	0
	21(OCC)	5	-1	-0	0	0	0
	MAX	-289/L17	-7423/L1	-1207/L15			
670		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-6224	1	0	0	0
	2(OPE)	1286	-3400	-1016	0	0	0
	4(OPE)	1364	-3399	-1016	0	0	0
	6(OPE)	-3	-3374	1012	0	0	0
	8(SUS)	0	-3378	0	0	0	0
	9(SUS)	0	-3374	0	0	0	0
	10(OPE)	3081	-3401	-1017	0	0	0
	11(OPE)	-16	-3399	-1020	0	0	0
	12(OPE)	1286	-2992	-895	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	1357	-3400	-1017	0	0	0
	14(OPE)	1421	-3398	-1016	0	0	0
	15(OPE)	1299	-3396	-1015	0	0	0
	16(OCC)	1717	-1	-0	0	0	0
	17(OCC)	-1380	0	-3	0	0	0
	18(OCC)	-78	407	122	0	0	0
	19(OCC)	-7	-1	-0	0	0	0
	20(OCC)	57	1	0	0	0	0
	21(OCC)	-64	3	1	0	0	0
	MAX	3081/L10	-6224/L1	-1020/L11			
680		TYPE=Rigid +Y;					
	1(HYD)	-0	-6893	2	0	0	0
	2(OPE)	136	-3659	-1089	0	0	0
	4(OPE)	140	-3660	-1089	0	0	0
	6(OPE)	125	-3755	1120	0	0	0
	8(SUS)	-0	-3741	1	0	0	0
	9(SUS)	-0	-3736	1	0	0	0
	10(OPE)	124	-3655	-1089	0	0	0
	11(OPE)	110	-3661	-1093	0	0	0
	12(OPE)	118	-3217	-958	0	0	0
	13(OPE)	140	-3656	-1088	0	0	0
	14(OPE)	145	-3664	-1090	0	0	0
	15(OPE)	136	-3673	-1093	0	0	0
	16(OCC)	-16	5	-1	0	0	0
	17(OCC)	-31	-1	-4	0	0	0
	18(OCC)	-22	442	131	0	0	0
	19(OCC)	-1	3	1	0	0	0
	20(OCC)	4	-4	-1	0	0	0
	21(OCC)	-4	-13	-4	0	0	0
	MAX	145/L14	-6893/L1	1120/L6			
690		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	1	-5086	4	0	0	0
	2(OPE)	-9227	-3195	-958	0	0	0
	4(OPE)	-9510	-3188	-956	0	0	0
	6(OPE)	598	-2686	773	0	0	0
	8(SUS)	1	-2760	2	0	0	0
	9(SUS)	1	-2757	2	0	0	0
	10(OPE)	-6412	-3214	-963	0	0	0
	11(OPE)	-12257	-3184	-954	0	0	0
	12(OPE)	-9208	-2823	-846	0	0	0
	13(OPE)	-9478	-3207	-961	0	0	0
	14(OPE)	-9710	-3168	-950	0	0	0
	15(OPE)	-9300	-3121	-936	0	0	0
	16(OCC)	3098	-26	-8	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OCC)	-2747	4	1	0	0	0
	18(OCC)	302	365	110	0	0	0
	19(OCC)	32	-18	-5	0	0	0
	20(OCC)	-200	20	6	0	0	0
	21(OCC)	210	67	20	0	0	0
	MAX	-12257/L11	-5086/L1	-963/L10			
700		TYPE=Rigid +Y;					
	1(HYD)	-27	-7184	8	0	0	0
	2(OPE)	-196	-2814	-821	0	0	0
	4(OPE)	-199	-2772	-807	0	0	0
	6(OPE)	431	-4199	1184	0	0	0
	8(SUS)	-14	-3900	4	0	0	0
	9(SUS)	-14	-3895	4	0	0	0
	10(OPE)	-147	-2688	-793	0	0	0
	11(OPE)	-224	-2775	-802	0	0	0
	12(OPE)	-162	-2370	-692	0	0	0
	13(OPE)	-197	-2746	-800	0	0	0
	14(OPE)	-208	-2810	-817	0	0	0
	15(OPE)	-201	-2890	-843	0	0	0
	16(OCC)	52	84	15	0	0	0
	17(OCC)	-25	-3	6	0	0	0
	18(OCC)	37	402	115	0	0	0
	19(OCC)	2	26	8	0	0	0
	20(OCC)	-9	-38	-10	0	0	0
	21(OCC)	-2	-118	-36	0	0	0
	MAX	431/L6	-7184/L1	1184/L6			
730		TYPE=Rigid +Y; Rigid Z;					
	1(HYD)	19	-10265	-80	0	0	0
	2(OPE)	3283	-10945	-9157	0	0	0
	4(OPE)	3382	-11273	-9284	0	0	0
	6(OPE)	-500	-3851	782	0	0	0
	8(SUS)	10	-5566	-42	0	0	0
	9(SUS)	10	-5558	-42	0	0	0
	10(OPE)	3578	-11925	-8713	0	0	0
	11(OPE)	-132	-11274	-9886	0	0	0
	12(OPE)	3117	-10391	-9135	0	0	0
	13(OPE)	3409	-11363	-6825	0	0	0
	14(OPE)	3330	-11101	-11840	0	0	0
	15(OPE)	3268	-10894	-9274	0	0	0
	16(OCC)	196	-652	571	0	0	0
	17(OCC)	-3514	-1	-602	0	0	0
	18(OCC)	-265	882	150	0	0	0
	19(OCC)	27	-90	2460	0	0	0
	20(OCC)	-52	173	-2555	0	0	0
	21(OCC)	-114	379	10	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	3578/L10	-11925/L10	-11840/L14			
770		TYPE=Rigid +Y;					
	1(HYD)	11	-7671	-279	0	0	0
	2(OPE)	2918	-11223	1679	0	0	0
	4(OPE)	2963	-11549	1795	0	0	0
	6(OPE)	-46	-194	-36	0	0	0
	8(SUS)	6	-4148	-152	0	0	0
	9(SUS)	6	-4142	-151	0	0	0
	10(OPE)	2953	-10956	1443	0	0	0
	11(OPE)	2871	-11569	1949	0	0	0
	12(OPE)	2622	-10126	1533	0	0	0
	13(OPE)	2865	-11562	1956	0	0	0
	14(OPE)	3039	-11504	1636	0	0	0
	15(OPE)	2815	-10869	1646	0	0	0
	16(OCC)	-10	592	-352	0	0	0
	17(OCC)	-92	-20	154	0	0	0
	18(OCC)	-341	1423	-262	0	0	0
	19(OCC)	-99	-13	161	0	0	0
	20(OCC)	75	45	-159	0	0	0
	21(OCC)	-148	680	-149	0	0	0
	MAX	3039/L14	-11569/L11	1956/L13			
780		TYPE=Rigid +Y; Rigid Z;					
	1(HYD)	0	-2038	50	0	0	0
	2(OPE)	0	0	1901	0	0	0
	4(OPE)	0	0	1980	0	0	0
	6(OPE)	0	-1905	-491	0	0	0
	8(SUS)	0	-1109	27	0	0	0
	9(SUS)	0	-1108	27	0	0	0
	10(OPE)	0	0	1997	0	0	0
	11(OPE)	0	0	1831	0	0	0
	12(OPE)	0	0	2052	0	0	0
	13(OPE)	0	0	2882	0	0	0
	14(OPE)	0	0	1041	0	0	0
	15(OPE)	0	0	2007	0	0	0
	16(OCC)	0	0	17	0	0	0
	17(OCC)	0	0	-149	0	0	0
	18(OCC)	0	0	72	0	0	0
	19(OCC)	0	0	902	0	0	0
	20(OCC)	0	0	-939	0	0	0
	21(OCC)	0	0	27	0	0	0
	MAX		-2038/L1	2882/L13			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 22 (OCC) L22=L16+L8
CASE 23 (OCC) L23=L17+L8
CASE 24 (OCC) L24=L18+L8
CASE 25 (OCC) L25=L19+L8
CASE 26 (OCC) L26=L20+L8
CASE 27 (OCC) L27=L21+L8
CASE 28 (EXP) L28=L2-L8
CASE 29 (EXP) L29=L4-L8
CASE 30 (EXP) L30=L2-L4
CASE 31 (EXP) L31=L6-L8
CASE 32 (EXP) L32=L2-L6
CASE 33 (EXP) L33=L4-L6

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	9.2	@Node	730
Code Stress:	22099.4	Allowable Stress:	241316.5
Axial Stress:	6681.2	@Node	330
Bending Stress:	16137.6	@Node	730
Torsion Stress:	700.2	@Node	500
Hoop Stress:	12989.9	@Node	330
Max Stress Intensity:	22103.6	@Node	730

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	27.3	@Node	730
Code Stress:	35269.5	Allowable Stress:	129365.3
Axial Stress:	13744.3	@Node	220
Bending Stress:	23193.5	@Node	730
Torsion Stress:	997.7	@Node	500
Hoop Stress:	24443.4	@Node	28
Max Stress Intensity:	35319.9	@Node	730

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	17.9	@Node	730
Code Stress:	23174.7	Allowable Stress:	129365.3
Axial Stress:	1670.4	@Node	220
Bending Stress:	23163.9	@Node	730
Torsion Stress:	994.9	@Node	500
Hoop Stress:	0.0	@Node	20

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 13, 2024 Time: 13:3
Job:: BNK-GCS-CN-005-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Max Stress Intensity:       23174.7       @Node    730

 CODE STRESS CHECK PASSED      : LOADCASE 22 (OCC) L22=L16+L8

Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L16+L8
Ratio (%):                    33.9       @Node     50
Code Stress:                58246.8       Allowable Stress:     172055.9
Axial Stress:               13643.9       @Node    220
Bending Stress:             50444.9       @Node     28
Torsion Stress:             10470.6       @Node     40
Hoop Stress:                24443.4       @Node     28
Max Stress Intensity:       74646.4       @Node     28

 CODE STRESS CHECK PASSED      : LOADCASE 23 (OCC) L23=L17+L8

Highest Stresses: (   KPa    ) LOADCASE 23 (OCC) L23=L17+L8
Ratio (%):                    24.6       @Node    690
Code Stress:                42297.8       Allowable Stress:     172055.9
Axial Stress:               13771.8       @Node    220
Bending Stress:             30101.8       @Node    690
Torsion Stress:              6268.3       @Node    800
Hoop Stress:                24443.4       @Node     28
Max Stress Intensity:       49317.3       @Node    690

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L18+L8

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L18+L8
Ratio (%):                    23.2       @Node    730
Code Stress:                39943.7       Allowable Stress:     172055.9
Axial Stress:               13552.2       @Node    220
Bending Stress:             27759.4       @Node    730
Torsion Stress:              1378.8       @Node    798
Hoop Stress:                24443.4       @Node     28
Max Stress Intensity:       40927.7       @Node     20

 CODE STRESS CHECK PASSED      : LOADCASE 25 (OCC) L25=L19+L8

Highest Stresses: (   KPa    ) LOADCASE 25 (OCC) L25=L19+L8
Ratio (%):                    29.6       @Node    730
Code Stress:                50853.2       Allowable Stress:     172055.9
Axial Stress:               13775.7       @Node    119
Bending Stress:             48466.7       @Node    230
Torsion Stress:              3203.7       @Node    380
Hoop Stress:                24443.4       @Node     28
Max Stress Intensity:       61544.7       @Node    230

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L20+L8

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L20+L8
Ratio (%):                    30.1       @Node    730
Code Stress:                51805.6       Allowable Stress:     172055.9
Axial Stress:               13745.5       @Node    650
Bending Stress:             47118.2       @Node    230
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Torsion Stress:              4449.7       @Node    500
Hoop Stress:                24443.4       @Node     28
Max Stress Intensity:       60350.8       @Node    230

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L21+L8

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L21+L8
Ratio (%):                     23.3       @Node    800
Code Stress:                42801.1       Allowable Stress:     183400.5
Axial Stress:               14087.8       @Node    110
Bending Stress:             42061.5       @Node    800
Torsion Stress:              4182.2       @Node    500
Hoop Stress:                24443.4       @Node     28
Max Stress Intensity:       61122.1       @Node    800

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L2-L8
Ratio (%):                     49.4       @Node    709
Code Stress:               157561.0       Allowable Stress:     319151.3
Axial Stress:                1844.2       @Node    550
Bending Stress:            156110.2       @Node    709
Torsion Stress:              6427.6       @Node    800
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      418063.5       @Node    709

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L4-L8

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L4-L8
Ratio (%):                     50.4       @Node    709
Code Stress:               160525.1       Allowable Stress:     318810.1
Axial Stress:                1863.3       @Node    800
Bending Stress:            159046.3       @Node    709
Torsion Stress:              5808.4       @Node    380
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      425928.4       @Node    709

 CODE STRESS CHECK PASSED      : LOADCASE 30 (EXP) L30=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 30 (EXP) L30=L2-L4
Ratio (%):                      3.9       @Node    799
Code Stress:                10329.5       Allowable Stress:     261639.9
Axial Stress:                  94.1       @Node    500
Bending Stress:             10825.3       @Node    798
Torsion Stress:              2909.5       @Node    800
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:       23904.4       @Node    798

 CODE STRESS CHECK PASSED      : LOADCASE 31 (EXP) L31=L6-L8

Highest Stresses: (   KPa    ) LOADCASE 31 (EXP) L31=L6-L8
Ratio (%):                      5.8       @Node    709
Code Stress:                19214.8       Allowable Stress:     329472.3
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Axial Stress:	827.4	@Node	660
Bending Stress:	19030.2	@Node	709
Torsion Stress:	2175.9	@Node	178
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	50984.4	@Node	709

CODE STRESS CHECK PASSED : LOADCASE 32 (EXP) L32=L2-L6

Highest Stresses: (KPa) LOADCASE 32 (EXP) L32=L2-L6				
Ratio (%):	55.4	@Node	709	
Code Stress:	176773.7	Allowable Stress:		319151.3
Axial Stress:	2555.1	@Node	800	
Bending Stress:	175138.5	@Node	709	
Torsion Stress:	7560.7	@Node	260	
Hoop Stress:	0.0	@Node	20	
Max Stress Intensity:	469042.3	@Node	709	

CODE STRESS CHECK PASSED : LOADCASE 33 (EXP) L33=L4-L6

Highest Stresses: (KPa) LOADCASE 33 (EXP) L33=L4-L6				
Ratio (%):	56.4	@Node	709	
Code Stress:	179738.2	Allowable Stress:		318810.1
Axial Stress:	2574.2	@Node	800	
Bending Stress:	178074.9	@Node	709	
Torsion Stress:	7583.3	@Node	178	
Hoop Stress:	0.0	@Node	20	
Max Stress Intensity:	476908.4	@Node	709	

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 13, 2024 Time: 13:3
Job:: BNK-GCS-CN-005-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

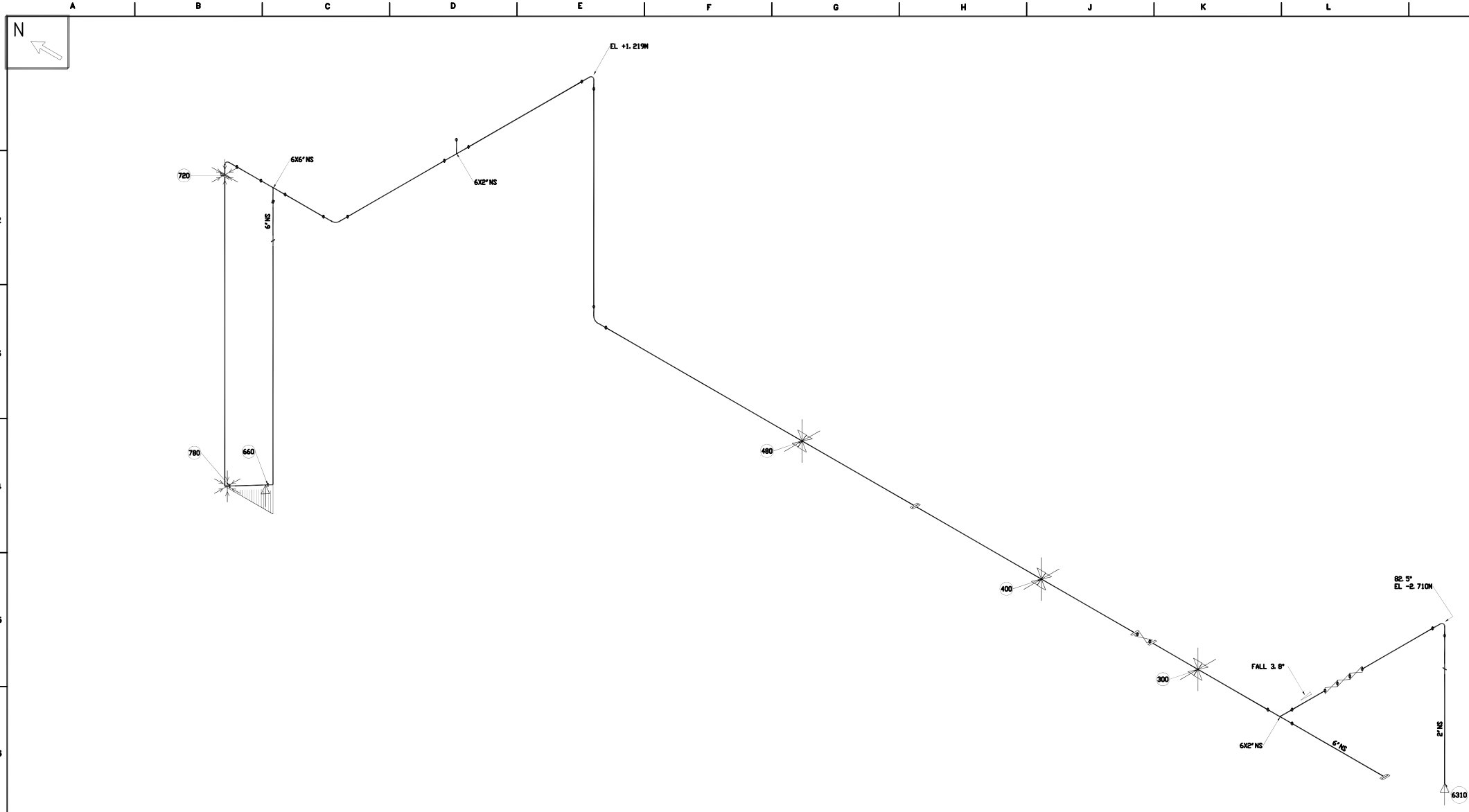
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
550		Absolute Method								
	Limits	11201	11201	8400		6720	4480	5820		
	2(OPE)	14513	-1901	-1497	1.296	-4365	881	-479	0.650	*
	4(OPE)	14642	-2116	-760	1.307	-2403	1485	684	0.358	*
	6(OPE)	-2768	3514	235	0.314	-259	441	-1830	0.314	
	8(SUS)	2040	481	39	0.182	-31	146	-582	0.100	
	9(SUS)	2033	481	39	0.182	-31	146	-581	0.100	

BNK-GCS-CN-006

1. GAS-111-0051A-FN05-6"-IS
2. GAS-111-0044A-CN05-6"-ET
3. GAS-111-0047A-FN05-2"-PT
4. GAS-111-0048A-FN05-2"-PT
5. FL-112-0020A-AN07-6"-PT
6. FL-112-0022A-AN07-6"-PT
7. GAS-111-0058A-FS00-6"-IS
8. GAS-111-0055A-FS00-6"-IS
9. GAS-111-0057A-FS00-4"-IS
10. FL-112-0024A-AN07-4"-PT
11. GAS-111-0045A-FS00-6"-NP
12. GAS-111-0046A-CN07-6"-PT
13. GAS-111-0026A-AN07-8"-PT
14. GAS-111-0049A-CN07-8"-PT
15. GAS-111-0160A-CN05-2"-PT
16. FL-112-0119A-AN07-3"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 5

REV.	CHANGE	DATE
		22 MAY 2024

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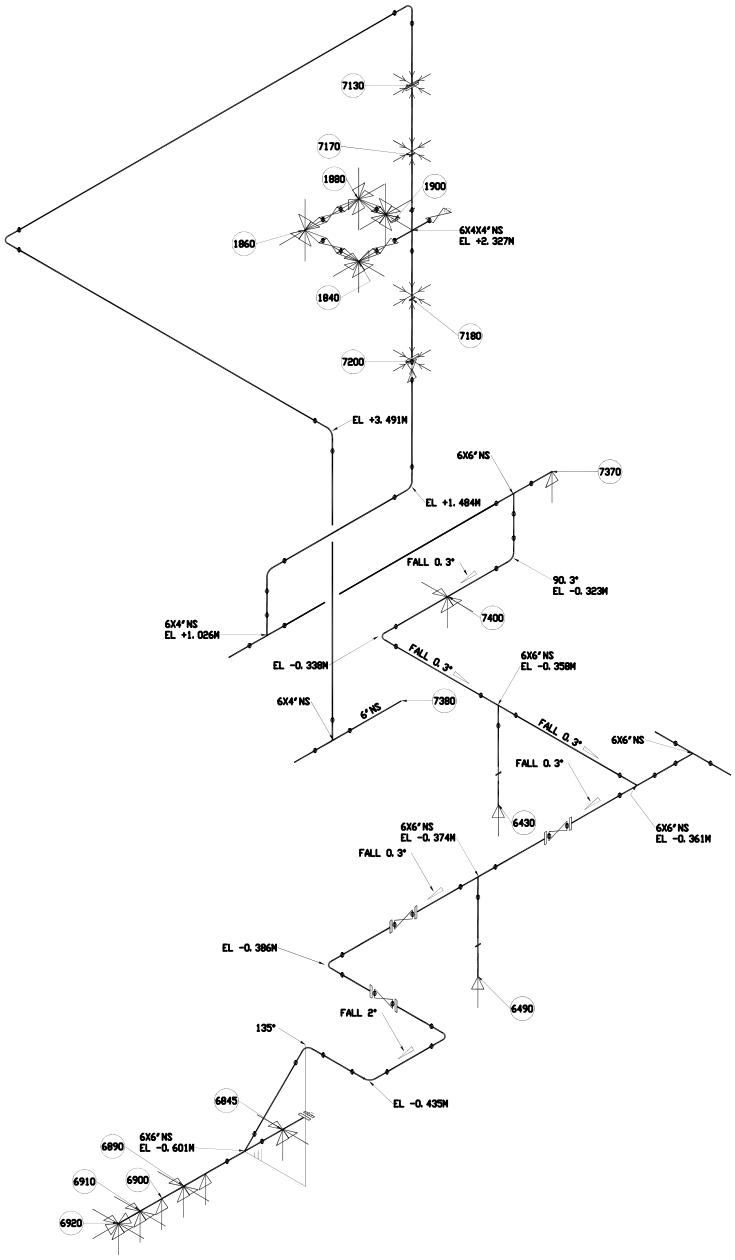

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INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

2 OF 5

REV.	CHANGE	DATE
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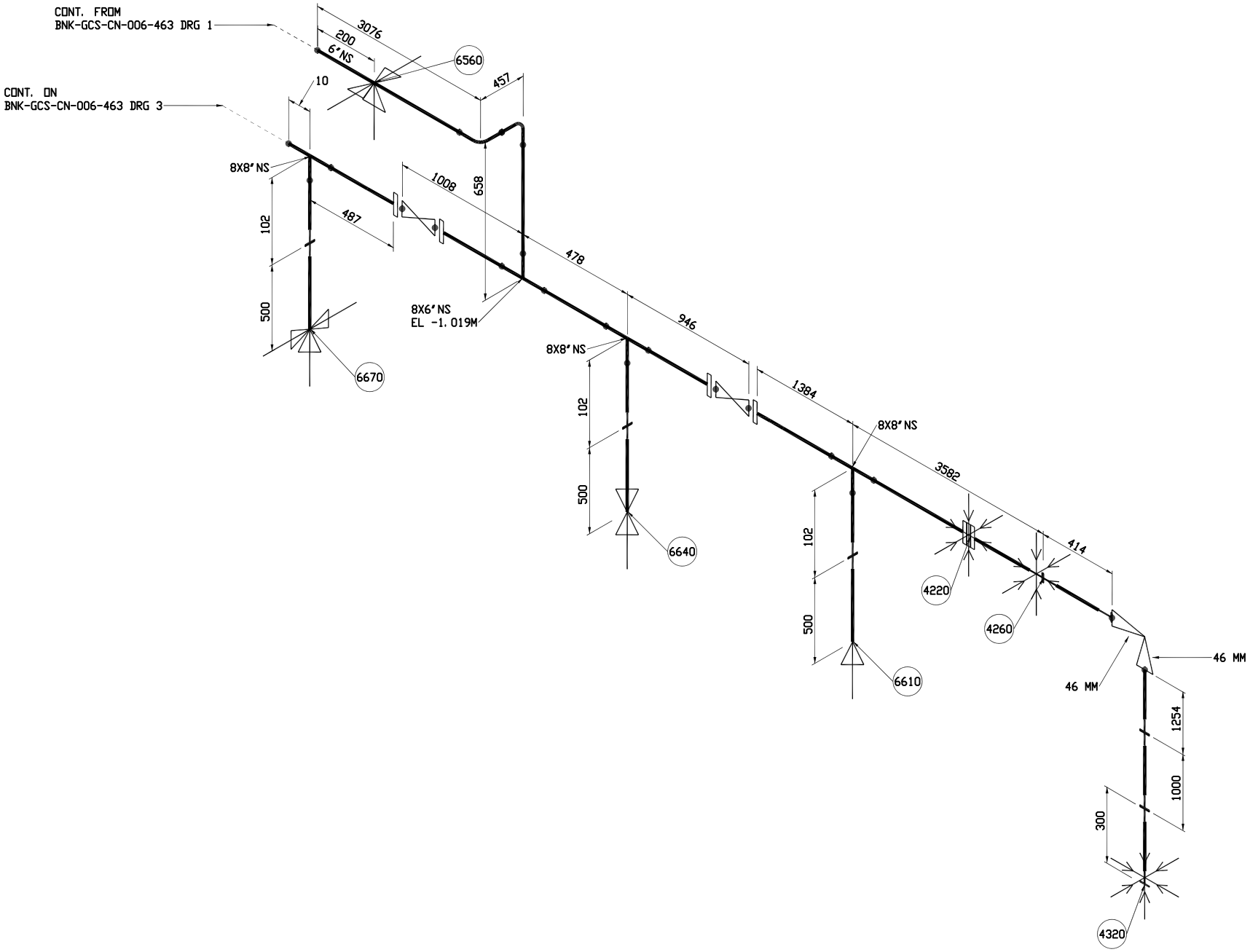

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

3 OF 5

REV.	CHANGE	DATE
		22 MAY 2024

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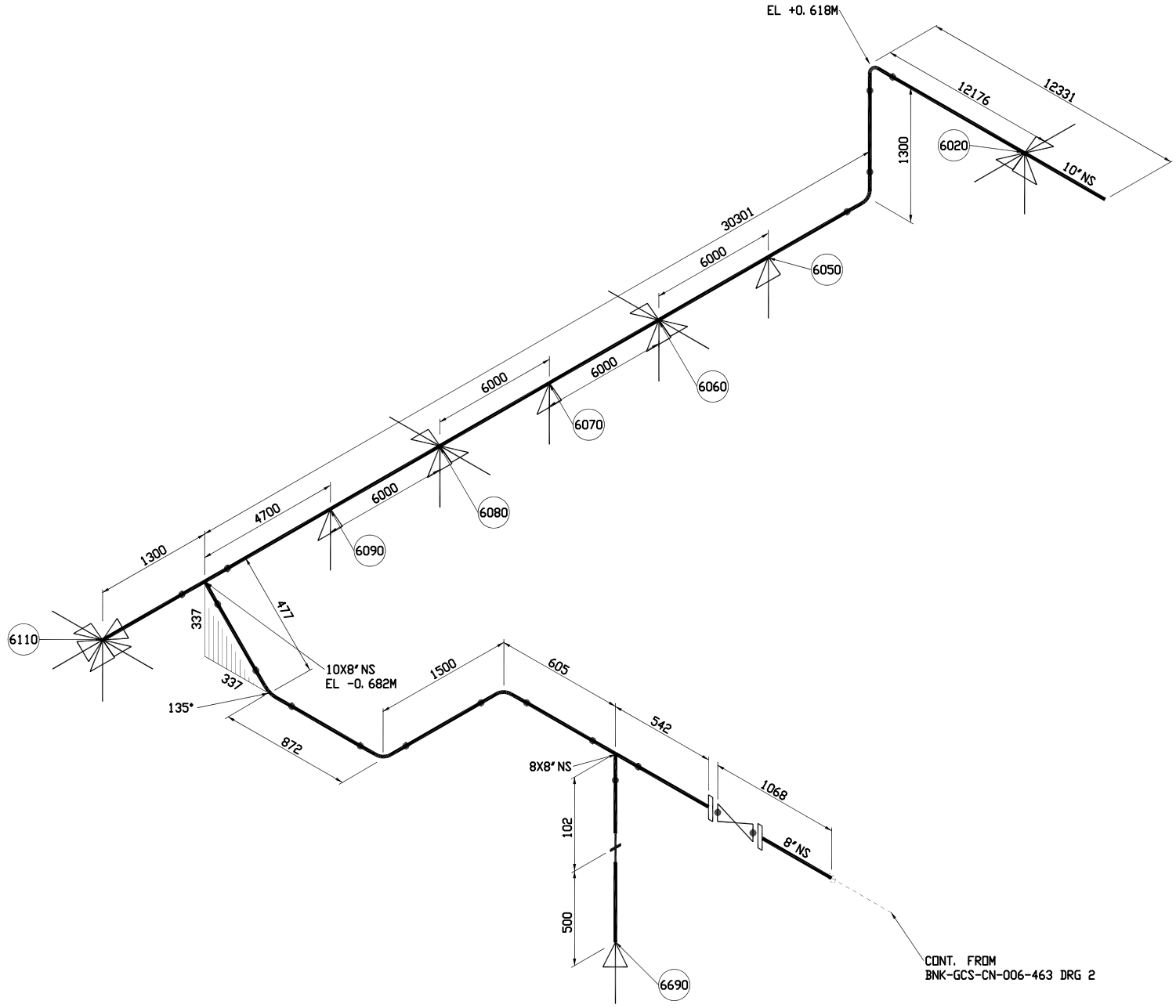

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

4 OF 5

REV.	CHANGE	DATE
		22 MAY 2024

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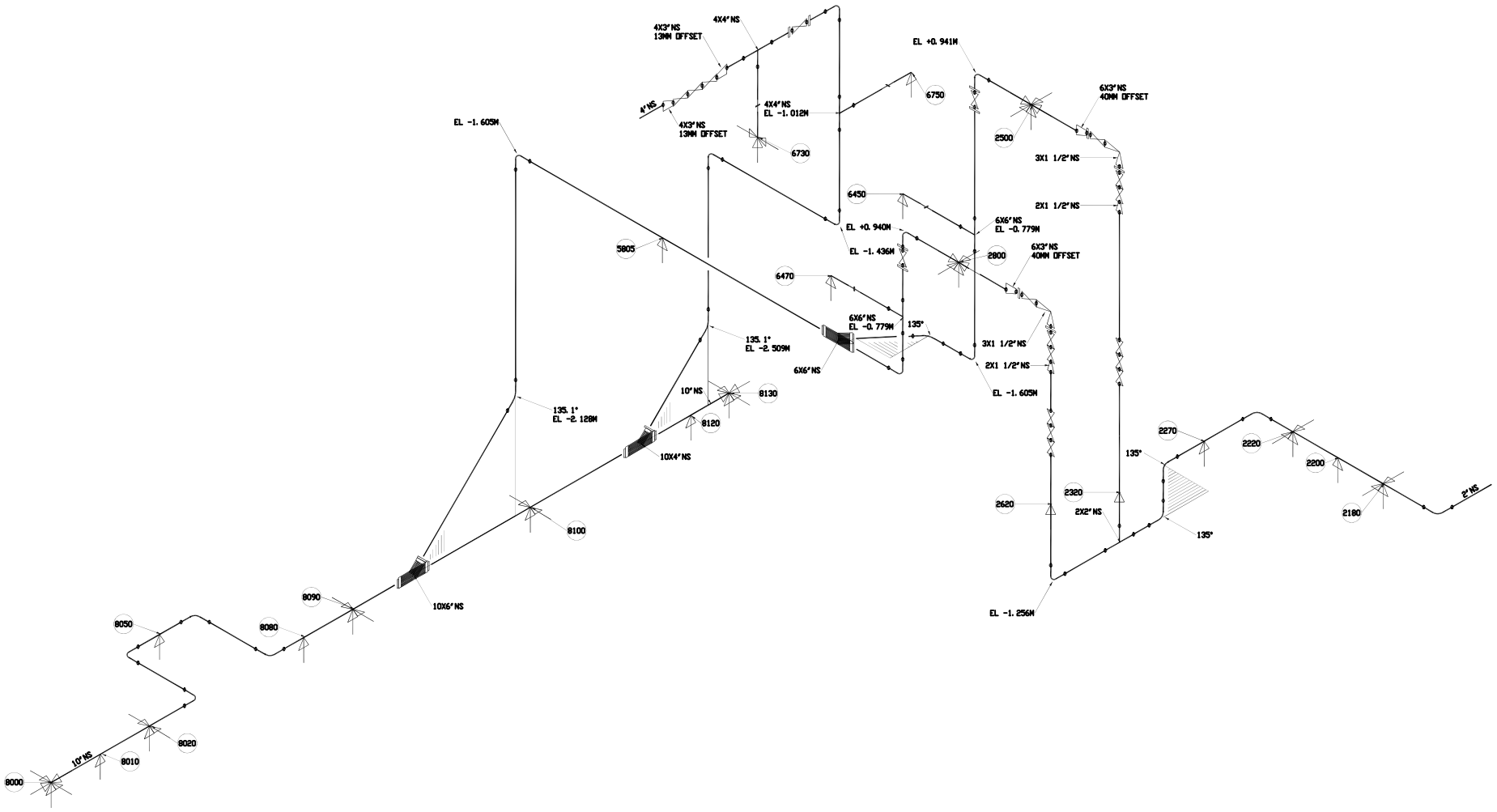

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 5 OF 5

REV.	CHANGE	DATE
		22 MAY 2024

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Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (OPE) W+D1+T2+P2+H
8 (SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19-L6
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L6-L11
36 (EXP) L36=L4-L6
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L6-L9

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 13:45
Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 13:45
Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 22,2024 13:45:30

PIPE DATA

From 10 To 20 DX= -101.600 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= 3.0000 mm.
Element Name= FLANGE_FLG_150
GENERAL
T1= 115 C T2= 60 C T3= 60 C P1= 2,200.0500 KPa P2= 1,810.0413 KPa
PHyd= 3,300.0752 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 197,200,352 KPa EH2= 200,644,016 KPa EH3= 200,644,016 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000181 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001500 kg./cu.cm.
RIGID Weight= 191.27 N.
DISPLACEMENTS
Node 20 DX1= 4.000 mm. DY1= 2.400 mm. DZ1= 1.500 mm.
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 25 To 40 DX= -101.600 mm.
RIGID Weight= 191.27 N.
RESTRAINTS
Node 25 ANC Cnode 20
EQUIPMENT LIMITS
Nozzle Node = 25 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 7,000.35 N.
FB= 7,000.35 N. FC= 5,000.25 N. MA= 4,000.17 N.m. MB= 1,200.05 N.m.
MC= 2,200.09 N.m. Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute

From 40 To 60 DX= -729.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 59
Angle/Node @2= .00 58

From 60 To 80 DY= .000 mm. DZ= 1,587.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 79
Angle/Node @2= .00 78

INPUT LISTING

```
 ------------------------------------------------------------------------------
 From  80  To  100  DX= .000 mm.  DY= -1,404.000 mm.
 ------------------------------------------------------------------------------
 From  100  To  120 DY= -1,153.000 mm.
 ------------------------------------------------------------------------------
 From  120  To  140 DY= -229.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  140  To  160 DY= -200.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   P2= .0000 KPa
    PHyd= .0000 KPa   Fluid Den= .0000000 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  160  -X   Mu = .30
    Node  160  Z   Cnode  121
    Node  121  +Y   Mu = .10
    Node  160  X   Cnode  121
 HANGERS
    Hanger Node = 160   Hanger Connecting Node = 121
    Available Space = -1,000.0000 mm.   Allowed Load Variation = 25.0000
    No. Hangers = 0.0   Short Range Flag = -1   User Operating Load = .00 N.
    Free Node = 0   Free Node = 0   Free Code = 0.0   Spring Rate = .00 N./cm.
    Theoretical Cold Load = .00 N.
 SIF's & TEE's
    Node  140   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  8260  To  8270 DY= .000 mm.  DZ= 300.000 mm.
 RESTRAINTS
    Node  8270  +Y   Mu = .30
    Node  8270  X
 ------------------------------------------------------------------------------
 From  120  To  180 DY= -229.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000181 kg./cu.cm.
    Insul Thk= 40.000 mm.
 DOUBLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 179
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  180  To  200  DX= -229.000 mm.
 ------------------------------------------------------------------------------
 From  200  To  220  DX= -101.600 mm.
```

INPUT LISTING
```
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  220  To  240  DX= -101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  240  To  260  DX= -500.000 mm.
 ------------------------------------------------------------------------------
 From  260  To  280  DX= -344.500 mm.
 SIF's & TEE's
    Node  280   Weldolet
 ------------------------------------------------------------------------------
 From  280  To  300  DX= -500.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
    PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 197,200,352 KPa   EH2= 200,644,016 KPa   EH3= 200,644,016 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000181 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  300  Y   Mu = .30
    Node  300  Z   Gap= 3.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  300  To  320  DX= -203.000 mm.
 ------------------------------------------------------------------------------
 From  320  To  340  DX= -101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  340  To  360  DX= -489.000 mm.
    Element Name= GATE_NOFLG_300
 RIGID  Weight= 1,023.41 N.
 ------------------------------------------------------------------------------
 From  360  To  380  DX= -101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  380  To  400  DX= -861.000 mm.
 RESTRAINTS
    Node  400  Y   Mu = .30
    Node  400  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  400  To  420  DX= -1,557.000 mm.
 ------------------------------------------------------------------------------
 From  420  To  440  DX= -101.600 mm.
    Element Name= FLANGE_FLG_300
```

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INPUT LISTING

```
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  440  To  460  DX= -101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  460  To  480  DX= -1,243.000 mm.
 RESTRAINTS
    Node  480  Y   Mu = .30
    Node  480  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  480  To  490  DX= -2,035.000 mm.
 ------------------------------------------------------------------------------
 From  500  To  6210 DY= -76.200 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  490  To  500  DX= -2,035.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 499
    Angle/Node @2= .00 498
 ------------------------------------------------------------------------------
 From  500  To  580 DY= 4,005.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    T3= 60 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa   PHyd= 3,300.0752 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 197,200,352 KPa
    EH2= 200,644,016 KPa   EH3= 200,644,016 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000058 kg./cu.cm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 579
    Angle/Node @2= .00 578
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  580  To  590 DZ= 1,548.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= 3.0000 mm.
 GENERAL
    P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa   Fluid Den= .0000181 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001500 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  590  To  600 DZ= 1,202.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 599
```

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```
    Angle/Node @2= .00 598
 ------------------------------------------------------------------------------
 From  600  To  610  DX= -385.000 mm.
 ------------------------------------------------------------------------------
 From  610  To  620  DX= -345.000 mm.
 GENERAL
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 197,200,352 KPa
    EH2= 200,644,016 KPa   EH3= 200,644,016 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  590  To  5190 DY= 398.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
 GENERAL
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 197,200,352 KPa
    EH2= 200,644,016 KPa   EH3= 200,644,016 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5189
    Angle/Node @2= .00 5188
 SIF's & TEE's
    Node  590   Weldolet
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  5190  To  8160  DX= -229.000 mm.  DZ= 229.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 8159
    Angle/Node @2= .00 8158
 ------------------------------------------------------------------------------
 From  8160  To  8170 DZ= 523.000 mm.
 ------------------------------------------------------------------------------
 From  8170  To  8180 DZ= 77.000 mm.
 ------------------------------------------------------------------------------
 From  8180  To  8190 DZ= 101.600 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 6.020 mm.
 ------------------------------------------------------------------------------
 From  8190  To  8200 DZ= 210.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
    Insul Thk= 40.000 mm.
 ------------------------------------------------------------------------------
 From  8200  To  8210 DZ= 102.000 mm.
```

INPUT LISTING
```
 REDUCER
    Diam2= 60.325 mm.   Wall2= 5.537 mm.
 ---------------------------------------------------------------------------
 From  8210  To  5200 DZ= 290.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= 40.000 mm.
 ---------------------------------------------------------------------------
 From  5200  To  5210 DZ= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  5210  To  5220 DZ= 301.000 mm.
 RIGID  Weight= 93.41 N.
 ---------------------------------------------------------------------------
 From  5220  To  5230 DZ= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  5230  To  5240 DZ= 77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5239
    Angle/Node @2= .00 5238
 ---------------------------------------------------------------------------
 From  5240  To  5245  DX= -539.000 mm.
 ---------------------------------------------------------------------------
 From  5240  To  6230 DY= -17.961 mm.  DZ= 17.961 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6230   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  5245  To  5250  DX= -539.000 mm.
 ---------------------------------------------------------------------------
 From  5250  To  5260  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  5260  To  5270  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  5270  To  5275  DX= -150.000 mm.
 ---------------------------------------------------------------------------
 From  5275  To  6260 DY= -25.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6260   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  5275  To  5280  DX= -150.000 mm.
 ---------------------------------------------------------------------------
 From  5280  To  5290  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  5290  To  5300  DX= -200.000 mm.
 RIGID  Weight= 258.00 N.
 ---------------------------------------------------------------------------
 From  5300  To  5310  DX= -66.675 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 6.0000 mm.
 GENERAL
```

INPUT LISTING
```
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   P2= 50.0011 KPa
    PHyd= 900.0205 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 187,483,936 KPa   EH2= 187,335,024 KPa   EH3= 205,934,864 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  5310  To  5320  DX= -89.000 mm.
 REDUCER
    Diam2= 88.900 mm.   Wall2= 7.620 mm.
 ------------------------------------------------------------------------------
 From  5320  To  5330  DX= -287.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5329
    Angle/Node @2= .00 5328
 ------------------------------------------------------------------------------
 From  5330  To  5340 DY= -918.000 mm.
 ------------------------------------------------------------------------------
 From  5340  To  6280  DX= 38.100 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6280   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  5340  To  5350 DY= -1,940.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5349
    Angle/Node @2= .00 5348
 ------------------------------------------------------------------------------
 From  5350  To  5370  DX= -3,156.000 mm.
 RESTRAINTS
    Node  5370  +Y   Mu = .30
    Node  5370  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  5370  To  5375  DX= -4,413.000 mm.
 RESTRAINTS
    Node  5375  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  5375  To  5380  DX= -561.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5379
    Angle/Node @2= .00 5378
 ------------------------------------------------------------------------------
 From  5380  To  5390 DY= -1,219.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 44.922   Angle/Node @1= 22.46 5389
    Angle/Node @2= .00 5388
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  5390  To  6130  DX= .143 mm.  DY= -369.000 mm.  DZ= 368.000 mm.
 ---------------------------------------------------------------------------
 From  610  To  640 DY= -84.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.110 mm.
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
    PHyd= 3,300.0752 KPa   Insul Thk= 40.000 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  640   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  640  To  660 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   P2= .0000 KPa
    PHyd= .0000 KPa   Mat= (102)A53 Grade B   E= 203,401,232 KPa
    EH1= 203,401,232 KPa   EH2= 203,401,232 KPa   EH3= 203,401,232 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  660  +Y   Cnode  800   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  620  To  680  DX= -578.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
    PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 197,200,352 KPa   EH2= 200,644,016 KPa   EH3= 200,644,016 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000181 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001500 kg./cu.cm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 679
    Angle/Node @2= .00 678
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
```

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```
 ----------------------------------------------------------------------------
 From  680  To  700 DY= -229.000 mm.
 ----------------------------------------------------------------------------
 From  700  To  720 DY= -126.000 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 286.91 N.
 RESTRAINTS
    Node  720  ANC   Cnode  721
 ----------------------------------------------------------------------------
 From  721  To  760 DY= -104.775 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 177.93 N.
 ----------------------------------------------------------------------------
 From  760  To  780 DY= -196.000 mm.
 RESTRAINTS
    Node  780  ANC   Cnode  820
 EQUIPMENT LIMITS
    Nozzle Node = 780   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 9,600.48 N.
    FB= 9,600.48 N.   FC= 7,200.36 N.   MA= 5,760.24 N.m.   MB= 3,840.16 N.m.
    MC= 4,990.21 N.m.   Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ----------------------------------------------------------------------------
 From  780  To  800  DX= 923.000 mm.  DY= 271.775 mm.  DZ= .000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  780  To  6241  DX= 1,079.000 mm.  DY= 1,035.814 mm.  DZ= 1,172.611 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  780  To  6271  DX= -295.050 mm.  DY= 678.375 mm.  DZ= 854.650 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  780  To  6291  DX= -822.649 mm.  DY= 135.775 mm.  DZ= 854.650 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  820  To  840 DY= -3,570.000 mm.
 PIPE
    Dia= 914.400 mm.   Wall= 15.000 mm.
 GENERAL
    Mat= (383)A516 70   E= 203,401,232 KPa   EH1= 197,200,352 KPa
    EH2= 200,644,016 KPa   EH3= 200,644,016 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Insul Thk= 40.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  840  ANC
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 160,648 KPa
    Sh1= 157,769 KPa   Sh2= 160,373 KPa   Sh3= 160,373 KPa   Sh4= 160,648 KPa
    Sh5= 160,648 KPa   Sh6= 160,648 KPa   Sh7= 160,648 KPa   Sh8= 160,648 KPa
    Sh9= 160,648 KPa   Sy= 262,001 KPa
 ----------------------------------------------------------------------------
 From  280  To  4350 DZ= -122.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Cor= 3.0000 mm.
 GENERAL
```

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INPUT LISTING
```
    T3= 60 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa   PHyd= 3,300.0752 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 197,200,352 KPa
    EH2= 200,644,016 KPa   EH3= 200,644,016 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000181 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001500 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4350  To  4360 DZ= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  4360  To  4370 DZ= -301.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
 GENERAL
    T1= 175 C   T2= 142 C   T3= 142 C   P1= 6,200.1411 KPa   P2= 5,410.1230 KPa
    PHyd= 9,300.2119 KPa   Fluid Den= .0000430 kg./cu.cm.
    Insul Thk= 60.000 mm.
 RIGID  Weight= 311.38 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4370  To  4380 DZ= -82.550 mm.
 RIGID  Weight= 57.83 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4380  To  4390 DZ= -576.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4389
    Angle/Node @2= .00 4388
 ------------------------------------------------------------------------------
 From  4390  To  4395 DY= 257.000 mm.
 ------------------------------------------------------------------------------
 From  4390  To  6300 DY= -25.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6300   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  4395  To  880 DY= 257.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 879
    Angle/Node @2= .00 878
 ------------------------------------------------------------------------------
 From  880  To  900 DZ= 77.000 mm.
```

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INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  900  To  920 DZ= 82.550 mm.
    Element Name= BALL_FLG_600
 GENERAL
    P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa   Fluid Den= .0000430 kg./cu.cm.
 RIGID  Weight= 57.83 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  920  To  940 DZ= 301.000 mm.
    Element Name= CHECK_FLG_150
 RIGID  Weight= 427.03 N.
 ----------------------------------------------------------------------------
 From  940  To  960 DZ= 82.550 mm.
 RIGID  Weight= 57.83 N.
 ----------------------------------------------------------------------------
 From  960  To  980 DZ= 1,222.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 979
    Angle/Node @2= .00 978
 ----------------------------------------------------------------------------
 From  980  To  1000 DY= -100.000 mm.
 ----------------------------------------------------------------------------
 From  1000  To  1020 DY= -414.000 mm.
    Element Name= CHECK_FLG_600
 SIF's & TEE's
    Node  1020   Weldolet
 ----------------------------------------------------------------------------
 From  1020  To  1040  DX= 195.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.   Cor= 3.0000 mm.
 GENERAL
    T2= 149 C   T3= 149 C   P1= 6,200.1411 KPa   P2= 5,480.1250 KPa
    PHyd= 9,300.2119 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 193,178,448 KPa   EH2= 195,077,104 KPa   EH3= 195,077,104 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000430 kg./cu.cm.
    Insul Thk= 40.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,888 KPa   Sh3= 137,888 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  1040  To  1060  DX= 150.000 mm.
 ----------------------------------------------------------------------------
 From  1060  To  1080  DX= 127.000 mm.
    Element Name= FLG.PR_FLG_150
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq   Class/Grade= ASME-2009-600-3.19
    G/C= 192.151 mm.   T/P table ( 1)=  37.8 C   -> 10,342.1 KPa   ( 2)=  93.3 C
```

INPUT LISTING

```
    -> 10,342.1 KPa   ( 3)=  148.9 C   -> 10,031.9 KPa   ( 4)=  204.4 C
    -> 9,721.6 KPa   ( 5)=  260.0 C   -> 9,170.0 KPa   ( 6)=  315.6 C
    -> 8,342.7 KPa   ( 7)=  343.3 C   -> 8,101.3 KPa   ( 8)=  371.1 C
    -> 7,825.5 KPa   ( 9)=  398.9 C   -> 7,342.9 KPa   (10)=  426.7 C
    -> 6,998.2 KPa   (11)=  454.4 C   -> 6,722.4 KPa   (12)=  482.2 C
    -> 6,205.3 KPa   (13)=  510.0 C   -> 5,343.4 KPa   (14)=  537.8 C
    -> 4,998.7 KPa   (15)=  565.6 C   -> 4,964.2 KPa   (16)=  593.3 C
    -> 4,447.1 KPa   (17)=  621.1 C   -> 3,792.1 KPa   (18)=  648.9 C
    -> 2,826.9 KPa   (19)=  676.7 C   -> 2,516.6 KPa   (20)=  704.4 C
    -> 1,896.1 KPa   (21)=  732.2 C   -> 1,413.4 KPa   (22)=  760.0 C
    -> 1,034.2 KPa   (23)=  787.8 C   -> 792.9 KPa   (24)=  815.6 C
    -> 586.1 KPa
 ------------------------------------------------------------------------------
 From  1080  To  1100  DX= 126.000 mm.
    Element Name= FLG.PR_FLG_150
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= From   Method= Peq
 ------------------------------------------------------------------------------
 From  1100  To  1120  DX= 1,152.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1119
    Angle/Node @2= .00 1118
 ------------------------------------------------------------------------------
 From  1120  To  8250 DZ= -229.000 mm.
 ------------------------------------------------------------------------------
 From  1120  To  8260 DY= -53.882 mm.  DZ= 53.882 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  8250  To  1145 DZ= -979.000 mm.
 ------------------------------------------------------------------------------
 From  1145  To  1140 DZ= -979.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1139
    Angle/Node @2= .00 1138
 ------------------------------------------------------------------------------
 From  1140  To  1160 DY= 417.500 mm.
 ------------------------------------------------------------------------------
 From  1160  To  1200  DX= .000 mm.  DY= 417.500 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1199
    Angle/Node @2= .00 1198
 ------------------------------------------------------------------------------
 From  1200  To  1220  DX= 229.000 mm.
 ------------------------------------------------------------------------------
 From  1220  To  1240  DX= 127.000 mm.
    Element Name= FLANGE_FLG_600
 RIGID  Weight= 364.75 N.
 RESTRAINTS
    Node  1240  ANC   Cnode  1241
 FLANGES
    Location= To   Method= Peq
 EQUIPMENT LIMITS
    Nozzle Node = 1240
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 7,000.35 N.   FB= 7,000.35 N.
    FC= 5,000.25 N.   MA= 4,000.17 N.m.   MB= 1,200.05 N.m.   MC= 2,200.09 N.m.
```

INPUT LISTING
```
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1241  To  8300  DX= 127.000 mm.
 RIGID  Weight= 364.75 N.
 DISPLACEMENTS
    Node  1241   DX1= 4.000 mm.   DY1= 2.400 mm.   DZ1= 1.500 mm.
 ---------------------------------------------------------------------------
 From  1020  To  8280  DX= -500.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.   Cor= 3.0000 mm.
 GENERAL
    T2= 149 C   P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 193,178,448 KPa
    EH2= 195,077,104 KPa   EH3= 195,077,104 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000430 kg./cu.cm.
    Insul Thk= 60.000 mm.   Insul Den= .0001500 kg./cu.cm.
 RESTRAINTS
    Node  8280  Y   Mu = .30
    Node  8280  Z   Gap= 3.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,888 KPa   Sh3= 137,888 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  8280  To  1260  DX= -900.000 mm.
 SIF's & TEE's
    Node  1260   Weldolet
 ---------------------------------------------------------------------------
 From  1260  To  1280  DX= -850.000 mm.
 RESTRAINTS
    Node  1280  Y   Mu = .30
    Node  1280  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1280  To  1300  DX= -650.000 mm.
 ---------------------------------------------------------------------------
 From  1300  To  1320  DX= -127.000 mm.
    Element Name= FLANGE_FLG_600
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ---------------------------------------------------------------------------
 From  1320  To  1340  DX= -568.000 mm.
    Element Name= CHECK_NOFLG_600
 RIGID  Weight= 3,087.07 N.
 ---------------------------------------------------------------------------
 From  1340  To  1360  DX= -127.000 mm.
    Element Name= FLANGE_NOFLG_600
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= From   Method= Peq
 ---------------------------------------------------------------------------
 From  1360  To  1380  DX= -1,549.000 mm.
```

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INPUT LISTING
```
 RESTRAINTS
    Node  1380  Y   Mu = .30
    Node  1380  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1380  To  1390  DX= -2,035.000 mm.
 ---------------------------------------------------------------------------
 From  1400  To  6400 DY= -76.200 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1390  To  1400  DX= -2,035.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1399
    Angle/Node @2= .00 1398
 ---------------------------------------------------------------------------
 From  1400  To  1480 DY= 1,384.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
 GENERAL
    T2= 149 C   P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 193,178,448 KPa
    EH2= 195,077,104 KPa   EH3= 195,077,104 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000154 kg./cu.cm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1479
    Angle/Node @2= .00 1478
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,888 KPa   Sh3= 137,888 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1480  To  1485  DX= -4,760.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1484
    Angle/Node @2= .00 1483
 ---------------------------------------------------------------------------
 From  1485  To  1490 DZ= 1,800.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1489
    Angle/Node @2= .00 1488
 ---------------------------------------------------------------------------
 From  1490  To  1500  DX= -876.000 mm.
 RESTRAINTS
    Node  1500  +Y   Mu = .30
    Node  1500  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1500  To  1520  DX= -5,893.000 mm.
 RESTRAINTS
    Node  1520  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1520  To  1540  DX= -2,916.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1539
```

INPUT LISTING
```
    Angle/Node @2= .00 1538
 ------------------------------------------------------------------------------
 From  1540  To  1560 DZ= 1,068.000 mm.
 RESTRAINTS
    Node  1560  +Y   Mu = .30
    Node  1560  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1560  To  1580 DZ= 1,068.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1579
    Angle/Node @2= .00 1578
 ------------------------------------------------------------------------------
 From  1580  To  1600 DY= 2,730.000 mm.
 SIF's & TEE's
    Node  1600   Welding Tee
 ------------------------------------------------------------------------------
 From  1600  To  7390 DZ= -393.000 mm.
 RESTRAINTS
    Node  7390  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  7390  To  7020 DZ= -393.000 mm.
 SIF's & TEE's
    Node  7020   Welding Tee
 ------------------------------------------------------------------------------
 From  7020  To  7030 DZ= -245.000 mm.
 ------------------------------------------------------------------------------
 From  1600  To  7380 DZ= 393.000 mm.
 RESTRAINTS
    Node  7380  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  7380  To  7040 DZ= 393.000 mm.
 SIF's & TEE's
    Node  7040   Welding Tee
 ------------------------------------------------------------------------------
 From  7040  To  7050 DZ= 245.000 mm.
 ------------------------------------------------------------------------------
 From  7020  To  7060 DY= 2,163.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 8.560 mm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7059
    Angle/Node @2= .00 7058
 ------------------------------------------------------------------------------
 From  7060  To  7065  DX= -989.000 mm.
 ------------------------------------------------------------------------------
 From  7065  To  7070  DX= -511.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1621
    Angle/Node @2= .00 1622
 ------------------------------------------------------------------------------
 From  7070  To  7080 DZ= 531.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7079
    Angle/Node @2= .00 7078
 ------------------------------------------------------------------------------
```

INPUT LISTING

```
 From  7080  To  1640 DY= -501.500 mm.
 ------------------------------------------------------------------------------
 From  1640  To  1660 DY= -111.125 mm.
    Element Name= FLANGE_NOFLG_600
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1660  ANC   Cnode  1661
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  7040  To  7090 DY= 2,163.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7089
    Angle/Node @2= .00 7088
 ------------------------------------------------------------------------------
 From  7090  To  7095  DX= -989.000 mm.
 ------------------------------------------------------------------------------
 From  7095  To  7100  DX= -511.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7099
    Angle/Node @2= .00 7098
 ------------------------------------------------------------------------------
 From  7100  To  7110 DZ= -531.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7109
    Angle/Node @2= .00 7108
 ------------------------------------------------------------------------------
 From  7110  To  7120 DY= -501.500 mm.
 ------------------------------------------------------------------------------
 From  7120  To  7130 DY= -111.125 mm.
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  7130  ANC   Cnode  7131
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  1660  To  1680 DY= -111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 17.120 mm.   Cor= .0000 mm.
    Element Name= FLANGE_NOFLG_600
 GENERAL
    T1= 155 C   T2= 129 C   T3= 129 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
    PHyd= 2,800.0637 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 194,667,600 KPa   EH2= 196,356,512 KPa   EH3= 196,356,512 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000430 kg./cu.cm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1680  To  1700 DY= -200.000 mm.
```

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INPUT LISTING
```
 RESTRAINTS
    Node  1700  ANC   Cnode  1720
 EQUIPMENT LIMITS
    Nozzle Node = 1700
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 15,090.75 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1720  To  7140 DY= -240.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  7131  To  7160 DY= -111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 17.120 mm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ---------------------------------------------------------------------------
 From  7160  To  7170 DY= -200.000 mm.
 RESTRAINTS
    Node  7170  ANC   Cnode  7171
 EQUIPMENT LIMITS
    Nozzle Node = 7170
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 15,090.75 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  7171  To  7150  DX= .000 mm.  DY= -240.000 mm.  DZ= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  7140  To  1760 DY= -240.000 mm.
 GENERAL
    T3= 129 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
 RIGID  Weight= .00 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1780  To  1800 DY= -200.000 mm.
 RESTRAINTS
    Node  1780  ANC   Cnode  1760
 EQUIPMENT LIMITS
    Nozzle Node = 1780
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 16,200.81 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1800  To  1820 DY= -111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 17.120 mm.   Element Name= FLANGE_NOFLG_150
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
```

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INPUT LISTING

```
 RESTRAINTS
    Node  1820  ANC   Cnode  1821
 ------------------------------------------------------------------------
 From  7150  To  7180 DY= -240.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  7180  ANC   Cnode  7181
 EQUIPMENT LIMITS
    Nozzle Node = 7180
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 16,200.81 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------
 From  7181  To  7190 DY= -200.000 mm.
 ------------------------------------------------------------------------
 From  7190  To  7200 DY= -111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 17.120 mm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  7200  ANC   Cnode  7201
 ------------------------------------------------------------------------
 From  7201  To  7210 DY= -139.125 mm.
 GENERAL
    T1= 175 C   T2= 60 C   T3= 60 C   P1= 6,200.1411 KPa   P2= 5,410.1230 KPa
    PHyd= 9,300.2119 KPa
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 FLANGES
    Location= From   Method= Peq
 ------------------------------------------------------------------------
 From  7210  To  7220 DY= -153.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7219
 ------------------------------------------------------------------------
 From  7220  To  7225 DZ= 265.500 mm.
 ------------------------------------------------------------------------
 From  7225  To  7230 DZ= 265.500 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7229
    Angle/Node @2= .00 7228
 ------------------------------------------------------------------------
 From  7230  To  7240 DY= -458.000 mm.
 ------------------------------------------------------------------------
 From  7240  To  7250 DZ= 245.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
    Insul Thk= 40.000 mm.
 ------------------------------------------------------------------------
 From  7240  To  7360 DZ= -494.000 mm.
```

INPUT LISTING

```
 ------------------------------------------------------------------------------
 From  7360  To  7260 DZ= -292.000 mm.
 ------------------------------------------------------------------------------
 From  7260  To  7370 DZ= -393.000 mm.
 RESTRAINTS
    Node  7370  +Y
 ------------------------------------------------------------------------------
 From  7370  To  7270 DZ= -393.000 mm.
 ------------------------------------------------------------------------------
 From  7270  To  7280 DZ= -245.000 mm.
 ------------------------------------------------------------------------------
 From  1740  To  7150 DZ= 255.000 mm.
 GENERAL
    T1= 155 C   T2= 129 C   T3= 129 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
    PHyd= 2,800.0637 KPa
 RIGID  Weight= 382.52 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  7150  To  1840 DZ= 550.000 mm.
 RIGID  Weight= 1,867.59 N.
 RESTRAINTS
    Node  1840  +Y
    Node  1840  X   Mu = .30
    Node  1840  Z   Gap= 6.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1840  To  1860  DX= -5,100.000 mm.
 RIGID  Weight=10,500.52 N.
 RESTRAINTS
    Node  1860  Y   Mu = .10
    Node  1860  Z   Gap= 6.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1860  To  1880 DZ= -1,400.000 mm.
 RIGID  Weight= 4,500.22 N.
 RESTRAINTS
    Node  1880  Y   Mu = .10
    Node  1880  Z   Gap= 6.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1880  To  1900  DX= 5,100.000 mm.
 RIGID  Weight=10,500.52 N.
 RESTRAINTS
    Node  1900  Y   Mu = .10
    Node  1900  X   Mu = .30
    Node  1900  Z   Gap= 6.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1900  To  7140  DX= .000 mm.  DY= .000 mm.  DZ= 340.000 mm.
 RIGID  Weight= 1,867.59 N.
 ------------------------------------------------------------------------------
 From  7140  To  1740 DZ= 255.000 mm.
 RIGID  Weight= 382.52 N.
 ------------------------------------------------------------------------------
 From  1821  To  1920 DY= -139.125 mm.
 PIPE
```

INPUT LISTING
Dia= 114.300 mm. Wall= 6.020 mm. Cor= .0000 mm.
Element Name= FLANGE_NOFLG_150
GENERAL
T1= 175 C T2= 60 C T3= 60 C P1= 6,200.1411 KPa P2= 5,410.1230 KPa
PHyd= 9,300.2119 KPa Mat= (165)A312 TP316L E= 195,127,520 KPa
EH1= 184,539,120 KPa EH2= 192,364,096 KPa EH3= 192,364,096 KPa
EH4= 195,127,520 KPa EH5= 195,127,520 KPa EH6= 195,127,520 KPa
EH7= 195,127,520 KPa EH8= 195,127,520 KPa EH9= 195,127,520 KPa
v = .292 Pipe Den= .0080272 kg./cu.cm. Fluid Den= .0000596 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001500 kg./cu.cm.
RIGID Weight= 191.27 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa
FLANGES
Location= From Method= Peq

From 1920 To 1940 DY= -153.000 mm.
GENERAL
P1= 2,200.0500 KPa P2= 1,810.0413 KPa PHyd= 3,300.0752 KPa
Fluid Den= .0000183 kg./cu.cm.
SINGLE FLANGED BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1939

From 1940 To 1960 DY= .000 mm. DZ= -531.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1959
Angle/Node @2= .00 1958

From 1960 To 7270 DY= -458.000 mm. DZ= .000 mm.
SIF's & TEE's
Node 7270 Welding Tee

From 7260 To 7290 DX= .000 mm. DY= -1,349.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm.
Insul Thk= 40.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 89.719 Angle/Node @1= 44.86 7289
Angle/Node @2= .00 7288

From 7290 To 7400 DY= -4.725 mm. DZ= 962.988 mm.
RESTRAINTS
Node 7400 +Y Mu = .30
Node 7400 X Gap= 3.000 mm.

From 7400 To 7300 DY= -10.275 mm. DZ= 2,094.011 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 89.999 Angle/Node @1= 45.00 7299
Angle/Node @2= .00 7298

From 7300 To 2000 DX= 4,199.000 mm. DY= -20.000 mm.

From 2000 To 6420 DY= -76.200 mm.

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INPUT LISTING
```
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    T1= 175 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   PHyd= 9,300.2119 KPa
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 184,539,120 KPa
    EH2= 192,370,304 KPa   EH3= 192,370,304 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000183 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6420   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  2000  To  4100  DX= 550.000 mm.  DY= -2.750 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    P1= 6,200.1411 KPa   P2= 5,410.1230 KPa   PHyd= 9,300.2119 KPa
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 184,539,120 KPa
    EH2= 192,370,304 KPa   EH3= 192,370,304 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000600 kg./cu.cm.
    Insul Thk= .000 mm.
 SIF's & TEE's
    Node  4100   Welding Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  4100  To  4400 DY= -7.210 mm.  DZ= 1,447.982 mm.
 ------------------------------------------------------------------------------
 From  4400  To  4410 DY= -.632 mm.  DZ= 126.998 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  4410  To  4420 DY= -2.828 mm.  DZ= 567.993 mm.
 RIGID  Weight= 3,087.07 N.
 ------------------------------------------------------------------------------
 From  4420  To  4430 DY= -.632 mm.  DZ= 126.998 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= From   Method= Peq
 ------------------------------------------------------------------------------
 From  4430  To  4440 DY= -1.661 mm.  DZ= 333.496 mm.
 ------------------------------------------------------------------------------
 From  4440  To  6480 DY= -76.200 mm.
```

INPUT LISTING
```
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6480   Unreinforced Tee   Pad= 7.110 mm.
 ---------------------------------------------------------------------------
 From  4440  To  4450 DY= -1.661 mm.  DZ= 333.496 mm.
 ---------------------------------------------------------------------------
 From  4450  To  4460 DY= -.632 mm.  DZ= 126.998 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ---------------------------------------------------------------------------
 From  4460  To  4470 DY= -2.828 mm.  DZ= 567.993 mm.
 RIGID  Weight= 733.96 N.
 ---------------------------------------------------------------------------
 From  4470  To  4480 DY= -.632 mm.  DZ= 126.998 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= From   Method= Peq
 ---------------------------------------------------------------------------
 From  4480  To  4482 DY= -3.070 mm.  DZ= 564.500 mm.
 ---------------------------------------------------------------------------
 From  4485  To  6760  DX= -53.882 mm.  DY= -53.882 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6760   Unreinforced Tee   Pad= 7.110 mm.
 ---------------------------------------------------------------------------
 From  4482  To  4485 DY= -3.070 mm.  DZ= 564.500 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4484
    Angle/Node @2= .00 4483
 ---------------------------------------------------------------------------
 From  4485  To  4490  DX= 1,042.000 mm.  DY= .000 mm.  DZ= .000 mm.
 ---------------------------------------------------------------------------
 From  4490  To  4500  DX= 127.000 mm.  DY= .000 mm.  DZ= .000 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ---------------------------------------------------------------------------
 From  4500  To  4505  DX= 598.000 mm.  DY= .000 mm.  DZ= .000 mm.
 RIGID  Weight= 1,005.30 N.
 ---------------------------------------------------------------------------
 From  4505  To  6790  DX= 127.000 mm.  DY= .000 mm.  DZ= .000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa   Mat= (165)A312 TP316L
    E= 195,127,520 KPa   EH1= 184,539,120 KPa   EH2= 192,370,304 KPa
    EH3= 192,370,304 KPa   EH4= 195,127,520 KPa   EH5= 195,127,520 KPa
    EH6= 195,127,520 KPa   EH7= 195,127,520 KPa   EH8= 195,127,520 KPa
    EH9= 195,127,520 KPa   v = .292   Pipe Den= .0080272 kg./cu.cm.
    Fluid Den= .0000600 kg./cu.cm.   Insul Thk= .000 mm.
    Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= 364.75 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
```

INPUT LISTING
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa
FLANGES
Location= From Method= Peq

From 6790 To 6780 DX= 324.000 mm.

From 6795 To 7000 DX= 53.882 mm. DY= -53.882 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 7000 Unreinforced Tee Pad= 7.110 mm.

From 6780 To 6795 DX= 324.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6794
Angle/Node @2= .00 6793

From 6795 To 6800 DY= -49.000 mm. DZ= 1,406.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6799
Angle/Node @2= .00 6798

From 6800 To 6810 DX= -2,068.000 mm. DY= .000 mm. DZ= .000 mm.

From 6810 To 6820 DX= -2,000.000 mm. DY= .000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 6819
Angle/Node @2= .00 6818

From 6820 To 6830 DX= -166.000 mm. DY= -166.000 mm.

From 6840 To 6850 DX= .000 mm. DZ= 127.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= 3.0000 mm.
GENERAL
P1= 6,200.1411 KPa PHyd= 9,300.2119 KPa Mat= (165)A312 TP316L
E= 195,127,520 KPa EH1= 184,539,120 KPa EH2= 192,370,304 KPa
EH3= 192,370,304 KPa EH4= 195,127,520 KPa EH5= 195,127,520 KPa
EH6= 195,127,520 KPa EH7= 195,127,520 KPa EH8= 195,127,520 KPa
EH9= 195,127,520 KPa v = .292 Pipe Den= .0080272 kg./cu.cm.
Fluid Den= .0000181 kg./cu.cm. Insul Thk= 40.000 mm.
Insul Den= .0001500 kg./cu.cm.
RIGID Weight= 364.75 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 6850 To 6860 DZ= 127.000 mm.
PIPE
Cor= .0000 mm.
GENERAL
P1= 6,200.1411 KPa PHyd= 9,300.2119 KPa Fluid Den= .0000600 kg./cu.cm.
RIGID Weight= 364.75 N.
ALLOWABLE STRESSES

INPUT LISTING
```
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ---------------------------------------------------------------------------
 From  6860  To  6845 DZ= 369.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa   Mat= (165)A312 TP316L
    E= 195,127,520 KPa   EH1= 184,539,120 KPa   EH2= 192,370,304 KPa
    EH3= 192,370,304 KPa   EH4= 195,127,520 KPa   EH5= 195,127,520 KPa
    EH6= 195,127,520 KPa   EH7= 195,127,520 KPa   EH8= 195,127,520 KPa
    EH9= 195,127,520 KPa   v = .292   Pipe Den= .0080272 kg./cu.cm.
    Fluid Den= .0000596 kg./cu.cm.   Insul Thk= .000 mm.
    Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  6845  +Y   Mu = .30
    Node  6845  X   Gap= 15.000 mm.   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ---------------------------------------------------------------------------
 From  6845  To  6830 DZ= 424.000 mm.
 SIF's & TEE's
    Node  6830   Welding Tee
 ---------------------------------------------------------------------------
 From  6830  To  6870 DZ= 5,576.000 mm.
 RESTRAINTS
    Node  6870  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  6870  To  6880 DZ= 2,000.000 mm.
 ---------------------------------------------------------------------------
 From  6880  To  6890 DZ= 4,000.000 mm.
 RESTRAINTS
    Node  6890  +Y   Mu = .30
    Node  6890  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  6890  To  6900 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  6900  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  6900  To  6910 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  6910  +Y   Mu = .30
    Node  6910  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  6910  To  6920 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  6920  +Y   Mu = .30
    Node  6920  X   Gap= 3.000 mm.   Mu = .30
    Node  6920  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  4100  To  4560 DZ= -285.000 mm.
```

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INPUT LISTING

```
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    T2= 60 C   T3= 60 C   P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 184,539,120 KPa
    EH2= 192,364,096 KPa   EH3= 192,364,096 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000600 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001500 kg./cu.cm.
 SIF's & TEE's
    Node  4560   Welding Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  4560  To  4570  DX= 143.000 mm.
 ------------------------------------------------------------------------------
 From  4570  To  8140  DX= 140.000 mm.  DY= -27.000 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 6.020 mm.
 ------------------------------------------------------------------------------
 From  4560  To  4580  DX= -143.000 mm.
 ------------------------------------------------------------------------------
 From  4580  To  4590  DX= -372.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4589
    Angle/Node @2= .00 4588
 ------------------------------------------------------------------------------
 From  4590  To  4600 DZ= -229.000 mm.
 ------------------------------------------------------------------------------
 From  4600  To  4610 DZ= -127.000 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  4610  To  4620 DZ= -568.000 mm.
 RIGID  Weight= 2,708.97 N.
 ------------------------------------------------------------------------------
 From  4620  To  4630 DZ= -127.000 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= From   Method= Peq
 ------------------------------------------------------------------------------
 From  4630  To  4640 DZ= -200.000 mm.
 ------------------------------------------------------------------------------
 From  4640  To  6510 DY= -76.200 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6510   Unreinforced Tee   Pad= 7.110 mm.
```

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INPUT LISTING

```
 ------------------------------------------------------------------------------
 From  4640  To  4650 DZ= -532.500 mm.
 ------------------------------------------------------------------------------
 From  4650  To  4660 DY= -27.000 mm.  DZ= -140.000 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 6.020 mm.
 ------------------------------------------------------------------------------
 From  4660  To  4670 DZ= -111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 191.27 N.
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  4670  To  4680 DZ= -441.000 mm.
 RIGID  Weight= 387.00 N.
 ------------------------------------------------------------------------------
 From  4680  To  4690 DZ= -111.125 mm.
 RIGID  Weight= 191.27 N.
 FLANGES
    Location= From   Method= Peq
 ------------------------------------------------------------------------------
 From  4690  To  4700 DY= 27.000 mm.  DZ= -140.000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 7.112 mm.
 ------------------------------------------------------------------------------
 From  4700  To  4710 DZ= -300.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  4710  To  6530 DY= -76.200 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6530   Unreinforced Tee   Pad= 7.112 mm.
 ------------------------------------------------------------------------------
 From  4710  To  4720 DZ= -300.000 mm.
 ------------------------------------------------------------------------------
 From  4720  To  4730 DZ= -127.000 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  4730  To  4740 DZ= -568.000 mm.
 RIGID  Weight= 2,708.97 N.
 ------------------------------------------------------------------------------
 From  4740  To  4750 DZ= -101.600 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 900.0205 KPa   P2= 510.0116 KPa
    PHyd= 1,350.0308 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 199,086,608 KPa   EH2= 202,089,360 KPa   EH3= 202,089,360 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
```

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INPUT LISTING
```
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000060 kg./cu.cm.
    Insul Thk= .000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 FLANGES
    Location= From   Method= Peq
 ------------------------------------------------------------------------------
 From  8150  To  4140 DZ= -3,792.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4139
    Angle/Node @2= .00 4138
 ------------------------------------------------------------------------------
 From  4140  To  6560  DX= 429.000 mm.
 RESTRAINTS
    Node  6560  +Y   Mu = .30
    Node  6560  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  6560  To  4760  DX= 2,876.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4759
    Angle/Node @2= .00 4758
 ------------------------------------------------------------------------------
 From  4760  To  4770 DZ= -457.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4769
 ------------------------------------------------------------------------------
 From  4770  To  7330 DY= -658.000 mm.
 SIF's & TEE's
    Node  7330   Welding Tee
 ------------------------------------------------------------------------------
 From  4780  To  4160  DX= 900.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 12.700 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 900.0205 KPa   PHyd= 1,350.0308 KPa   Fluid Den= .0000060 kg./cu.cm.
    Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4160  To  6600 DY= -101.600 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6600   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  4160  To  4180  DX= 3,188.000 mm.
 ------------------------------------------------------------------------------
 From  4180  To  4200  DX= 114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
```

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```
 ----------------------------------------------------------------------------
 From  4200  To  4220  DX= 20.000 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 30.00 N.
 RESTRAINTS
    Node  4220  ANC   Cnode  4221
 ----------------------------------------------------------------------------
 From  4220  To  4240  DX= 104.775 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 177.93 N.
 ----------------------------------------------------------------------------
 From  4240  To  4260  DX= 155.000 mm.
 RESTRAINTS
    Node  4260  ANC   Cnode  4261
 EQUIPMENT LIMITS
    Nozzle Node = 4260
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,400.19 N.m.   MC= 5,020.21 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ----------------------------------------------------------------------------
 From  4261  To  4280  DX= 460.000 mm.
 PIPE
    Dia= 920.000 mm.   Wall= 12.000 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  4280  To  4300 DY= -1,300.000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  4300  To  4310 DY= -1,000.000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  4310  To  4320 DY= -300.000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  4320  ANC
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  4780  To  6620  DX= -242.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 12.700 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
```

INPUT LISTING
```
 From  7320  To  6630 DY= -101.600 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6630   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  6620  To  4800  DX= -242.000 mm.
 ------------------------------------------------------------------------------
 From  4800  To  4810  DX= -114.300 mm.
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  4810  To  4820  DX= -542.000 mm.
 RIGID  Weight= 3,362.86 N.
 ------------------------------------------------------------------------------
 From  4820  To  4830  DX= -114.300 mm.
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  4830  To  7320  DX= -290.000 mm.
 ------------------------------------------------------------------------------
 From  7320  To  7330  DX= -478.000 mm.
 ------------------------------------------------------------------------------
 From  7330  To  4840  DX= -288.000 mm.
 ------------------------------------------------------------------------------
 From  4840  To  4850  DX= -114.300 mm.
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  4850  To  4860  DX= -606.000 mm.
 RIGID  Weight= 360.31 N.
 ------------------------------------------------------------------------------
 From  4860  To  4870  DX= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  4870  To  4880  DX= -200.000 mm.
 ------------------------------------------------------------------------------
 From  4880  To  6650  DX= -287.000 mm.
 ------------------------------------------------------------------------------
 From  6650  To  6660 DY= -101.600 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6660   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  6650  To  4890  DX= -487.000 mm.
 ------------------------------------------------------------------------------
 From  4890  To  4900  DX= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  4900  To  4910  DX= -486.500 mm.
 RIGID  Weight= 2,259.70 N.
 ------------------------------------------------------------------------------
 From  4910  To  4920  DX= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  4920  To  4930  DX= -542.000 mm.
 ------------------------------------------------------------------------------
 From  4930  To  6680 DY= -101.600 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
```

INPUT LISTING
```
    Node  6680   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  4930  To  4940  DX= -605.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4939
    Angle/Node @2= .00 4938
 ---------------------------------------------------------------------------
 From  4940  To  4950 DZ= 1,500.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4949
    Angle/Node @2= .00 4948
 ---------------------------------------------------------------------------
 From  4950  To  4960  DX= -871.500 mm.  DY= .000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 4959
    Angle/Node @2= .00 4958
 ---------------------------------------------------------------------------
 From  4960  To  4970  DX= -337.000 mm.  DY= 337.000 mm.
 ---------------------------------------------------------------------------
 From  8140  To  4980  DX= 383.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
 GENERAL
    T1= 175 C   T2= 60 C   T3= 60 C   P1= 6,200.1411 KPa   P2= 5,410.1230 KPa
    PHyd= 9,300.2119 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 193,178,448 KPa   EH2= 200,637,808 KPa   EH3= 200,637,808 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000060 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001500 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  4570  To  8140  DX= 140.000 mm.  DY= -27.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    P2= 5,410.1230 KPa   Insul Thk= 40.000 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 6.020 mm.
 ---------------------------------------------------------------------------
 From  4980  To  4990  DX= 111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
    E= 203,401,232 KPa   EH1= 193,178,448 KPa   EH2= 200,637,808 KPa
    EH3= 200,637,808 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
```

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Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa
FLANGES
Location= To Method= Peq

From 4990 To 5000 DX= 441.000 mm.
RIGID Weight= 1,116.50 N.
FLANGES
Location= To Method= Peq

From 5000 To 5010 DX= 111.125 mm.
RIGID Weight= 191.27 N.
FLANGES
Location= From Method= Peq

From 5010 To 5020 DX= 153.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5019

From 5020 To 5025 DZ= -498.350 mm.

From 5020 To 6700 DX= 35.355 mm. DY= -35.355 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6700 Unreinforced Tee Pad= 7.112 mm.

From 5025 To 5030 DZ= -498.350 mm.

From 5030 To 5040 DY= -13.000 mm. DZ= -102.000 mm.
REDUCER
Diam2= 88.900 mm. Wall2= 5.486 mm.

From 5040 To 5060 DZ= -92.075 mm.
PIPE
Dia= 88.900 mm. Wall= 5.486 mm.
Insul Thk= 40.000 mm.
RIGID Weight= 106.76 N.
FLANGES
Location= To Method= Peq

From 5060 To 5070 DZ= -452.000 mm.
RIGID Weight= 217.96 N.

From 5070 To 5080 DZ= -92.075 mm.
RIGID Weight= 106.76 N.
FLANGES
Location= From Method= Peq

From 5080 To 5090 DY= 12.500 mm. DZ= -102.000 mm.
REDUCER
Diam2= 114.300 mm. Wall2= 6.020 mm.

From 5090 To 5095 DZ= -248.500 mm.
PIPE
Dia= 114.300 mm. Wall= 6.020 mm.
Insul Thk= 40.000 mm.

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  5095  To  6720 DY= -50.800 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6720   Reinforced Tee   Pad= 6.020 mm.
 ---------------------------------------------------------------------------
 From  5095  To  5100 DZ= -248.500 mm.
 ---------------------------------------------------------------------------
 From  5100  To  5110 DZ= -111.125 mm.
 RIGID  Weight= 191.27 N.
 FLANGES
    Location= To   Method= Peq
 ---------------------------------------------------------------------------
 From  5110  To  5120 DZ= -441.000 mm.
 RIGID  Weight= 1,116.50 N.
 ---------------------------------------------------------------------------
 From  5120  To  5130 DZ= -79.375 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 8.560 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 272 C   T2= 270 C   T3= -28 C   P1= 600.0137 KPa   P2= 50.0011 KPa
    PHyd= 900.0205 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 187,335,024 KPa   EH2= 187,483,936 KPa   EH3= 205,934,864 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= 71.17 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,638 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  5130  To  5140 DZ= -153.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5139
 ---------------------------------------------------------------------------
 From  5140  To  5145 DY= -624.000 mm.
 ---------------------------------------------------------------------------
 From  5145  To  6740 DZ= -50.800 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6740   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  5145  To  5150 DY= -424.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5149
    Angle/Node @2= .00 5148
 ---------------------------------------------------------------------------
 From  5150  To  5160  DX= -885.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5159
    Angle/Node @2= .00 5158
 ---------------------------------------------------------------------------
 From  5160  To  5170 DY= -1,073.000 mm.
```

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```
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 44.939   Angle/Node @1= 22.47 5169
    Angle/Node @2= .00 5168
 ---------------------------------------------------------------------------
 From  5170  To  3965  DX= .000 mm.  DY= -530.000 mm.  DZ= 528.876 mm.
 ---------------------------------------------------------------------------
 From  4710  To  6530 DY= -76.200 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    T1= 85 C   T2= 38 C   T3= 38 C   P1= 6,200.1411 KPa   P2= 5,410.1230 KPa
    PHyd= 9,300.2119 KPa   Mat= (165)A312 TP316L   E= 195,127,520 KPa
    EH1= 190,812,912 KPa   EH2= 193,729,152 KPa   EH3= 193,729,152 KPa
    EH4= 195,127,520 KPa   EH5= 195,127,520 KPa   EH6= 195,127,520 KPa
    EH7= 195,127,520 KPa   EH8= 195,127,520 KPa   EH9= 195,127,520 KPa
    v = .292   Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000600 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6530   Unreinforced Tee   Pad= 7.112 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ---------------------------------------------------------------------------
 From  6010  To  6020  DX= -155.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 900.0205 KPa   P2= 510.0116 KPa   PHyd= 1,350.0308 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 199,086,608 KPa
    EH2= 202,002,864 KPa   EH3= 202,002,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  6020  +Y   Mu = .30
    Node  6020  Z   Gap= 3.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  6020  To  6030  DX= -12,176.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 6029
    Angle/Node @2= .00 6028
 ---------------------------------------------------------------------------
 From  6030  To  6040 DY= -1,300.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 6039
    Angle/Node @2= .00 6038
 ---------------------------------------------------------------------------
```

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```
 From  6040  To  6050 DZ= 1,601.000 mm.
 RESTRAINTS
    Node  6050  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  6050  To  6060 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  6060  +Y   Mu = .30
    Node  6060  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  6060  To  6070 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  6070  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  6070  To  6080 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  6080  +Y   Mu = .30
    Node  6080  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  6080  To  6090 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  6090  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  6090  To  4970 DZ= 4,700.000 mm.
 ------------------------------------------------------------------------------
 From  4970  To  6110 DZ= 1,300.000 mm.
 RESTRAINTS
    Node  6110  +Y
    Node  6110  Z   Gap= 3.000 mm.
    Node  6110  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  1260  To  2140 DY= 1,530.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 175 C   T2= 142 C   T3= 142 C   P1= 6,200.1411 KPa   P2= 5,480.1250 KPa
    PHyd= 9,300.2119 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 193,178,448 KPa   EH2= 195,549,872 KPa   EH3= 195,549,872 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000430 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2139
    Angle/Node @2= .00 2138
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2140  To  2160  DX= .000 mm.  DZ= 3,672.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2159
    Angle/Node @2= .00 2158
 ------------------------------------------------------------------------------
 From  2160  To  2180  DX= -3,864.000 mm.
```

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```
 RESTRAINTS
    Node  2180  +Y   Mu = .30
    Node  2180  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  2180  To  2200  DX= -4,915.000 mm.
 RESTRAINTS
    Node  2200  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  2200  To  2220  DX= -4,791.000 mm.
 RESTRAINTS
    Node  2220  +Y   Mu = .30
    Node  2220  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  2220  To  2260  DX= -738.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000
 ---------------------------------------------------------------------------
 From  2260  To  2270 DZ= 3,378.000 mm.
 RESTRAINTS
    Node  2270  +Y
 ---------------------------------------------------------------------------
 From  2270  To  7340 DZ= 1,259.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 7339
    Angle/Node @2= .00 7338
 ---------------------------------------------------------------------------
 From  7340  To  2280  DX= 226.000 mm.  DZ= 226.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 2279
    Angle/Node @2= .00 2278
 ---------------------------------------------------------------------------
 From  2280  To  7350 DZ= 99.000 mm.
 SIF's & TEE's
    Node  7350   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  7350  To  2320 DY= 658.000 mm.
 RESTRAINTS
    Node  2320  +Y
 ---------------------------------------------------------------------------
 From  2320  To  2330 DY= 228.000 mm.
 ---------------------------------------------------------------------------
 From  2330  To  2340 DY= 213.000 mm.
 ---------------------------------------------------------------------------
 From  2340  To  2360 DY= 82.550 mm.
    Element Name= GATE_FLG_600
 RIGID  Weight= 57.83 N.
 ---------------------------------------------------------------------------
 From  2360  To  5650 DY= 301.000 mm.
 RIGID  Weight= 311.38 N.
 ---------------------------------------------------------------------------
 From  5650  To  5660 DY= 82.550 mm.
 RIGID  Weight= 57.83 N.
 ---------------------------------------------------------------------------
 From  5660  To  2400 DY= 365.000 mm.
 ---------------------------------------------------------------------------
 From  2400  To  5670 DY= 106.000 mm.
```

INPUT LISTING
```
 REDUCER
    Diam2= 48.260 mm.   Wall2= 7.137 mm.
 ------------------------------------------------------------------------------
 From  5670  To  5680 DY= 79.375 mm.
 PIPE
    Dia= 48.260 mm.   Wall= 7.137 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 35.59 N.
 ------------------------------------------------------------------------------
 From  5680  To  5690 DY= 79.375 mm.
 RIGID  Weight= 35.59 N.
 ------------------------------------------------------------------------------
 From  5690  To  2420 DY= 41.500 mm.
 RIGID  Weight= 25.00 N.
 FORCES & MOMENTS
    Node  2420   FX1= 2,000.10 N.   FY1= 1,000.05 N.   FZ1= .00 N.
 ------------------------------------------------------------------------------
 From  2420  To  2440  DX= -156.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 100.00 N.
 ------------------------------------------------------------------------------
 From  2440  To  2460  DX= -73.025 mm.  DZ= .000 mm.
 PIPE
    Cor= 6.0000 mm.   Element Name= FLANGE_FLG_150
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   P2= 50.0011 KPa
    PHyd= 900.0205 KPa   Fluid Den= .0000015 kg./cu.cm.
 RIGID  Weight= 54.49 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2460  To  2480  DX= -140.000 mm.  DY= -39.700 mm.  DZ= .000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------------
 From  2480  To  2500  DX= -345.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2500  +Y   Mu = .30
    Node  2500  Z   Gap= 3.000 mm.
    Node  2500  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  2500  To  2520  DX= -574.000 mm.  DZ= .000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2519
    Angle/Node @2= .00 2518
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  2520  To  2540 DY= -229.000 mm.
 ---------------------------------------------------------------------------
 From  2540  To  5700 DY= -92.075 mm.
    Element Name= BALL_FLG_150
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  5700  To  2560 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ---------------------------------------------------------------------------
 From  2560  To  2570 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  2570  To  5710 DY= -1,030.000 mm.
 ---------------------------------------------------------------------------
 From  5710  To  6440  DX= -76.200 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6440   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  5710  To  2580 DY= -826.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2579
    Angle/Node @2= .00 2578
 ---------------------------------------------------------------------------
 From  2580  To  5840  DX= -324.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 5839
 ---------------------------------------------------------------------------
 From  5840  To  5800  DX= -500.000 mm.  DZ= 500.000 mm.
 ---------------------------------------------------------------------------
 From  7350  To  2300 DZ= 500.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 175 C   T2= 142 C   T3= 142 C   P1= 6,200.1411 KPa   P2= 5,480.1250 KPa
    PHyd= 9,300.2119 KPa   Fluid Den= .0000430 kg./cu.cm.   Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2299
    Angle/Node @2= .00 2298
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  2300  To  2620 DY= 658.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 3.0000 mm.
 GENERAL
    P1= 2,200.0500 KPa   P2= 1,810.0413 KPa   PHyd= 3,300.0752 KPa
    Fluid Den= .0000154 kg./cu.cm.   Insul Thk= .000 mm.
 RESTRAINTS
    Node  2620  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
```

INPUT LISTING
Sh1= 137,571 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 2620 To 2640 DY= 441.000 mm.

From 2640 To 5720 DY= 82.550 mm.
RIGID Weight= 57.83 N.

From 5720 To 2660 DY= 301.000 mm.
Element Name= GATE_FLG_600
RIGID Weight= 311.38 N.

From 2660 To 5730 DY= 82.550 mm.
RIGID Weight= 57.83 N.

From 5730 To 2700 DY= 365.000 mm.

From 2700 To 5740 DY= 106.000 mm.
REDUCER
Diam2= 48.260 mm. Wall2= 7.137 mm.

From 5740 To 5750 DY= 79.375 mm.
PIPE
Dia= 48.260 mm. Wall= 7.137 mm.
Insul Thk= .000 mm.
RIGID Weight= 35.59 N.

From 5750 To 5760 DY= 79.375 mm.
RIGID Weight= 35.59 N.

From 5760 To 2720 DY= 41.000 mm.
RIGID Weight= 35.59 N.
FORCES & MOMENTS
Node 2720 FX2= 2,000.10 N. FY2= 1,000.05 N. FZ2= .00 N.

From 2720 To 2740 DX= -156.000 mm. DZ= .000 mm.
PIPE
Dia= 88.900 mm. Wall= 7.620 mm.
Insul Thk= .000 mm.
RIGID Weight= 100.00 N.

From 2740 To 2760 DX= -73.025 mm. DZ= .000 mm.
PIPE
Dia= 88.900 mm. Wall= 7.620 mm. Cor= 6.0000 mm.
Element Name= FLANGE_FLG_150
GENERAL
T1= 270 C T2= 272 C T3= -28 C P1= 600.0137 KPa P2= 50.0011 KPa
PHyd= 900.0205 KPa Fluid Den= .0000015 kg./cu.cm. Insul Thk= .000 mm.
RIGID Weight= 54.49 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

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Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 From  2760  To  2780  DX= -140.000 mm.  DY= -39.700 mm.  DZ= .000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------
 From  2780  To  2800  DX= -345.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2800  +Y
    Node  2800  Z   Gap= 3.000 mm.
    Node  2800  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------
 From  2800  To  2820  DX= -574.000 mm.  DZ= .000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2819
    Angle/Node @2= .00 2818
 ------------------------------------------------------------------------
 From  2820  To  2840 DY= -229.000 mm.
 ------------------------------------------------------------------------
 From  2840  To  2846 DY= -92.075 mm.
    Element Name= BALL_FLG_150
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------
 From  2846  To  2852 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ------------------------------------------------------------------------
 From  2852  To  2860 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------
 From  2860  To  2870 DY= -1,030.000 mm.
 ------------------------------------------------------------------------
 From  2870  To  6460  DX= -76.200 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------
 From  2870  To  2880 DY= -826.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2879
    Angle/Node @2= .00 2878
 ------------------------------------------------------------------------
 From  2880  To  5800  DX= -824.000 mm.
 SIF's & TEE's
    Node  5800   Welding Tee
 ------------------------------------------------------------------------
 From  5800  To  5805  DX= -1,228.000 mm.
 RESTRAINTS
    Node  5805  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  5805  To  5810  DX= -1,118.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5809
    Angle/Node @2= .00 5808
 ------------------------------------------------------------------------
 From  5810  To  5820 DY= -523.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 44.937   Angle/Node @1= 22.47 5819
```

INPUT LISTING

```
    Angle/Node @2= .00 5818
 ------------------------------------------------------------------------------
 From  5820  To  6120  DX= .000 mm.  DY= -912.000 mm.  DZ= 910.000 mm.
 ------------------------------------------------------------------------------
 From  4750  To  8150 DZ= -178.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 900.0205 KPa   P2= 510.0116 KPa
    PHyd= 1,350.0308 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 199,086,608 KPa   EH2= 202,089,360 KPa   EH3= 202,089,360 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000060 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  8150  To  6550 DY= -76.200 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  6210  To  6220 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   P2= .0000 KPa
    PHyd= .0000 KPa   Mat= (102)A53 Grade B   E= 203,401,232 KPa
    EH1= 203,401,232 KPa   EH2= 203,401,232 KPa   EH3= 203,401,232 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  6220  +Y   Mu = .30
    Node  6220  Z   Gap= 3.000 mm.   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  6230  To  6240 DZ= 300.000 mm.
 PIPE
    Dia= 48.260 mm.   Wall= 3.683 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  6240  +Y   Cnode  6241
 ------------------------------------------------------------------------------
 From  6260  To  6270 DY= -350.000 mm.
 RESTRAINTS
    Node  6270  +Y   Cnode  6271   Mu = .30
    Node  6270  Z   Cnode  6271   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
```

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Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
 From  6280  To  6290  DX= 300.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 3.912 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  6290  +Y   Cnode  6291   Mu = .30
    Node  6290  Z   Cnode  6291   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  6300  To  6310 DY= -900.000 mm.
 RESTRAINTS
    Node  6310  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  6400  To  6410 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  6410  +Y   Mu = .30
    Node  6410  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  6420  To  6425 DY= -230.000 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  6425  To  6430 DY= -380.000 mm.
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  6430  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  6440  To  6450  DX= -300.000 mm.
 RESTRAINTS
    Node  6450  +Y
 ------------------------------------------------------------------------------
 From  6460  To  6470  DX= -300.000 mm.
 RESTRAINTS
    Node  6470  +Y   Mu = .30
 ------------------------------------------------------------------------------
```

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Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 From  6480  To  6485 DY= -230.000 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  6485  To  6490 DY= -380.000 mm.
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  6490  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  6510  To  6515 DY= -230.000 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  6515  To  6520 DY= -380.000 mm.
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  6520  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
```

INPUT LISTING

```
 From  6530  To  6535 DY= -230.000 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  6535  To  6540 DY= -380.000 mm.
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  6540  +Y   Mu = .30
    Node  6540  X   Gap= 3.000 mm.   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  6550  To  6590 DY= -610.000 mm.
 RESTRAINTS
    Node  6590  +Y   Mu = .30
    Node  6590  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  6600  To  6610 DY= -500.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  6610  +Y
 ------------------------------------------------------------------------------
 From  6630  To  6640 DY= -500.000 mm.
 RESTRAINTS
    Node  6640  Y
 ------------------------------------------------------------------------------
 From  6660  To  6670 DY= -500.000 mm.
 RESTRAINTS
    Node  6670  +Y
    Node  6670  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  6680  To  6690 DY= -500.000 mm.
 RESTRAINTS
    Node  6690  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  6700  To  6705  DX= 100.000 mm.
 PIPE
```

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INPUT LISTING
```
    Dia= 88.900 mm.   Wall= 5.486 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  6705  To  6710  DX= 400.000 mm.
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  6710  +Y
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  6720  To  6730 DY= -700.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  6730  +Y   Mu = .30
    Node  6730  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  6740  To  6750 DZ= -300.000 mm.
 RESTRAINTS
    Node  6750  +Y
 ------------------------------------------------------------------------------
 From  6760  To  6765  DX= -100.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  6765  To  6770  DX= -450.000 mm.
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 13:45
Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  6770  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  7000  To  7005  DX= 100.000 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  7005  To  7010  DX= 400.000 mm.
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  7010  +Y   Mu = .30
    Node  7010  Z   Gap= 3.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  8000  To  8010 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 272 C   T2= 270 C   T3= -28 C   P1= 600.0137 KPa   P2= 50.0011 KPa
    PHyd= 900.0205 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 187,335,024 KPa   EH2= 187,483,936 KPa   EH3= 205,934,864 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  8010  +Y   Mu = .30
```

INPUT LISTING
```
    Node  8000  +Y   Mu = .30
    Node  8000  X   Gap= 3.000 mm.   Mu = .30
    Node  8000  Z   Gap= 3.000 mm.   Mu = .30
 UNIFORM LOAD
   Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
   Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
   Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,638 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  8010  To  8020 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  8020  +Y   Mu = .30
    Node  8020  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  8020  To  8030 DZ= -2,950.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8029
    Angle/Node @2= .00 8028
 ------------------------------------------------------------------------------
 From  8030  To  8040  DX= -6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8039
    Angle/Node @2= .00 8038
 ------------------------------------------------------------------------------
 From  8040  To  8050 DZ= -1,000.000 mm.
 RESTRAINTS
    Node  8050  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  8050  To  8060 DZ= -1,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8059
    Angle/Node @2= .00 8058
 ------------------------------------------------------------------------------
 From  8060  To  8070  DX= 6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8069
    Angle/Node @2= .00 8068
 ------------------------------------------------------------------------------
 From  8070  To  8080 DZ= -850.000 mm.
 RESTRAINTS
    Node  8080  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  8080  To  8090  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  8090  +Y   Mu = .30
    Node  8090  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  8090  To  6120 DZ= -4,205.000 mm.
 SIF's & TEE's
    Node  6120   Welding Tee
 ------------------------------------------------------------------------------
 From  6120  To  8100 DZ= -1,892.000 mm.
```

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Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
 RESTRAINTS
    Node  8100  +Y
    Node  8100  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  8100  To  3965  DX= .000 mm.  DY= .000 mm.  DZ= -4,034.000 mm.
 SIF's & TEE's
    Node  3965   Welding Tee
 ---------------------------------------------------------------------------
 From  3965  To  8110 DZ= -954.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 900.0205 KPa   P2= 510.0116 KPa   PHyd= 1,300.0297 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,335,024 KPa
    EH2= 187,483,936 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,638 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  8110  To  8120 DZ= -1,212.000 mm.
 RESTRAINTS
    Node  8120  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  8120  To  8130 DZ= -6,000.000 mm.
 GENERAL
    T1= 272 C   T2= 270 C   T3= -28 C   P1= 900.0205 KPa   P2= 510.0116 KPa
    PHyd= 1,300.0297 KPa
 RESTRAINTS
    Node  8130  +Y   Mu = .30
    Node  8130  X   Gap= 3.000 mm.   Mu = .30
    Node  8130  Z   Gap= 3.000 mm.   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,638 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
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 MATERIAL Changes:
    10              20             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   280             300             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   500             580             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   610             620             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   590            5190             Mat= (106)A106 Grade B   E= 203,401,232 KPa
```

INPUT LISTING

		v = .292 Density= .0078 kg./cu.cm.
5300	5310	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
640	660	Mat= (102)A53 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
620	680	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
820	840	Mat= (383)A516 70 E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
280	4350	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
1020	1040	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
1020	8280	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
1400	1480	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
1660	1680	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
1821	1920	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
2000	6420	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
2000	4100	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
4505	6790	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
6840	6850	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
6860	6845	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
4100	4560	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
4740	4750	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
8140	4980	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
4980	4990	E= 203,401,232 KPa v = .292
		Density= .0078 kg./cu.cm.
5120	5130	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
4710	6530	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
6010	6020	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
1260	2140	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
4750	8150	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
6210	6220	Mat= (102)A53 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
6420	6425	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
6425	6430	Mat= (102)A53 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
6480	6485	Mat= (165)A312 TP316L E= 195,127,520 KPa

INPUT LISTING

```
                                  v = .292   Density= .0080 kg./cu.cm.
  6485            6490            Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                  v = .292   Density= .0078 kg./cu.cm.
  6510            6515            Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                  v = .292   Density= .0080 kg./cu.cm.
  6515            6520            Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                  v = .292   Density= .0078 kg./cu.cm.
  6530            6535            Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                  v = .292   Density= .0080 kg./cu.cm.
  6535            6540            Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                  v = .292   Density= .0078 kg./cu.cm.
  6700            6705            Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                  v = .292   Density= .0080 kg./cu.cm.
  6705            6710            Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                  v = .292   Density= .0078 kg./cu.cm.
  6760            6765            Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                  v = .292   Density= .0080 kg./cu.cm.
  6765            6770            Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                  v = .292   Density= .0078 kg./cu.cm.
  7000            7005            Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                  v = .292   Density= .0080 kg./cu.cm.
  7005            7010            Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                  v = .292   Density= .0078 kg./cu.cm.
  8000            8010            Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                  v = .292   Density= .0078 kg./cu.cm.
  3965            8110            Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                  v = .292   Density= .0078 kg./cu.cm.
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JOBNAME: D:\BINAK PRO\STRESS REPORT -D03\BNK-GCS-CN-006-D03\BNK-GCS-CN-006-D03

ALLOWABLE STRESS Changes
    10              20              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
   140             160              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
   120             180              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
   280             300              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
```

INPUT LISTING

```
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   500              580         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   580              590         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   610              620         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   590             5190         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  5300             5310         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   610              640         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   640              660         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   620              680         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
```

INPUT LISTING

```
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   820              840         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 160,648 KPa   Sh1= 157,769 KPa
                                Sh2= 160,373 KPa   Sh3= 160,373 KPa
                                Sh4= 160,648 KPa   Sh5= 160,648 KPa
                                Sh6= 160,648 KPa   Sh7= 160,648 KPa
                                Sh8= 160,648 KPa   Sh9= 160,648 KPa
                                Sy= 262,001 KPa
   280             4350         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4360             4370         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4370             4380         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   900              920         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1020             1040         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,888 KPa   Sh3= 137,888 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1020             8280         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,888 KPa   Sh3= 137,888 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1400             1480         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,888 KPa   Sh3= 137,888 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
```

INPUT LISTING

```
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1660            1680          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  7140            1760          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  7201            7210          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1740            7150          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1821            1920          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  2000            6420          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  2000            4100          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  4505            6790          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
```

INPUT LISTING

```
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6840            6850          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6850            6860          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6860            6845          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  4100            4560          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  4740            4750          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4780            4160          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4310            4320          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4780            6620          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
```

INPUT LISTING

```
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  8140              4980        B31.3 (2016)         Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4980              4990        B31.3 (2016)         Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  5120              5130        B31.3 (2016)         Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,638 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4710              6530        B31.3 (2016)         Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6010              6020        B31.3 (2016)         Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1260              2140        B31.3 (2016)         Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2440              2460        B31.3 (2016)         Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  7350              2300        B31.3 (2016)         Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
```

INPUT LISTING

```
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2300              2620        B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2740              2760        B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4750              8150        B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6210              6220        B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6420              6425        B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6425              6430        B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6480              6485        B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6485              6490        B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
```

INPUT LISTING

```
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6510            6515          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6515            6520          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6530            6535          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6535            6540          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6700            6705          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6705            6710          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6760            6765          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6765            6770          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
```

INPUT LISTING

```
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  7000            7005            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 115,142 KPa   Sh1= 115,142 KPa
                                  Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                  Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                  Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                  Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                  Sy= 172,369 KPa
  7005            7010            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  8000            8010            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,365 KPa
                                  Sh2= 129,638 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  3965            8110            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,365 KPa
                                  Sh2= 129,638 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  8120            8130            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,365 KPa
                                  Sh2= 129,638 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
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BEND ELEMENTS
    40              60            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 59
                                  Angle/Node @2= .00 58
    60              80            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 79
                                  Angle/Node @2= .00 78
   120             180            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 179
   490             500            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 499   Angle/Node @2= .00 498
   500             580            Radius= 228.600 mm. (LONG)
```

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INPUT LISTING

```
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                579   Angle/Node @2= .00 578
   590             600            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                599   Angle/Node @2= .00 598
   590            5190            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                5189   Angle/Node @2= .00 5188
  5190            8160            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 45.000   Angle/Node @1= 22.50
                                8159   Angle/Node @2= .00 8158
  5230            5240            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                5239   Angle/Node @2= .00 5238
  5320            5330            Radius= 114.300 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                5329   Angle/Node @2= .00 5328
  5340            5350            Radius= 114.300 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                5349   Angle/Node @2= .00 5348
  5375            5380            Radius= 114.300 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                5379   Angle/Node @2= .00 5378
  5380            5390            Radius= 114.300 mm. (LONG)
                                  Bend Angle= 44.922   Angle/Node @1= 22.46
                                5389   Angle/Node @2= .00 5388
   620             680            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                679   Angle/Node @2= .00 678
  4380            4390            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4389   Angle/Node @2= .00 4388
  4395             880            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                879   Angle/Node @2= .00 878
   960             980            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                979   Angle/Node @2= .00 978
  1100            1120            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1119   Angle/Node @2= .00 1118
  1145            1140            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1139   Angle/Node @2= .00 1138
  1160            1200            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1199   Angle/Node @2= .00 1198
  1390            1400            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1399   Angle/Node @2= .00 1398
  1400            1480            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1479   Angle/Node @2= .00 1478
  1480            1485            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1484   Angle/Node @2= .00 1483
```

INPUT LISTING

1485	1490	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1489 Angle/Node @2= .00 1488
1520	1540	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1539 Angle/Node @2= .00 1538
1560	1580	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1579 Angle/Node @2= .00 1578
7020	7060	Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7059 Angle/Node @2= .00 7058
7065	7070	Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1621 Angle/Node @2= .00 1622
7070	7080	Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7079 Angle/Node @2= .00 7078
7040	7090	Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7089 Angle/Node @2= .00 7088
7095	7100	Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7099 Angle/Node @2= .00 7098
7100	7110	Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7109 Angle/Node @2= .00 7108
7210	7220	Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7219
7225	7230	Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7229 Angle/Node @2= .00 7228
1920	1940	Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1939
1940	1960	Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1959 Angle/Node @2= .00 1958
7260	7290	Radius= 228.600 mm. (LONG) Bend Angle= 89.719 Angle/Node @1= 44.86 7289 Angle/Node @2= .00 7288
7400	7300	Radius= 228.600 mm. (LONG) Bend Angle= 89.999 Angle/Node @1= 45.00 7299 Angle/Node @2= .00 7298
4482	4485	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4484 Angle/Node @2= .00 4483
6780	6795	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6794 Angle/Node @2= .00 6793
6795	6800	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6799 Angle/Node @2= .00 6798
6810	6820	Radius= 228.600 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50

INPUT LISTING

		6819 Angle/Node @2= .00 6818
4580	4590	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4589 Angle/Node @2= .00 4588
8150	4140	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4139 Angle/Node @2= .00 4138
6560	4760	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4759 Angle/Node @2= .00 4758
4760	4770	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4769
4930	4940	Radius= 304.800 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4939 Angle/Node @2= .00 4938
4940	4950	Radius= 304.800 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4949 Angle/Node @2= .00 4948
4950	4960	Radius= 304.800 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		4959 Angle/Node @2= .00 4958
5010	5020	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5019
5130	5140	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5139
5145	5150	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5149 Angle/Node @2= .00 5148
5150	5160	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5159 Angle/Node @2= .00 5158
5160	5170	Radius= 152.400 mm. (LONG)
		Bend Angle= 44.939 Angle/Node @1= 22.47
		5169 Angle/Node @2= .00 5168
6020	6030	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		6029 Angle/Node @2= .00 6028
6030	6040	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		6039 Angle/Node @2= .00 6038
1260	2140	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2139 Angle/Node @2= .00 2138
2140	2160	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2159 Angle/Node @2= .00 2158
2220	2260	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000
2270	7340	Radius= 76.200 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		7339 Angle/Node @2= .00 7338
7340	2280	Radius= 76.200 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50

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INPUT LISTING

```
                                  2279   Angle/Node @2= .00 2278
  2500            2520              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2519   Angle/Node @2= .00 2518
  5710            2580              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2579   Angle/Node @2= .00 2578
  2580            5840              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50
                                  5839
  7350            2300              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2299   Angle/Node @2= .00 2298
  2800            2820              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2819   Angle/Node @2= .00 2818
  2870            2880              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2879   Angle/Node @2= .00 2878
  5805            5810              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  5809   Angle/Node @2= .00 5808
  5810            5820              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 44.937   Angle/Node @1= 22.47
                                  5819   Angle/Node @2= .00 5818
  8020            8030              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  8029   Angle/Node @2= .00 8028
  8030            8040              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  8039   Angle/Node @2= .00 8038
  8050            8060              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  8059   Angle/Node @2= .00 8058
  8060            8070              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  8069   Angle/Node @2= .00 8068
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RIGIDS
    10              20          RIGID  Weight= 191.27 N.
    25              40          RIGID  Weight= 191.27 N.
   120             140          RIGID  Weight= .00 N.
   200             220          RIGID  Weight= 191.27 N.
   220             240          RIGID  Weight= 191.27 N.
   320             340          RIGID  Weight= 191.27 N.
   340             360          RIGID  Weight= 1,023.41 N.
   360             380          RIGID  Weight= 191.27 N.
   420             440          RIGID  Weight= 191.27 N.
   440             460          RIGID  Weight= 191.27 N.
   500            6210          RIGID  Weight= .00 N.
  5200            5210          RIGID  Weight= 44.48 N.
  5210            5220          RIGID  Weight= 93.41 N.
  5220            5230          RIGID  Weight= 44.48 N.
```

INPUT LISTING

5240	6230	RIGID	Weight= .00 N.
5250	5260	RIGID	Weight= 44.48 N.
5260	5270	RIGID	Weight= 44.48 N.
5275	6260	RIGID	Weight= .00 N.
5280	5290	RIGID	Weight= 44.48 N.
5290	5300	RIGID	Weight= 258.00 N.
5300	5310	RIGID	Weight= 31.14 N.
5340	6280	RIGID	Weight= .00 N.
610	640	RIGID	Weight= .00 N.
700	720	RIGID	Weight= 286.91 N.
721	760	RIGID	Weight= 177.93 N.
780	800	RIGID	Weight= .00 N.
780	6241	RIGID	Weight= .00 N.
780	6271	RIGID	Weight= .00 N.
780	6291	RIGID	Weight= .00 N.
820	840	RIGID	Weight= .00 N.
4350	4360	RIGID	Weight= 44.48 N.
4360	4370	RIGID	Weight= 311.38 N.
4370	4380	RIGID	Weight= 57.83 N.
4390	6300	RIGID	Weight= .00 N.
900	920	RIGID	Weight= 57.83 N.
920	940	RIGID	Weight= 427.03 N.
940	960	RIGID	Weight= 57.83 N.
1060	1080	RIGID	Weight= 364.75 N.
1080	1100	RIGID	Weight= 364.75 N.
1120	8260	RIGID	Weight= .00 N.
1220	1240	RIGID	Weight= 364.75 N.
1241	8300	RIGID	Weight= 364.75 N.
1300	1320	RIGID	Weight= 364.75 N.
1320	1340	RIGID	Weight= 3,087.07 N.
1340	1360	RIGID	Weight= 364.75 N.
1400	6400	RIGID	Weight= .00 N.
1640	1660	RIGID	Weight= 191.27 N.
7120	7130	RIGID	Weight= 191.27 N.
1660	1680	RIGID	Weight= 191.27 N.
1720	7140	RIGID	Weight= .00 N.
7131	7160	RIGID	Weight= 191.27 N.
7171	7150	RIGID	Weight= .00 N.
7140	1760	RIGID	Weight= .00 N.
1800	1820	RIGID	Weight= 191.27 N.
7150	7180	RIGID	Weight= .00 N.
7190	7200	RIGID	Weight= 191.27 N.
7201	7210	RIGID	Weight= 191.27 N.
1740	7150	RIGID	Weight= 382.52 N.
7150	1840	RIGID	Weight= 1,867.59 N.
1840	1860	RIGID	Weight=10,500.52 N.
1860	1880	RIGID	Weight= 4,500.22 N.
1880	1900	RIGID	Weight=10,500.52 N.
1900	7140	RIGID	Weight= 1,867.59 N.
7140	1740	RIGID	Weight= 382.52 N.
1821	1920	RIGID	Weight= 191.27 N.
2000	6420	RIGID	Weight= .00 N.
4400	4410	RIGID	Weight= 364.75 N.
4410	4420	RIGID	Weight= 3,087.07 N.
4420	4430	RIGID	Weight= 364.75 N.
4440	6480	RIGID	Weight= .00 N.

INPUT LISTING

4450	4460	RIGID	Weight= 364.75 N.
4460	4470	RIGID	Weight= 733.96 N.
4470	4480	RIGID	Weight= 364.75 N.
4485	6760	RIGID	Weight= .00 N.
4490	4500	RIGID	Weight= 364.75 N.
4500	4505	RIGID	Weight= 1,005.30 N.
4505	6790	RIGID	Weight= 364.75 N.
6795	7000	RIGID	Weight= .00 N.
6840	6850	RIGID	Weight= 364.75 N.
6850	6860	RIGID	Weight= 364.75 N.
4600	4610	RIGID	Weight= 364.75 N.
4610	4620	RIGID	Weight= 2,708.97 N.
4620	4630	RIGID	Weight= 364.75 N.
4640	6510	RIGID	Weight= .00 N.
4660	4670	RIGID	Weight= 191.27 N.
4670	4680	RIGID	Weight= 387.00 N.
4680	4690	RIGID	Weight= 191.27 N.
4710	6530	RIGID	Weight= .00 N.
4720	4730	RIGID	Weight= 364.75 N.
4730	4740	RIGID	Weight= 2,708.97 N.
4740	4750	RIGID	Weight= 191.27 N.
4160	6600	RIGID	Weight= .00 N.
4180	4200	RIGID	Weight= 302.48 N.
4200	4220	RIGID	Weight= 30.00 N.
4220	4240	RIGID	Weight= 177.93 N.
4261	4280	RIGID	Weight= .00 N.
4280	4300	RIGID	Weight= .00 N.
4300	4310	RIGID	Weight= .00 N.
4310	4320	RIGID	Weight= .00 N.
7320	6630	RIGID	Weight= .00 N.
4800	4810	RIGID	Weight= 302.48 N.
4810	4820	RIGID	Weight= 3,362.86 N.
4820	4830	RIGID	Weight= 302.48 N.
4840	4850	RIGID	Weight= 302.48 N.
4850	4860	RIGID	Weight= 360.31 N.
4860	4870	RIGID	Weight= 177.93 N.
6650	6660	RIGID	Weight= .00 N.
4890	4900	RIGID	Weight= 177.93 N.
4900	4910	RIGID	Weight= 2,259.70 N.
4910	4920	RIGID	Weight= 177.93 N.
4930	6680	RIGID	Weight= .00 N.
4980	4990	RIGID	Weight= 191.27 N.
4990	5000	RIGID	Weight= 1,116.50 N.
5000	5010	RIGID	Weight= 191.27 N.
5020	6700	RIGID	Weight= .00 N.
5040	5060	RIGID	Weight= 106.76 N.
5060	5070	RIGID	Weight= 217.96 N.
5070	5080	RIGID	Weight= 106.76 N.
5095	6720	RIGID	Weight= .00 N.
5100	5110	RIGID	Weight= 191.27 N.
5110	5120	RIGID	Weight= 1,116.50 N.
5120	5130	RIGID	Weight= 71.17 N.
5145	6740	RIGID	Weight= .00 N.
4710	6530	RIGID	Weight= .00 N.
2340	2360	RIGID	Weight= 57.83 N.
2360	5650	RIGID	Weight= 311.38 N.

INPUT LISTING

5650	5660	RIGID	Weight= 57.83 N.
5670	5680	RIGID	Weight= 35.59 N.
5680	5690	RIGID	Weight= 35.59 N.
5690	2420	RIGID	Weight= 25.00 N.
2420	2440	RIGID	Weight= 100.00 N.
2440	2460	RIGID	Weight= 54.49 N.
2540	5700	RIGID	Weight= 111.21 N.
5700	2560	RIGID	Weight= 1,005.30 N.
2560	2570	RIGID	Weight= 111.21 N.
5710	6440	RIGID	Weight= .00 N.
2640	5720	RIGID	Weight= 57.83 N.
5720	2660	RIGID	Weight= 311.38 N.
2660	5730	RIGID	Weight= 57.83 N.
5740	5750	RIGID	Weight= 35.59 N.
5750	5760	RIGID	Weight= 35.59 N.
5760	2720	RIGID	Weight= 35.59 N.
2720	2740	RIGID	Weight= 100.00 N.
2740	2760	RIGID	Weight= 54.49 N.
2840	2846	RIGID	Weight= 111.21 N.
2846	2852	RIGID	Weight= 1,005.30 N.
2852	2860	RIGID	Weight= 111.21 N.
2870	6460	RIGID	Weight= .00 N.
8150	6550	RIGID	Weight= .00 N.

SIF's & TEE's

140	160	Node 140	Unreinforced Tee
260	280	Node 280	Weldolet
590	5190	Node 590	Weldolet
5240	6230	Node 6230	Unreinforced Tee
5275	6260	Node 6260	Unreinforced Tee
5340	6280	Node 6280	Unreinforced Tee
610	640	Node 640	Unreinforced Tee
4390	6300	Node 6300	Unreinforced Tee
1000	1020	Node 1020	Weldolet
8280	1260	Node 1260	Weldolet
1580	1600	Node 1600	Welding Tee
7390	7020	Node 7020	Welding Tee
7380	7040	Node 7040	Welding Tee
1960	7270	Node 7270	Welding Tee
2000	6420	Node 6420	Unreinforced Tee
2000	4100	Node 4100	Welding Tee
4440	6480	Node 6480	Unreinforced Tee
		Pad= 7.110 mm.	
4485	6760	Node 6760	Unreinforced Tee
		Pad= 7.110 mm.	
6795	7000	Node 7000	Unreinforced Tee
		Pad= 7.110 mm.	
6845	6830	Node 6830	Welding Tee
4100	4560	Node 4560	Welding Tee
4640	6510	Node 6510	Unreinforced Tee
		Pad= 7.110 mm.	
4710	6530	Node 6530	Unreinforced Tee
		Pad= 7.112 mm.	

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INPUT LISTING

4770	7330	Node 7330	Welding Tee
4160	6600	Node 6600	Unreinforced Tee
7320	6630	Node 6630	Unreinforced Tee
6650	6660	Node 6660	Unreinforced Tee
4930	6680	Node 6680	Unreinforced Tee
5020	6700	Node 6700	Unreinforced Tee
		Pad= 7.112 mm.	
5095	6720	Node 6720	Reinforced Tee Pad= 6.020 mm.
5145	6740	Node 6740	Unreinforced Tee
4710	6530	Node 6530	Unreinforced Tee
		Pad= 7.112 mm.	
2280	7350	Node 7350	Unreinforced Tee
5710	6440	Node 6440	Unreinforced Tee
2880	5800	Node 5800	Welding Tee
8090	6120	Node 6120	Welding Tee
8100	3965	Node 3965	Welding Tee

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REDUCERS

8180	8190	Diam2= 114.300 mm. Wall2= 6.020 mm.
8200	8210	Diam2= 60.325 mm. Wall2= 5.537 mm.
5310	5320	Diam2= 88.900 mm. Wall2= 7.620 mm.
4570	8140	Diam2= 114.300 mm. Wall2= 6.020 mm.
4650	4660	Diam2= 114.300 mm. Wall2= 6.020 mm.
4690	4700	Diam2= 168.275 mm. Wall2= 7.112 mm.
4570	8140	Diam2= 114.300 mm. Wall2= 6.020 mm.
5030	5040	Diam2= 88.900 mm. Wall2= 5.486 mm.
5080	5090	Diam2= 114.300 mm. Wall2= 6.020 mm.
2400	5670	Diam2= 48.260 mm. Wall2= 7.137 mm.
2460	2480	Diam2= 168.275 mm. Wall2= 10.973 mm.
2700	5740	Diam2= 48.260 mm. Wall2= 7.137 mm.
2760	2780	Diam2= 168.275 mm. Wall2= 10.973 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
25	ANC	20				.000	.000	.000
160	-X				.30	1.000	.000	.000
160	Z	121				.000	.000	1.000
121	+Y				.10	.000	1.000	.000
160	X	121				1.000	.000	.000
8270	+Y				.30	.000	1.000	.000
8270	X					1.000	.000	.000
300	Y				.30	.000	1.000	.000
300	Z			3.00		.000	.000	1.000
400	Y				.30	.000	1.000	.000
400	Z			3.00	.30	.000	.000	1.000
480	Y				.30	.000	1.000	.000
480	Z			3.00	.30	.000	.000	1.000
5370	+Y				.30	.000	1.000	.000
5370	Z			3.00	.30	.000	.000	1.000
5375	+Y				.30	.000	1.000	.000

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INPUT LISTING

660	+Y	800		.30	.000	1.000	.000
720	ANC	721			.000	.000	.000
780	ANC	820			.000	.000	.000
840	ANC				.000	.000	.000
1240	ANC	1241			.000	.000	.000
8280	Y			.30	.000	1.000	.000
8280	Z		3.00		.000	.000	1.000
1280	Y			.30	.000	1.000	.000
1280	Z		3.00	.30	.000	.000	1.000
1380	Y			.30	.000	1.000	.000
1380	Z		3.00	.30	.000	.000	1.000
1500	+Y			.30	.000	1.000	.000
1500	Z		3.00		.000	.000	1.000
1520	+Y			.30	.000	1.000	.000
1560	+Y			.30	.000	1.000	.000
1560	X		3.00	.30	1.000	.000	.000
7390	+Y			.30	.000	1.000	.000
7380	+Y			.30	.000	1.000	.000
1660	ANC	1661			.000	.000	.000
7130	ANC	7131			.000	.000	.000
1700	ANC	1720			.000	.000	.000
7170	ANC	7171			.000	.000	.000
1780	ANC	1760			.000	.000	.000
1820	ANC	1821			.000	.000	.000
7180	ANC	7181			.000	.000	.000
7200	ANC	7201			.000	.000	.000
7370	+Y				.000	1.000	.000
1840	+Y				.000	1.000	.000
1840	X			.30	1.000	.000	.000
1840	Z		6.00	.30	.000	.000	1.000
1860	Y			.10	.000	1.000	.000
1860	Z		6.00	.30	.000	.000	1.000
1880	Y			.10	.000	1.000	.000
1880	Z		6.00	.30	.000	.000	1.000
1900	Y			.10	.000	1.000	.000
1900	X			.30	1.000	.000	.000
1900	Z		6.00	.30	.000	.000	1.000
7400	+Y			.30	.000	1.000	.000
7400	X		3.00		1.000	.000	.000
6845	+Y			.30	.000	1.000	.000
6845	X		15.00	.30	1.000	.000	.000
6870	+Y			.30	.000	1.000	.000
6890	+Y			.30	.000	1.000	.000
6890	X		3.00	.30	1.000	.000	.000
6900	+Y			.30	.000	1.000	.000
6910	+Y			.30	.000	1.000	.000
6910	X		3.00	.30	1.000	.000	.000
6920	+Y			.30	.000	1.000	.000
6920	X		3.00	.30	1.000	.000	.000
6920	Z		3.00	.30	.000	.000	1.000
6560	+Y			.30	.000	1.000	.000
6560	Z		3.00	.30	.000	.000	1.000
4220	ANC	4221			.000	.000	.000
4260	ANC	4261			.000	.000	.000
4320	ANC				.000	.000	.000
6020	+Y			.30	.000	1.000	.000

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INPUT LISTING

6020	Z		3.00		.000	.000	1.000
6050	+Y			.30	.000	1.000	.000
6060	+Y			.30	.000	1.000	.000
6060	X		3.00	.30	1.000	.000	.000
6070	+Y			.30	.000	1.000	.000
6080	+Y			.30	.000	1.000	.000
6080	X		3.00	.30	1.000	.000	.000
6090	+Y			.30	.000	1.000	.000
6110	+Y				.000	1.000	.000
6110	Z		3.00		.000	.000	1.000
6110	X		3.00		1.000	.000	.000
2180	+Y			.30	.000	1.000	.000
2180	Z		3.00	.30	.000	.000	1.000
2200	+Y			.30	.000	1.000	.000
2220	+Y			.30	.000	1.000	.000
2220	Z		3.00	.30	.000	.000	1.000
2270	+Y				.000	1.000	.000
2320	+Y				.000	1.000	.000
2500	+Y			.30	.000	1.000	.000
2500	Z		3.00		.000	.000	1.000
2500	X		3.00	.30	1.000	.000	.000
2620	+Y			.30	.000	1.000	.000
2800	+Y				.000	1.000	.000
2800	Z		3.00		.000	.000	1.000
2800	X		3.00		1.000	.000	.000
5805	+Y			.30	.000	1.000	.000
6220	+Y			.30	.000	1.000	.000
6220	Z		3.00	.30	.000	.000	1.000
6240	+Y	6241			.000	1.000	.000
6270	+Y	6271		.30	.000	1.000	.000
6270	Z	6271	3.00		.000	.000	1.000
6290	+Y	6291		.30	.000	1.000	.000
6290	Z	6291	3.00		.000	.000	1.000
6310	+Y			.30	.000	1.000	.000
6410	+Y			.30	.000	1.000	.000
6410	Z		3.00	.30	.000	.000	1.000
6430	+Y			.30	.000	1.000	.000
6450	+Y				.000	1.000	.000
6470	+Y			.30	.000	1.000	.000
6490	+Y			.30	.000	1.000	.000
6520	+Y			.30	.000	1.000	.000
6540	+Y			.30	.000	1.000	.000
6540	X		3.00	.30	1.000	.000	.000
6590	+Y			.30	.000	1.000	.000
6590	X		3.00	.30	1.000	.000	.000
6610	+Y				.000	1.000	.000
6640	Y				.000	1.000	.000
6670	+Y				.000	1.000	.000
6670	Z		3.00		.000	.000	1.000
6690	+Y			.30	.000	1.000	.000
6710	+Y				.000	1.000	.000
6730	+Y			.30	.000	1.000	.000
6730	X		3.00		1.000	.000	.000
6750	+Y				.000	1.000	.000
6770	+Y			.30	.000	1.000	.000
7010	+Y			.30	.000	1.000	.000

INPUT LISTING

```
    7010   Z                              3.00              .000   .000  1.000
    8010   +Y                                          .30    .000  1.000   .000
    8000   +Y                                          .30    .000  1.000   .000
    8000   X                              3.00         .30   1.000   .000   .000
    8000   Z                              3.00         .30    .000   .000  1.000
    8020   +Y                                          .30    .000  1.000   .000
    8020   X                              3.00         .30   1.000   .000   .000
    8050   +Y                                          .30    .000  1.000   .000
    8080   +Y                                          .30    .000  1.000   .000
    8090   +Y                                          .30    .000  1.000   .000
    8090   X                              3.00              1.000   .000   .000
    8100   +Y                                                .000  1.000   .000
    8100   X                              3.00         .30   1.000   .000   .000
    8120   +Y                                          .30    .000  1.000   .000
    8130   +Y                                          .30    .000  1.000   .000
    8130   X                              3.00         .30   1.000   .000   .000
    8130   Z                              3.00         .30    .000   .000  1.000
```


DISPLACEMENTS

```
   10              20             Node    20  DX1= 4.000 mm.  DY1= 2.400 mm.
                                  DZ1= 1.500 mm.
 1241            8300             Node  1241  DX1= 4.000 mm.  DY1= 2.400 mm.
                                  DZ1= 1.500 mm.
```


HANGER CONTROL AND LOCATION DATA

```
                                  No. of Hanger Design Load Cases = 1
                                  Actual Cold Load Flag = 0.0
                                  Short Range Spring Flag = 1
                                  Allowed Load Variation (%) = 25.0000
                                  Default Hanger Table = 5

  140             160             Hanger Node = 160
                                  Hanger Connecting Node = 121
                                  Available Space = -1,000.0000 mm.
                                  Allowed Load Variation = 25.0000
                                  No. Hangers = 0.0   Short Range Flag = -1
                                  User Operating Load = .00 N.   Free Node = 0
                                  Free Node = 0   Free Code = 0.0
                                  Spring Rate = .00 N./cm.
                                  Theoretical Cold Load = .00 N.
```


FLANGES

```
 1060            1080             Location= To   Method= Peq
                                  Class/Grade= ASME-2009-600-3.19
                                  G/C= 192.151 mm.   T/P table ( 1)=  37.8 C
                                  -> 10,342.1 KPa   ( 2)=  93.3 C
                                  -> 10,342.1 KPa   ( 3)=  148.9 C
```

INPUT LISTING

```
                                    -> 10,031.9 KPa   ( 4)=  204.4 C
                                    -> 9,721.6 KPa   ( 5)=  260.0 C
                                    -> 9,170.0 KPa   ( 6)=  315.6 C
                                    -> 8,342.7 KPa   ( 7)=  343.3 C
                                    -> 8,101.3 KPa   ( 8)=  371.1 C
                                    -> 7,825.5 KPa   ( 9)=  398.9 C
                                    -> 7,342.9 KPa   (10)=  426.7 C
                                    -> 6,998.2 KPa   (11)=  454.4 C
                                    -> 6,722.4 KPa   (12)=  482.2 C
                                    -> 6,205.3 KPa   (13)=  510.0 C
                                    -> 5,343.4 KPa   (14)=  537.8 C
                                    -> 4,998.7 KPa   (15)=  565.6 C
                                    -> 4,964.2 KPa   (16)=  593.3 C
                                    -> 4,447.1 KPa   (17)=  621.1 C
                                    -> 3,792.1 KPa   (18)=  648.9 C
                                    -> 2,826.9 KPa   (19)=  676.7 C
                                    -> 2,516.6 KPa   (20)=  704.4 C
                                    -> 1,896.1 KPa   (21)=  732.2 C
                                    -> 1,413.4 KPa   (22)=  760.0 C
                                    -> 1,034.2 KPa   (23)=  787.8 C
                                    -> 792.9 KPa   (24)=  815.6 C   -> 586.1 KPa
  1080            1100              Location= From   Method= Peq
  1220            1240              Location= To   Method= Peq
  1300            1320              Location= To   Method= Peq
  1340            1360              Location= From   Method= Peq
  1640            1660              Location= To   Method= Peq
  7120            7130              Location= To   Method= Peq
  7201            7210              Location= From   Method= Peq
  1821            1920              Location= From   Method= Peq
  4400            4410              Location= To   Method= Peq
  4420            4430              Location= From   Method= Peq
  4450            4460              Location= To   Method= Peq
  4470            4480              Location= From   Method= Peq
  4490            4500              Location= To   Method= Peq
  4505            6790              Location= From   Method= Peq
  4600            4610              Location= To   Method= Peq
  4620            4630              Location= From   Method= Peq
  4660            4670              Location= To   Method= Peq
  4680            4690              Location= From   Method= Peq
  4720            4730              Location= To   Method= Peq
  4740            4750              Location= From   Method= Peq
  4980            4990              Location= To   Method= Peq
  4990            5000              Location= To   Method= Peq
  5000            5010              Location= From   Method= Peq
  5040            5060              Location= To   Method= Peq
  5070            5080              Location= From   Method= Peq
  5100            5110              Location= To   Method= Peq
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EQUIPMENT LIMITS
   25             40              Nozzle Node = 25


   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 7,000.35 N.   FB= 7,000.35 N.
```

INPUT LISTING
FC= 5,000.25 N. MA= 4,000.17 N.m. MB= 1,200.05 N.m. MC= 2,200.09 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute
760 780 Nozzle Node = 780

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 9,600.48 N. FB= 9,600.48 N.
FC= 7,200.36 N. MA= 5,760.24 N.m. MB= 3,840.16 N.m. MC= 4,990.21 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute
1220 1240 Nozzle Node = 1240

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 7,000.35 N. FB= 7,000.35 N.
FC= 5,000.25 N. MA= 4,000.17 N.m. MB= 1,200.05 N.m. MC= 2,200.09 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute
1680 1700 Nozzle Node = 1700

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 15,090.75 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute
7160 7170 Nozzle Node = 7170

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 15,090.75 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute
1780 1800 Nozzle Node = 1780

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 16,200.81 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute
7150 7180 Nozzle Node = 7180

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 16,200.81 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute
4240 4260 Nozzle Node = 4260

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 11,200.56 N. FB= 11,200.56 N.
FC= 8,400.42 N. MA= 6,720.29 N.m. MB= 4,400.19 N.m. MC= 5,020.21 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute

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INPUT LISTING
FORCES AND MOMENTS

5690	2420	Node 2420 FX1= 2,000.10 N. FY1= 1,000.05 N. FZ1= .00 N.
5760	2720	Node 2720 FX2= 2,000.10 N. FY2= 1,000.05 N. FZ2= .00 N.

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UNIFORM LOAD Changes

10	20	Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
8000	8010	Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's

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INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	=	N./cm.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

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INPUT LISTING
SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS =	NO
MISSING MASS ZPA =	EXTRACTED
MIN WALL MILL TOLERANCE =	12.5000
WRC-107 VERSION =	MAR 79 1B1/2B1
WRC-107 INTERPOLATION =	LAST VALUE
DEFAULT AMBIENT TEMPERATURE=	21.1111 C
BOURDON PRESSURE=	NONE
COEFFICIENT OF FRICTION (MU) =	0.000000
INCLUDE SPRG STIF IN HGR OPE =	NO
INCLUDE INSULATION IN HYDROTEST =	NO
REDUCED INTERSECTION =	B31.1(POST1980)
USE WRC329	NO
NO REDUCED SIF FOR RFT AND WLT	NO
B31.1 REDUCED Z FIX =	YES
CLASS 1 BRANCH FLEX	NO
ALL STRESS CASES CORRODED =	NO
ADD TORSION IN SL STRESS =	DEFAULT
ADD F/A IN STRESS =	DEFAULT
OCCASIONAL LOAD FACTOR =	0.000000
DEFAULT CODE =	B31.3
B31.3 SUS CASE SIF FACTOR =	0.000000
ALLOW USERS BEND SIF =	NO
USE SCHNEIDER	NO
YIELD CRITERION STRESS =	MAX 3D SHEAR
USE PD/4T	NO
BASE HOOP STRESS ON ? =	ID
EN13480 USE IN OUTPLANE SIFS=	NO
LIBERAL EXPANSION ALLOWABLE=	YES
B31.3 SEC 319.2.3C SAXIAL=	Default

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INPUT LISTING

```
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178      YES
  IGNORE B31.1/B31.3 Wc FACTOR=     YES
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152730
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
    Uniform Load Option ........    1.000

    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
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 COORDINATE REPORT
          /--------------------(mm.)----------------------/
  NODE           X              Y              Z
    10          .000          .000          .000
    25      -101.600          .000          .000
    40      -203.200          .000          .000
    60      -932.200          .000          .000
    80      -932.200          .000      1587.000
   100      -932.200     -1404.000      1587.000
   120      -932.200     -2557.000      1587.000
   140      -932.200     -2786.000      1587.000
   160      -932.200     -2986.000      1587.000
  8260      -458.900     -2839.882      2251.407
  8270      -458.900     -2839.882      2551.407
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CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 13:45
Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

120	-932.200	-2557.000	1587.000
180	-932.200	-2786.000	1587.000
200	-1161.200	-2786.000	1587.000
220	-1262.800	-2786.000	1587.000
240	-1364.400	-2786.000	1587.000
260	-1864.400	-2786.000	1587.000
280	-2208.900	-2786.000	1587.000
300	-2708.900	-2786.000	1587.000
320	-2911.900	-2786.000	1587.000
340	-3013.500	-2786.000	1587.000
360	-3502.500	-2786.000	1587.000
380	-3604.100	-2786.000	1587.000
400	-4465.100	-2786.000	1587.000
420	-6022.100	-2786.000	1587.000
440	-6123.700	-2786.000	1587.000
460	-6225.300	-2786.000	1587.000
480	-7468.300	-2786.000	1587.000
490	-9503.301	-2786.000	1587.000
500	-11538.301	-2786.000	1587.000
6210	-11538.301	-2862.200	1587.000
490	-9503.301	-2786.000	1587.000
500	-11538.301	-2786.000	1587.000
580	-11538.301	1219.000	1587.000
590	-11538.301	1219.000	3135.000
600	-11538.301	1219.000	4337.000
610	-11923.301	1219.000	4337.000
620	-12268.301	1219.000	4337.000
590	-11538.301	1219.000	3135.000
5190	-11538.301	1617.000	3135.000
8160	-11767.301	1617.000	3364.000
8170	-11767.301	1617.000	3887.000
8180	-11767.301	1617.000	3964.000
8190	-11767.301	1617.000	4065.600
8200	-11767.301	1617.000	4275.600
8210	-11767.301	1617.000	4377.600
5200	-11767.301	1617.000	4667.600
5210	-11767.301	1617.000	4740.625
5220	-11767.301	1617.000	5041.625
5230	-11767.301	1617.000	5114.650
5240	-11767.301	1617.000	5191.650
5245	-12306.301	1617.000	5191.650
5240	-11767.301	1617.000	5191.650
6230	-11767.301	1599.039	5209.610
5245	-12306.301	1617.000	5191.650
5250	-12845.301	1617.000	5191.650
5260	-12918.326	1617.000	5191.650
5270	-12991.352	1617.000	5191.650
5275	-13141.352	1617.000	5191.650
6260	-13141.352	1591.600	5191.650
5275	-13141.352	1617.000	5191.650
5280	-13291.352	1617.000	5191.650
5290	-13364.377	1617.000	5191.650
5300	-13564.377	1617.000	5191.650
5310	-13631.052	1617.000	5191.650
5320	-13720.052	1617.000	5191.650
5330	-14007.052	1617.000	5191.650

INPUT LISTING

5340	-14007.052	699.000	5191.650
6280	-13968.952	699.000	5191.650
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5350	-14007.052	-1241.000	5191.650
5370	-17163.051	-1241.000	5191.650
5375	-21576.051	-1241.000	5191.650
5380	-22137.051	-1241.000	5191.650
5390	-22137.051	-2460.000	5191.650
6130	-22136.908	-2829.000	5559.650
610	-11923.301	1219.000	4337.000
640	-11923.301	1135.000	4337.000
660	-11923.301	835.000	4337.000
620	-12268.301	1219.000	4337.000
680	-12846.301	1219.000	4337.000
700	-12846.301	990.000	4337.000
720	-12846.301	864.000	4337.000
760	-12846.301	759.225	4337.000
780	-12846.301	563.225	4337.000
780	-12846.301	563.225	4337.000
660	-11923.301	835.000	4337.000
780	-12846.301	563.225	4337.000
6240	-11767.301	1599.039	5509.611
780	-12846.301	563.225	4337.000
6270	-13141.351	1241.600	5191.650
780	-12846.301	563.225	4337.000
6290	-13668.950	699.000	5191.650
780	-12846.301	563.225	4337.000
840	-12846.301	-3006.775	4337.000
280	-2208.900	-2786.000	1587.000
4350	-2208.900	-2786.000	1465.000
4360	-2208.900	-2786.000	1391.975
4370	-2208.900	-2786.000	1090.975
4380	-2208.900	-2786.000	1008.425
4390	-2208.900	-2786.000	432.425
4395	-2208.900	-2529.000	432.425
4390	-2208.900	-2786.000	432.425
6300	-2208.900	-2811.400	432.425
4395	-2208.900	-2529.000	432.425
880	-2208.900	-2272.000	432.425
900	-2208.900	-2272.000	509.425
920	-2208.900	-2272.000	591.975
940	-2208.900	-2272.000	892.975
960	-2208.900	-2272.000	975.525
980	-2208.900	-2272.000	2197.525
1000	-2208.900	-2372.000	2197.525
1020	-2208.900	-2786.000	2197.525
1040	-2013.900	-2786.000	2197.525
1060	-1863.900	-2786.000	2197.525
1080	-1736.900	-2786.000	2197.525
1100	-1610.900	-2786.000	2197.525
1120	-458.900	-2786.000	2197.525
8250	-458.900	-2786.000	1968.525
1120	-458.900	-2786.000	2197.525
8260	-458.900	-2839.882	2251.407
8250	-458.900	-2786.000	1968.525
1145	-458.900	-2786.000	989.525

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 13:45
Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

1140	-458.900	-2786.000	10.525
1160	-458.900	-2368.500	10.525
1200	-458.900	-1951.000	10.525
1220	-229.900	-1951.000	10.525
1240	-102.900	-1951.000	10.525
8300	24.100	-1951.000	10.525
1020	-2208.900	-2786.000	2197.525
8280	-2708.900	-2786.000	2197.525
1260	-3608.900	-2786.000	2197.525
1280	-4458.900	-2786.000	2197.525
1300	-5108.900	-2786.000	2197.525
1320	-5235.900	-2786.000	2197.525
1340	-5803.900	-2786.000	2197.525
1360	-5930.900	-2786.000	2197.525
1380	-7479.900	-2786.000	2197.525
1390	-9514.900	-2786.000	2197.525
1400	-11549.900	-2786.000	2197.525
6400	-11549.900	-2862.200	2197.525
1390	-9514.900	-2786.000	2197.525
1400	-11549.900	-2786.000	2197.525
1480	-11549.900	-1402.000	2197.525
1485	-16309.900	-1402.000	2197.525
1490	-16309.900	-1402.000	3997.525
1500	-17185.900	-1402.000	3997.525
1520	-23078.900	-1402.000	3997.525
1540	-25994.900	-1402.000	3997.525
1560	-25994.900	-1402.000	5065.525
1580	-25994.900	-1402.000	6133.525
1600	-25994.900	1328.000	6133.525
7390	-25994.900	1328.000	5740.525
7020	-25994.900	1328.000	5347.525
7030	-25994.900	1328.000	5102.525
1600	-25994.900	1328.000	6133.525
7380	-25994.900	1328.000	6526.525
7040	-25994.900	1328.000	6919.525
7050	-25994.900	1328.000	7164.525
7020	-25994.900	1328.000	5347.525
7060	-25994.900	3491.000	5347.525
7065	-26983.900	3491.000	5347.525
7070	-27494.900	3491.000	5347.525
7080	-27494.900	3491.000	5878.525
1640	-27494.900	2989.500	5878.525
1660	-27494.900	2878.375	5878.525
7040	-25994.900	1328.000	6919.525
7090	-25994.900	3491.000	6919.525
7095	-26983.900	3491.000	6919.525
7100	-27494.900	3491.000	6919.525
7110	-27494.900	3491.000	6388.525
7120	-27494.900	2989.500	6388.525
7130	-27494.900	2878.375	6388.525
1660	-27494.900	2878.375	5878.525
1680	-27494.900	2767.250	5878.525
1700	-27494.900	2567.250	5878.525
7140	-27494.900	2327.250	5878.525
7130	-27494.900	2878.375	6388.525
7160	-27494.900	2767.250	6388.525

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 13:45
Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

7170	-27494.900	2567.250	6388.525
7150	-27494.900	2327.250	6388.525
7140	-27494.900	2327.250	5878.525
1780	-27494.900	2087.250	5878.525
1800	-27494.900	1887.250	5878.525
1820	-27494.900	1776.125	5878.525
7150	-27494.900	2327.250	6388.525
7180	-27494.900	2087.250	6388.525
7190	-27494.900	1887.250	6388.525
7200	-27494.900	1776.125	6388.525
7210	-27494.900	1637.000	6388.525
7220	-27494.900	1484.000	6388.525
7225	-27494.900	1484.000	6654.025
7230	-27494.900	1484.000	6919.525
7240	-27494.900	1026.000	6919.525
7250	-27494.900	1026.000	7164.525
7240	-27494.900	1026.000	6919.525
7360	-27494.900	1026.000	6425.525
7260	-27494.900	1026.000	6133.525
7370	-27494.900	1026.000	5740.525
7270	-27494.900	1026.000	5347.525
7280	-27494.900	1026.000	5102.525
1740	-27494.900	2327.250	6133.525
7150	-27494.900	2327.250	6388.525
1840	-27494.900	2327.250	6938.525
1860	-32594.900	2327.250	6938.525
1880	-32594.900	2327.250	5538.525
1900	-27494.900	2327.250	5538.525
7140	-27494.900	2327.250	5878.525
1740	-27494.900	2327.250	6133.525
1820	-27494.900	1776.125	5878.525
1920	-27494.900	1637.000	5878.525
1940	-27494.900	1484.000	5878.525
1960	-27494.900	1484.000	5347.525
7270	-27494.900	1026.000	5347.525
7260	-27494.900	1026.000	6133.525
7290	-27494.900	-323.000	6133.525
7400	-27494.900	-327.725	7096.513
7300	-27494.900	-338.000	9190.524
2000	-23295.900	-358.000	9190.524
6420	-23295.900	-434.200	9190.524
2000	-23295.900	-358.000	9190.524
4100	-22745.900	-360.750	9190.524
4400	-22745.900	-367.960	10638.506
4410	-22745.900	-368.592	10765.504
4420	-22745.900	-371.421	11333.497
4430	-22745.900	-372.053	11460.495
4440	-22745.900	-373.714	11793.991
6480	-22745.900	-449.914	11793.991
4440	-22745.900	-373.714	11793.991
4450	-22745.900	-375.374	12127.487
4460	-22745.900	-376.006	12254.485
4470	-22745.900	-378.835	12822.479
4480	-22745.900	-379.467	12949.477
4482	-22745.900	-382.537	13513.977
4485	-22745.900	-385.607	14078.477

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 13:45
Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

6760	-22799.781	-439.489	14078.477
4482	-22745.900	-382.537	13513.977
4485	-22745.900	-385.607	14078.477
4490	-21703.900	-385.607	14078.477
4500	-21576.900	-385.607	14078.477
4505	-20978.900	-385.607	14078.477
6790	-20851.900	-385.607	14078.477
6780	-20527.900	-385.607	14078.477
6795	-20203.900	-385.607	14078.477
7000	-20150.018	-439.489	14078.477
6780	-20527.900	-385.607	14078.477
6795	-20203.900	-385.607	14078.477
6800	-20203.900	-434.607	15484.477
6810	-22271.900	-434.607	15484.477
6820	-24271.900	-434.607	15484.477
6830	-24437.900	-600.607	15484.477
6840	-24437.900	-600.607	14437.477
6850	-24437.900	-600.607	14564.477
6860	-24437.900	-600.607	14691.477
6845	-24437.900	-600.607	15060.477
6830	-24437.900	-600.607	15484.477
6870	-24437.900	-600.607	21060.477
6880	-24437.900	-600.607	23060.477
6890	-24437.900	-600.607	27060.477
6900	-24437.900	-600.607	33060.477
6910	-24437.900	-600.607	39060.477
6920	-24437.900	-600.607	45060.477
4100	-22745.900	-360.750	9190.524
4560	-22745.900	-360.750	8905.524
4570	-22602.900	-360.750	8905.524
8140	-22462.900	-387.750	8905.524
4560	-22745.900	-360.750	8905.524
4580	-22888.900	-360.750	8905.524
4590	-23260.900	-360.750	8905.524
4600	-23260.900	-360.750	8676.524
4610	-23260.900	-360.750	8549.524
4620	-23260.900	-360.750	7981.524
4630	-23260.900	-360.750	7854.524
4640	-23260.900	-360.750	7654.524
6510	-23260.900	-436.950	7654.524
4640	-23260.900	-360.750	7654.524
4650	-23260.900	-360.750	7122.024
4660	-23260.900	-387.750	6982.024
4670	-23260.900	-387.750	6870.899
4680	-23260.900	-387.750	6429.899
4690	-23260.900	-387.750	6318.774
4700	-23260.900	-360.750	6178.774
4710	-23260.900	-360.750	5878.774
6530	-23260.900	-436.950	5878.774
4710	-23260.900	-360.750	5878.774
4720	-23260.900	-360.750	5578.774
4730	-23260.900	-360.750	5451.774
4740	-23260.900	-360.750	4883.774
4750	-23260.900	-360.750	4782.174
8150	-23260.900	-360.750	4604.174
4140	-23260.900	-360.750	812.174

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 13:45
Job:: BNK-GCS-CN-006-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

6560	-22831.900	-360.750	812.174
4760	-19955.900	-360.750	812.174
4770	-19955.900	-360.750	355.174
7330	-19955.900	-1018.750	355.174
4780	-17933.299	-1018.750	355.174
4160	-17033.299	-1018.750	355.174
6600	-17033.299	-1120.350	355.174
4160	-17033.299	-1018.750	355.174
4180	-13845.299	-1018.750	355.174
4200	-13730.999	-1018.750	355.174
4220	-13710.999	-1018.750	355.174
4240	-13606.224	-1018.750	355.174
4260	-13451.224	-1018.750	355.174
4280	-12991.224	-1018.750	355.174
4300	-12991.224	-2318.750	355.174
4310	-12991.224	-3318.750	355.174
4320	-12991.224	-3618.750	355.174
4780	-17933.299	-1018.750	355.174
6620	-18175.299	-1018.750	355.174
7320	-19477.900	-1018.750	355.174
6630	-19477.900	-1120.350	355.174
6620	-18175.299	-1018.750	355.174
4800	-18417.299	-1018.750	355.174
4810	-18531.600	-1018.750	355.174
4820	-19073.600	-1018.750	355.174
4830	-19187.900	-1018.750	355.174
7320	-19477.900	-1018.750	355.174
7330	-19955.900	-1018.750	355.174
4840	-20243.900	-1018.750	355.174
4850	-20358.201	-1018.750	355.174
4860	-20964.201	-1018.750	355.174
4870	-21068.977	-1018.750	355.174
4880	-21268.977	-1018.750	355.174
6650	-21555.977	-1018.750	355.174
6660	-21555.977	-1120.350	355.174
6650	-21555.977	-1018.750	355.174
4890	-22042.977	-1018.750	355.174
4900	-22147.752	-1018.750	355.174
4910	-22634.252	-1018.750	355.174
4920	-22739.027	-1018.750	355.174
4930	-23281.027	-1018.750	355.174
6680	-23281.027	-1120.350	355.174
4930	-23281.027	-1018.750	355.174
4940	-23886.027	-1018.750	355.174
4950	-23886.027	-1018.750	1855.174
4960	-24757.527	-1018.750	1855.174
4970	-25094.527	-681.750	1855.174
8140	-22462.900	-387.750	8905.524
4980	-22079.900	-387.750	8905.524
4570	-22602.900	-360.750	8905.524
8140	-22462.900	-387.750	8905.524
4980	-22079.900	-387.750	8905.524
4990	-21968.775	-387.750	8905.524
5000	-21527.775	-387.750	8905.524
5010	-21416.650	-387.750	8905.524
5020	-21263.650	-387.750	8905.524

INPUT LISTING

5025	-21263.650	-387.750	8407.175
5020	-21263.650	-387.750	8905.524
6700	-21228.295	-423.105	8905.524
5025	-21263.650	-387.750	8407.175
5030	-21263.650	-387.750	7908.825
5040	-21263.650	-400.750	7806.825
5060	-21263.650	-400.750	7714.750
5070	-21263.650	-400.750	7262.750
5080	-21263.650	-400.750	7170.674
5090	-21263.650	-388.250	7068.674
5095	-21263.650	-388.250	6820.174
6720	-21263.650	-439.050	6820.174
5095	-21263.650	-388.250	6820.174
5100	-21263.650	-388.250	6571.674
5110	-21263.650	-388.250	6460.549
5120	-21263.650	-388.250	6019.549
5130	-21263.650	-388.250	5940.174
5140	-21263.650	-388.250	5787.174
5145	-21263.650	-1012.250	5787.174
6740	-21263.650	-1012.250	5736.375
5145	-21263.650	-1012.250	5787.174
5150	-21263.650	-1436.250	5787.174
5160	-22148.650	-1436.250	5787.174
5170	-22148.650	-2509.250	5787.174
3965	-22148.650	-3039.250	6316.050
4710	-23260.900	-360.750	5878.774
6530	-23260.900	-436.950	5878.774
6010	-12763.527	618.250	-28445.826
6020	-12918.527	618.250	-28445.826
6030	-25094.527	618.250	-28445.826
6040	-25094.527	-681.750	-28445.826
6050	-25094.527	-681.750	-26844.826
6060	-25094.527	-681.750	-20844.826
6070	-25094.527	-681.750	-14844.826
6080	-25094.527	-681.750	-8844.826
6090	-25094.527	-681.750	-2844.826
4970	-25094.527	-681.750	1855.174
6110	-25094.527	-681.750	3155.174
1260	-3608.900	-2786.000	2197.525
2140	-3608.900	-1256.000	2197.525
2160	-3608.900	-1256.000	5869.525
2180	-7472.900	-1256.000	5869.525
2200	-12387.900	-1256.000	5869.525
2220	-17178.900	-1256.000	5869.525
2260	-17916.900	-1256.000	5869.525
2270	-17916.900	-1256.000	9247.525
7340	-17916.900	-1256.000	10506.525
2280	-17690.900	-1256.000	10732.525
7350	-17690.900	-1256.000	10831.525
2320	-17690.900	-598.000	10831.525
2330	-17690.900	-370.000	10831.525
2340	-17690.900	-157.000	10831.525
2360	-17690.900	-74.450	10831.525
5650	-17690.900	226.550	10831.525
5660	-17690.900	309.100	10831.525
2400	-17690.900	674.100	10831.525

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INPUT LISTING

5670	-17690.900	780.100	10831.525
5680	-17690.900	859.475	10831.525
5690	-17690.900	938.850	10831.525
2420	-17690.900	980.350	10831.525
2440	-17846.900	980.350	10831.525
2460	-17919.926	980.350	10831.525
2480	-18059.926	940.650	10831.525
2500	-18404.926	940.650	10831.525
2520	-18978.926	940.650	10831.525
2540	-18978.926	711.650	10831.525
5700	-18978.926	619.575	10831.525
2560	-18978.926	343.575	10831.525
2570	-18978.926	251.500	10831.525
5710	-18978.926	-778.500	10831.525
6440	-19055.125	-778.500	10831.525
5710	-18978.926	-778.500	10831.525
2580	-18978.926	-1604.500	10831.525
5840	-19302.926	-1604.500	10831.525
5800	-19802.926	-1604.500	11331.525
7350	-17690.900	-1256.000	10831.525
2300	-17690.900	-1256.000	11331.525
2620	-17690.900	-598.000	11331.525
2640	-17690.900	-157.000	11331.525
5720	-17690.900	-74.450	11331.525
2660	-17690.900	226.550	11331.525
5730	-17690.900	309.100	11331.525
2700	-17690.900	674.100	11331.525
5740	-17690.900	780.100	11331.525
5750	-17690.900	859.475	11331.525
5760	-17690.900	938.850	11331.525
2720	-17690.900	979.850	11331.525
2740	-17846.900	979.850	11331.525
2760	-17919.926	979.850	11331.525
2780	-18059.926	940.150	11331.525
2800	-18404.926	940.150	11331.525
2820	-18978.926	940.150	11331.525
2840	-18978.926	711.150	11331.525
2846	-18978.926	619.075	11331.525
2852	-18978.926	343.075	11331.525
2860	-18978.926	251.000	11331.525
2870	-18978.926	-779.000	11331.525
6460	-19055.125	-779.000	11331.525
2870	-18978.926	-779.000	11331.525
2880	-18978.926	-1605.000	11331.525
2880	-18978.926	-1604.500	11331.525
5800	-19802.926	-1604.500	11331.525
5805	-21030.926	-1604.500	11331.525
5810	-22148.926	-1604.500	11331.525
5820	-22148.926	-2127.500	11331.525
6120	-22148.926	-3039.500	12241.525
4750	-23260.900	-360.750	4782.174
8150	-23260.900	-360.750	4604.174
6550	-23260.900	-436.950	4604.174
6210	-11538.301	-2862.200	1587.000
6220	-11538.301	-3162.200	1587.000
6230	-11767.301	1599.039	5209.610

INPUT LISTING

6240	-11767.301	1599.039	5509.610
6260	-13141.352	1591.600	5191.650
6270	-13141.352	1241.600	5191.650
6280	-13968.952	699.000	5191.650
6290	-13668.952	699.000	5191.650
6300	-2208.900	-2811.400	432.425
6310	-2208.900	-3711.400	432.425
6400	-11549.900	-2862.200	2197.525
6410	-11549.900	-3162.200	2197.525
6420	-23295.900	-434.200	9190.524
6425	-23295.900	-664.200	9190.524
6430	-23295.900	-1044.200	9190.524
6440	-19055.125	-778.500	10831.525
6450	-19355.125	-778.500	10831.525
6460	-19055.125	-779.000	11331.525
6470	-19355.125	-779.000	11331.525
6480	-22745.900	-449.914	11793.991
6485	-22745.900	-679.914	11793.991
6490	-22745.900	-1059.914	11793.991
6510	-23260.900	-436.950	7654.524
6515	-23260.900	-666.950	7654.524
6520	-23260.900	-1046.950	7654.524
6530	-23260.900	-436.950	5878.774
6535	-23260.900	-666.950	5878.774
6540	-23260.900	-1046.950	5878.774
6550	-23260.900	-436.950	4604.174
6590	-23260.900	-1046.950	4604.174
6600	-17033.299	-1120.350	355.174
6610	-17033.299	-1620.350	355.174
6630	-19477.900	-1120.350	355.174
6640	-19477.900	-1620.350	355.174
6660	-21555.977	-1120.350	355.174
6670	-21555.977	-1620.350	355.174
6680	-23281.027	-1120.350	355.174
6690	-23281.027	-1620.350	355.174
6700	-21228.295	-423.105	8905.524
6705	-21128.295	-423.105	8905.524
6710	-20728.295	-423.105	8905.524
6720	-21263.650	-439.050	6820.174
6730	-21263.650	-1139.050	6820.174
6740	-21263.650	-1012.250	5736.375
6750	-21263.650	-1012.250	5436.375
6760	-22799.781	-439.489	14078.477
6765	-22899.781	-439.489	14078.477
6770	-23349.781	-439.489	14078.477
7000	-20150.018	-439.489	14078.477
7005	-20050.018	-439.489	14078.477
7010	-19650.018	-439.489	14078.477
8000	-22148.926	-3039.500	40246.523
8010	-22148.926	-3039.500	34246.523
8020	-22148.926	-3039.500	28246.525
8030	-22148.926	-3039.500	25296.525
8040	-28148.926	-3039.500	25296.525
8050	-28148.926	-3039.500	24296.525
8060	-28148.926	-3039.500	23296.525
8070	-22148.926	-3039.500	23296.525

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INPUT LISTING

8080	-22148.926	-3039.500	22446.525
8090	-22148.926	-3039.500	16446.525
6120	-22148.926	-3039.500	12241.525
8100	-22148.926	-3039.500	10349.525
8100	-22148.650	-3039.250	10350.051
3965	-22148.650	-3039.250	6316.050
8110	-22148.650	-3039.250	5362.050
8120	-22148.650	-3039.250	4150.050
8130	-22148.650	-3039.250	-1849.950

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (OPE) W+D1+T2+P2+H
8 (SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19-L6
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L6-L11
36 (EXP) L36=L4-L6
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L6-L9

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 4 (OPE) W+D1+T1+P1+H
CASE 6 (OPE) W+D1+T2+P1+H
CASE 9 (OPE) W+D1+T3+P1+H
CASE 11 (SUS) W+P1+H
CASE 12 (SUS) WNC
CASE 13 (OPE) W+D1+T2+P1+H+U1
CASE 14 (OPE) W+D1+T2+P1+H-U1
CASE 15 (OPE) W+D1+T2+P1+H+U2
CASE 16 (OPE) W+D1+T2+P1+H-U2
CASE 17 (OPE) W+D1+T2+P1+H+U3
CASE 18 (OPE) W+D1+T2+P1+H+F1
CASE 19 (OPE) W+D1+T2+P1+H+F2
CASE 20 (OCC) L20=L13-L6
CASE 21 (OCC) L21=L14-L6
CASE 22 (OCC) L22=L15-L6
CASE 23 (OCC) L23=L16-L6
CASE 24 (OCC) L24=L17-L6
CASE 25 (OCC) L25=L18-L6
CASE 26 (OCC) L26=L19-L6

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
20		TYPE=Displ. Reaction;					
	4(OPE)	32	-453	-340	0	0	0
	6(OPE)	-294	-968	15	0	0	0
	9(OPE)	-294	-968	14	0	0	0
	11(SUS)	-30	-738	-59	0	0	0
	12(SUS)	67	-922	23	0	0	0
	13(OPE)	97	-944	-25	0	0	0
	14(OPE)	-683	-1034	88	0	0	0
	15(OPE)	-302	-881	25	0	0	0
	16(OPE)	-277	-1069	12	0	0	0
	17(OPE)	-435	-1101	479	0	0	0
	18(OPE)	-295	-968	15	0	0	0
	19(OPE)	-294	-968	15	0	0	0
	20(OCC)	392	25	-40	0	0	0
	21(OCC)	-389	-65	73	0	0	0
	22(OCC)	-7	87	11	0	0	0
	23(OCC)	18	-100	-2	0	0	0
	24(OCC)	-140	-133	465	0	0	0
	25(OCC)	-0	0	0	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-683/L14	-1101/L17	479/L17			
25		TYPE=Rigid ANC;					
	4(OPE)	32	-254	-340	0	-0	10
	6(OPE)	-294	-770	15	-0	-0	10

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(OPE)	-294	-770	14	-0	-0	10
	11(SUS)	-30	-540	-59	0	0	10
	12(SUS)	67	-724	23	-0	0	10
	13(OPE)	45	-745	-25	0	0	10
	14(OPE)	-632	-835	88	-0	-0	10
	15(OPE)	-302	-707	25	-0	-0	9
	16(OPE)	-277	-846	12	-0	0	11
	17(OPE)	-435	-903	428	-0	3	10
	18(OPE)	-295	-770	15	-0	-0	10
	19(OPE)	-294	-770	15	-0	0	10
	20(OCC)	340	25	-40	0	0	0
	21(OCC)	-337	-65	73	0	0	0
	22(OCC)	-7	63	11	0	0	-1
	23(OCC)	18	-76	-2	0	0	1
	24(OCC)	-140	-133	413	-0	3	0
	25(OCC)	-0	0	0	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-632/L14	-903/L17	428/L17	-0/L17	3/L24	11/L16
121		TYPE=Rigid +Y;					
	4(OPE)	0	-1641	164	0	0	0
	6(OPE)	0	-1633	163	0	0	0
	9(OPE)	0	-1633	163	0	0	0
	11(SUS)	0	-1633	43	0	0	0
	12(SUS)	-1	-39	-4	0	0	0
	13(OPE)	0	-1633	163	0	0	0
	14(OPE)	0	-1635	164	0	0	0
	15(OPE)	0	-1633	163	0	0	0
	16(OPE)	0	-1635	164	0	0	0
	17(OPE)	0	-1643	164	0	0	0
	18(OPE)	0	-1633	163	0	0	0
	19(OPE)	0	-1633	163	0	0	0
	20(OCC)	0	0	-0	0	0	0
	21(OCC)	-0	-2	0	0	0	0
	22(OCC)	0	0	-0	0	0	0
	23(OCC)	-0	-2	0	0	0	0
	24(OCC)	-0	-10	1	0	0	0
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-1/L12	-1643/L17	164/L17			
160		TYPE=Rigid -X; Rigid X; Rigid Z; Prog Design VSH;					
	4(OPE)	2713	-2195	758	0	0	0
	6(OPE)	2228	-2245	423	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(OPE)	2228	-2247	419	0	0	0
	11(SUS)	461	-1704	87	0	0	0
	12(SUS)	-1	-39	-4	0	0	0
	13(OPE)	4050	-2523	368	0	0	0
	14(OPE)	395	-1665	305	0	0	0
	15(OPE)	1997	-1957	407	0	0	0
	16(OPE)	2612	-2380	399	0	0	0
	17(OPE)	1963	-1906	720	0	0	0
	18(OPE)	2227	-2245	423	0	0	0
	19(OPE)	2228	-2245	423	0	0	0
	20(OCC)	1823	-277	-55	0	0	0
	21(OCC)	-1833	581	-118	0	0	0
	22(OCC)	-231	288	-16	0	0	0
	23(OCC)	384	-135	-24	0	0	0
	24(OCC)	-265	339	297	0	0	0
	25(OCC)	-1	0	-0	0	0	0
	26(OCC)	-0	-0	-0	0	0	0
	MAX	4050/L13	-2523/L13	758/L4			
300		TYPE=Rigid Y; Rigid Z w/gap;					
	4(OPE)	-637	-2127	44	0	0	0
	6(OPE)	-327	-1088	1	0	0	0
	9(OPE)	-325	-1085	1	0	0	0
	11(SUS)	-178	-1795	-385	0	0	0
	12(SUS)	11	-4528	-402	0	0	0
	13(OPE)	-223	-749	26	0	0	0
	14(OPE)	-453	-1516	36	0	0	0
	15(OPE)	-262	-873	10	0	0	0
	16(OPE)	-423	-1412	15	0	0	0
	17(OPE)	-158	-1580	447	0	0	0
	18(OPE)	-326	-1088	1	0	0	0
	19(OPE)	-327	-1088	1	0	0	0
	20(OCC)	103	339	24	0	0	0
	21(OCC)	-127	-427	35	0	0	0
	22(OCC)	65	215	9	0	0	0
	23(OCC)	-97	-324	14	0	0	0
	24(OCC)	169	-492	446	0	0	0
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-637/L4	-4528/L12	447/L17			
400		TYPE=Rigid Y; Rigid Z w/gap;					
	4(OPE)	-172	-574	-13	0	0	0
	6(OPE)	-348	-1160	-16	0	0	0
	9(OPE)	-348	-1160	-16	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	11(SUS)	-113	-1101	59	0	0	0
	12(SUS)	0	281	84	0	0	0
	13(OPE)	-354	-1181	-6	0	0	0
	14(OPE)	-322	-1074	-20	0	0	0
	15(OPE)	-309	-1030	-10	0	0	0
	16(OPE)	-366	-1223	-14	0	0	0
	17(OPE)	-142	-862	217	0	0	0
	18(OPE)	-348	-1160	-16	0	0	0
	19(OPE)	-348	-1160	-16	0	0	0
	20(OCC)	-7	-21	10	0	0	0
	21(OCC)	26	86	-4	0	0	0
	22(OCC)	39	130	6	0	0	0
	23(OCC)	-19	-63	3	0	0	0
	24(OCC)	206	298	233	0	0	0
	25(OCC)	-0	-0	-0	0	0	0
	26(OCC)	-0	-0	-0	0	0	0
	MAX	-366/L16	-1223/L16	233/L24			
480		TYPE=Rigid Y; Rigid Z w/gap;					
	4(OPE)	-627	-2113	-97	0	0	0
	6(OPE)	-483	-1617	-48	0	0	0
	9(OPE)	-484	-1621	-47	0	0	0
	11(SUS)	-23	-1330	5	0	0	0
	12(SUS)	52	-1418	42	0	0	0
	13(OPE)	-523	-1748	-40	0	0	0
	14(OPE)	-441	-1485	-61	0	0	0
	15(OPE)	-435	-1458	-43	0	0	0
	16(OPE)	-532	-1780	-49	0	0	0
	17(OPE)	-399	-1678	307	0	0	0
	18(OPE)	-483	-1617	-48	0	0	0
	19(OPE)	-483	-1617	-48	0	0	0
	20(OCC)	-40	-131	8	0	0	0
	21(OCC)	41	132	-14	0	0	0
	22(OCC)	48	160	5	0	0	0
	23(OCC)	-49	-162	-1	0	0	0
	24(OCC)	84	-61	355	0	0	0
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-627/L4	-2113/L4	355/L24			
660		TYPE=Rigid +Y;					
	4(OPE)	-148	-1092	-292	0	0	0
	6(OPE)	-208	-1052	-237	0	0	0
	9(OPE)	-219	-1007	-208	0	0	0
	11(SUS)	-146	-1034	108	0	0	0
	12(SUS)	-145	-1022	118	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	-371	-1272	-90	0	0	0
	14(OPE)	-81	-829	-235	0	0	0
	15(OPE)	-173	-935	-221	0	0	0
	16(OPE)	-244	-1165	-250	0	0	0
	17(OPE)	-178	-1014	247	0	0	0
	18(OPE)	-208	-1052	-237	0	0	0
	19(OPE)	-208	-1052	-237	0	0	0
	20(OCC)	-163	-220	147	0	0	0
	21(OCC)	127	223	2	0	0	0
	22(OCC)	35	117	16	0	0	0
	23(OCC)	-36	-113	-13	0	0	0
	24(OCC)	30	38	484	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-371/L13	-1272/L13	484/L24			
720		TYPE=Rigid ANC;					
	4(OPE)	-332	71	410	256	529	-230
	6(OPE)	124	-126	250	57	108	-149
	9(OPE)	-44	-208	299	62	84	-117
	11(SUS)	170	-311	-82	-87	12	-39
	12(SUS)	167	-311	-81	-83	11	-39
	13(OPE)	988	101	-46	-2	25	-317
	14(OPE)	-635	-351	295	87	375	-6
	15(OPE)	100	-81	233	67	124	-142
	16(OPE)	145	-175	268	49	94	-155
	17(OPE)	-3	-124	641	226	-242	-118
	18(OPE)	124	-126	250	57	108	-149
	19(OPE)	124	-126	250	57	108	-149
	20(OCC)	864	226	-296	-59	-83	-168
	21(OCC)	-759	-226	45	29	267	143
	22(OCC)	-24	45	-17	10	16	6
	23(OCC)	21	-49	18	-9	-14	-6
	24(OCC)	-127	1	390	169	-350	31
	25(OCC)	-0	0	0	0	0	0
	26(OCC)	0	-0	0	0	0	-0
	MAX	988/L13	-351/L14	641/L17	256/L4	529/L4	-317/L13
780		TYPE=Rigid ANC;					
	4(OPE)	-139	-2526	197	1450	1107	-480
	6(OPE)	256	-2623	103	1163	641	-502
	9(OPE)	-595	-3192	97	1620	-38	-263
	11(SUS)	-80	-3141	24	1303	-177	-322
	12(SUS)	-82	-3127	35	1308	-187	-310
	13(OPE)	1023	-2706	96	1262	452	-1161
	14(OPE)	-1051	-2774	117	1347	356	152
	15(OPE)	227	-2270	98	1024	611	-462

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RESTRAINT SUMMARY REPORT: Loads On Restraints
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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OPE)	273	-2981	110	1309	662	-537
	17(OPE)	120	-2659	1161	1737	-70	-461
	18(OPE)	256	-2623	103	1163	641	-502
	19(OPE)	256	-2623	103	1163	641	-502
	20(OCC)	766	-83	-7	99	-189	-659
	21(OCC)	-1307	-150	13	184	-285	654
	22(OCC)	-29	353	-6	-139	-30	40
	23(OCC)	17	-358	7	146	21	-35
	24(OCC)	-136	-35	1057	574	-711	41
	25(OCC)	-0	0	-0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-1307/L21	-3192/L9	1161/L17	1737/L17	1107/L4	-1161/L13
840		TYPE=Rigid ANC;					
	4(OPE)	-139	-2526	197	2155	1107	17
	6(OPE)	256	-2623	103	1532	641	-1417
	9(OPE)	-595	-3192	97	1967	-38	1863
	11(SUS)	-80	-3141	24	1388	-177	-35
	12(SUS)	-82	-3127	35	1433	-187	-17
	13(OPE)	1023	-2706	96	1605	452	-4812
	14(OPE)	-1051	-2774	117	1763	356	3905
	15(OPE)	227	-2270	98	1373	611	-1272
	16(OPE)	273	-2981	110	1702	662	-1512
	17(OPE)	120	-2659	1161	5880	-70	-889
	18(OPE)	256	-2623	103	1532	641	-1417
	19(OPE)	256	-2623	103	1532	641	-1417
	20(OCC)	766	-83	-7	73	-189	-3395
	21(OCC)	-1307	-150	13	231	-285	5322
	22(OCC)	-29	353	-6	-159	-30	144
	23(OCC)	17	-358	7	170	21	-96
	24(OCC)	-136	-35	1057	4349	-711	528
	25(OCC)	-0	0	-0	-0	0	0
	26(OCC)	0	0	0	0	0	-0
	MAX	-1307/L21	-3192/L9	1161/L17	5880/L17	1107/L4	5322/L21
1240		TYPE=Rigid ANC;					
	4(OPE)	1243	-1802	-596	-0	0	24
	6(OPE)	920	-1742	-471	-0	0	24
	9(OPE)	923	-1742	-476	-0	0	24
	11(SUS)	-174	-1394	155	0	0	24
	12(SUS)	-173	-1380	153	0	0	24
	13(OPE)	1433	-1713	-467	-0	0	24
	14(OPE)	381	-1776	-434	0	0	24
	15(OPE)	904	-1575	-453	-0	0	21
	16(OPE)	937	-1902	-489	-0	0	27
	17(OPE)	422	-1882	490	0	6	24
	18(OPE)	921	-1741	-473	0	0	24

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OPE)	920	-1742	-470	-0	0	24
	20(OCC)	512	28	4	0	0	0
	21(OCC)	-540	-34	36	0	-0	0
	22(OCC)	-16	166	18	0	0	-3
	23(OCC)	17	-160	-18	0	0	3
	24(OCC)	-499	-140	961	0	6	0
	25(OCC)	1	1	-2	0	-0	-0
	26(OCC)	-0	-0	0	0	-0	0
	MAX	1433/L13	-1902/L16	961/L24	-0/L4	6/L17	27/L16
1241		TYPE=Displ. Reaction;					
	4(OPE)	1243	-2176	-596	0	0	0
	6(OPE)	920	-2116	-471	0	0	0
	9(OPE)	923	-2116	-476	0	0	0
	11(SUS)	-174	-1768	155	0	0	0
	12(SUS)	-173	-1754	153	0	0	0
	13(OPE)	1530	-2088	-467	0	0	0
	14(OPE)	283	-2150	-434	0	0	0
	15(OPE)	904	-1905	-453	0	0	0
	16(OPE)	937	-2321	-489	0	0	0
	17(OPE)	422	-2256	587	0	0	0
	18(OPE)	921	-2115	-473	0	0	0
	19(OPE)	920	-2116	-470	0	0	0
	20(OCC)	609	28	4	0	0	0
	21(OCC)	-637	-34	36	0	0	0
	22(OCC)	-16	211	18	0	0	0
	23(OCC)	17	-205	-18	0	0	0
	24(OCC)	-499	-140	1058	0	0	0
	25(OCC)	1	1	-2	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	1530/L13	-2321/L16	1058/L24			
1280		TYPE=Rigid Z w/gap; Rigid Y;					
	4(OPE)	-388	-1296	25	0	0	0
	6(OPE)	-550	-1835	7	0	0	0
	9(OPE)	-545	-1817	7	0	0	0
	11(SUS)	4	-3904	152	0	0	0
	12(SUS)	4	-3888	151	0	0	0
	13(OPE)	-476	-1588	4	0	0	0
	14(OPE)	-631	-2104	16	0	0	0
	15(OPE)	-409	-1363	5	0	0	0
	16(OPE)	-692	-2308	8	0	0	0
	17(OPE)	-491	-1833	248	0	0	0
	18(OPE)	-549	-1832	7	0	0	0
	19(OPE)	-551	-1835	7	0	0	0
	20(OCC)	74	247	-3	0	0	0

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Various Load Cases

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	21(OCC)	-81	-270	9	0	0	0
	22(OCC)	141	471	-2	0	0	0
	23(OCC)	-142	-474	1	0	0	0
	24(OCC)	59	2	241	0	0	0
	25(OCC)	1	3	0	0	0	0
	26(OCC)	-0	-1	-0	0	0	0
	MAX	-692/L16	-3904/L11	248/L17			
1380		TYPE=Rigid Z w/gap; Rigid Y;					
	4(OPE)	-2676	-8953	-236	0	0	0
	6(OPE)	-2310	-7756	-284	0	0	0
	9(OPE)	-2310	-7757	-283	0	0	0
	11(SUS)	-167	-2809	-300	0	0	0
	12(SUS)	-165	-2782	-298	0	0	0
	13(OPE)	-2376	-7983	-300	0	0	0
	14(OPE)	-2232	-7489	-261	0	0	0
	15(OPE)	-2212	-7431	-277	0	0	0
	16(OPE)	-2406	-8080	-294	0	0	0
	17(OPE)	-2331	-7862	362	0	0	0
	18(OPE)	-2310	-7756	-283	0	0	0
	19(OPE)	-2309	-7756	-284	0	0	0
	20(OCC)	-66	-226	-17	0	0	0
	21(OCC)	78	267	23	0	0	0
	22(OCC)	97	325	7	0	0	0
	23(OCC)	-97	-324	-11	0	0	0
	24(OCC)	-21	-106	646	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-2676/L4	-8953/L4	646/L24			
1500		TYPE=Rigid Z w/gap; Rigid +Y;					
	4(OPE)	108	-547	371	0	0	0
	6(OPE)	205	-1061	243	0	0	0
	9(OPE)	205	-1061	244	0	0	0
	11(SUS)	-171	-2971	-250	0	0	0
	12(SUS)	-171	-2955	-249	0	0	0
	13(OPE)	178	-972	308	0	0	0
	14(OPE)	238	-1135	244	0	0	0
	15(OPE)	108	-701	180	0	0	0
	16(OPE)	328	-1428	276	0	0	0
	17(OPE)	191	-1226	1357	0	0	0
	18(OPE)	205	-1061	243	0	0	0
	19(OPE)	205	-1061	243	0	0	0
	20(OCC)	-27	89	65	0	0	0
	21(OCC)	33	-74	0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	22(OCC)	-97	360	-63	0	0	0
	23(OCC)	123	-368	33	0	0	0
	24(OCC)	-14	-165	1114	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	26(OCC)	-0	0	-0	0	0	0
	MAX	328/L16	-2971/L11	1357/L17			
1520		TYPE=Rigid +Y;					
	4(OPE)	-701	-2498	-265	0	0	0
	6(OPE)	-709	-2469	-214	0	0	0
	9(OPE)	-709	-2469	-214	0	0	0
	11(SUS)	-149	-2683	205	0	0	0
	12(SUS)	-148	-2668	205	0	0	0
	13(OPE)	-795	-2661	75	0	0	0
	14(OPE)	-623	-2341	-323	0	0	0
	15(OPE)	-632	-2186	-176	0	0	0
	16(OPE)	-787	-2748	-247	0	0	0
	17(OPE)	-681	-2303	114	0	0	0
	18(OPE)	-709	-2469	-214	0	0	0
	19(OPE)	-709	-2469	-214	0	0	0
	20(OCC)	-86	-191	290	0	0	0
	21(OCC)	86	128	-109	0	0	0
	22(OCC)	77	283	38	0	0	0
	23(OCC)	-78	-279	-32	0	0	0
	24(OCC)	28	167	328	0	0	0
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	-0	-0	-0	0	0	0
	MAX	-795/L13	-2748/L16	328/L24			
1560		TYPE=Rigid X w/gap; Rigid +Y;					
	4(OPE)	-16457	-7337	6038	0	0	0
	6(OPE)	-13320	-6833	5069	0	0	0
	9(OPE)	-13313	-6832	5064	0	0	0
	11(SUS)	227	-2112	-151	0	0	0
	12(SUS)	226	-2100	-150	0	0	0
	13(OPE)	-10920	-6802	4872	0	0	0
	14(OPE)	-15334	-6953	5075	0	0	0
	15(OPE)	-13254	-6338	4941	0	0	0
	16(OPE)	-13405	-7329	5208	0	0	0
	17(OPE)	-13362	-6795	5644	0	0	0
	18(OPE)	-13320	-6833	5069	0	0	0
	19(OPE)	-13320	-6833	5069	0	0	0
	20(OCC)	2400	31	-197	0	0	0
	21(OCC)	-2014	-120	6	0	0	0
	22(OCC)	66	495	-129	0	0	0
	23(OCC)	-85	-496	139	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	24(OCC)	-41	38	574	0	0	0
	25(OCC)	-0	0	-0	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-16457/L4	-7337/L4	6038/L4			
1660		TYPE=Rigid ANC;					
	4(OPE)	0	0	0	0	-0	0
	6(OPE)	0	0	0	0	-0	-0
	9(OPE)	0	0	0	0	-0	0
	11(SUS)	0	0	0	0	-0	-0
	12(SUS)	0	0	0	0	-0	-0
	13(OPE)	0	0	0	0	-0	-0
	14(OPE)	0	0	0	-0	-0	-0
	15(OPE)	0	0	0	-0	-0	-0
	16(OPE)	0	-0	0	-0	0	-0
	17(OPE)	0	0	0	-0	-0	-0
	18(OPE)	0	0	0	-0	-0	0
	19(OPE)	0	0	0	-0	-0	-0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	-0	-0	0
	22(OCC)	0	0	0	-0	-0	0
	23(OCC)	0	-0	0	-0	0	0
	24(OCC)	0	0	0	-0	0	0
	25(OCC)	0	0	0	-0	0	0
	26(OCC)	0	0	0	-0	0	0
	MAX		-0/L16	0/L18	-0/L17	-0/L4	-0/L6
1700		TYPE=Rigid ANC;					
	4(OPE)	-1244	545	576	470	702	1890
	6(OPE)	-1011	241	515	351	529	1487
	9(OPE)	-1011	241	514	351	528	1486
	11(SUS)	32	-938	-29	-138	12	-89
	12(SUS)	32	-935	-29	-137	12	-89
	13(OPE)	-434	164	572	271	269	1094
	14(OPE)	-1586	321	505	408	753	1886
	15(OPE)	-1013	392	502	379	537	1527
	16(OPE)	-1007	89	528	323	518	1444
	17(OPE)	-960	176	1025	605	209	1414
	18(OPE)	-1011	241	515	351	529	1487
	19(OPE)	-1011	241	515	351	529	1487
	20(OCC)	577	-77	57	-80	-260	-393
	21(OCC)	-575	80	-9	57	224	400
	22(OCC)	-2	151	-13	28	8	40
	23(OCC)	4	-152	13	-28	-10	-42
	24(OCC)	52	-65	510	254	-320	-72
	25(OCC)	0	-0	-0	0	0	-0
	26(OCC)	-0	0	-0	0	0	0

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	MAX	-1586/L14	-938/L11	1025/L17	605/L17	753/L14	1890/L4
1780		TYPE=Rigid ANC;					
	4(OPE)	1042	15689	6587	944	-396	801
	6(OPE)	311	7146	4635	-531	-124	226
	9(OPE)	350	7152	4644	-535	-138	261
	11(SUS)	-58	-632	-170	77	6	-96
	12(SUS)	-58	-627	-166	76	6	-96
	13(OPE)	-118	7272	4957	-708	106	-198
	14(OPE)	393	7096	4517	-469	-256	261
	15(OPE)	312	7223	4656	-541	-123	232
	16(OPE)	316	7069	4613	-521	-128	226
	17(OPE)	286	6912	4107	-191	-126	172
	18(OPE)	313	7146	4634	-531	-125	227
	19(OPE)	312	7146	4634	-531	-125	227
	20(OCC)	-429	126	323	-177	230	-424
	21(OCC)	82	-50	-117	62	-132	35
	22(OCC)	1	77	21	-10	1	6
	23(OCC)	5	-77	-22	10	-4	-0
	24(OCC)	-26	-234	-528	340	-2	-54
	25(OCC)	1	-0	-0	0	-0	1
	26(OCC)	1	-0	-0	0	-0	1
	MAX	1042/L4	15689/L4	6587/L4	944/L4	-396/L4	801/L4
1820		TYPE=Rigid ANC;					
	4(OPE)	-1042	-15973	-6587	-2993	396	-477
	6(OPE)	-311	-7429	-4635	-911	124	-129
	9(OPE)	-350	-7435	-4644	-910	138	-152
	11(SUS)	58	348	170	-24	-6	78
	12(SUS)	58	344	166	-24	-6	77
	13(OPE)	192	-7556	-4957	-835	-106	154
	14(OPE)	-467	-7380	-4517	-936	256	-132
	15(OPE)	-312	-7472	-4656	-908	123	-135
	16(OPE)	-316	-7386	-4613	-914	128	-127
	17(OPE)	-286	-7195	-4033	-1079	126	-83
	18(OPE)	-313	-7429	-4634	-911	125	-130
	19(OPE)	-312	-7429	-4634	-911	125	-130
	20(OCC)	503	-126	-323	76	-230	283
	21(OCC)	-155	50	117	-25	132	-2
	22(OCC)	-1	-43	-21	3	-1	-5
	23(OCC)	-5	43	22	-3	4	2
	24(OCC)	26	234	602	-168	2	46
	25(OCC)	-1	0	0	-0	0	-1
	26(OCC)	-1	0	0	-0	0	-1
	MAX	-1042/L4	-15973/L4	-6587/L4	-2993/L4	396/L4	-477/L4

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1840		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	4(OPE)	1671	-2400	501	0	0	0
	6(OPE)	1651	-5692	495	0	0	0
	9(OPE)	1628	-5689	488	0	0	0
	11(SUS)	-57	-9175	-17	0	0	0
	12(SUS)	-57	-9140	-17	0	0	0
	13(OPE)	5815	-4823	1744	0	0	0
	14(OPE)	-3373	-6001	1012	0	0	0
	15(OPE)	1580	-4534	474	0	0	0
	16(OPE)	1716	-6850	515	0	0	0
	17(OPE)	13029	-8030	3909	0	0	0
	18(OPE)	1650	-5692	495	0	0	0
	19(OPE)	1651	-5692	495	0	0	0
	20(OCC)	4164	869	1249	0	0	0
	21(OCC)	-5024	-309	517	0	0	0
	22(OCC)	-71	1158	-21	0	0	0
	23(OCC)	65	-1158	19	0	0	0
	24(OCC)	11378	-2339	3413	0	0	0
	25(OCC)	-1	0	-0	0	0	0
	26(OCC)	-0	0	-0	0	0	0
	MAX	13029/L17	-9175/L11	3909/L17			
1860		TYPE=Rigid Z w/gap; Rigid Y;					
	4(OPE)	-764	-7916	209	0	0	0
	6(OPE)	-757	-7849	208	0	0	0
	9(OPE)	-757	-7853	208	0	0	0
	11(SUS)	0	-7695	-1	0	0	0
	12(SUS)	0	-7669	-1	0	0	0
	13(OPE)	-753	-7804	204	0	0	0
	14(OPE)	-755	-7824	207	0	0	0
	15(OPE)	-668	-6932	183	0	0	0
	16(OPE)	-845	-8767	232	0	0	0
	17(OPE)	-656	-7811	424	0	0	0
	18(OPE)	-757	-7849	208	0	0	0
	19(OPE)	-757	-7849	208	0	0	0
	20(OCC)	4	45	-4	0	0	0
	21(OCC)	2	25	-1	0	0	0
	22(OCC)	88	917	-24	0	0	0
	23(OCC)	-89	-918	24	0	0	0
	24(OCC)	101	38	216	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	-845/L16	-8767/L16	424/L17			

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1880		TYPE=Rigid Z w/gap; Rigid Y;					
	4(OPE)	-822	-8221	-1	0	0	0
	6(OPE)	-804	-8038	-0	0	0	0
	9(OPE)	-804	-8044	-0	0	0	0
	11(SUS)	-0	-7688	-1	0	0	0
	12(SUS)	-0	-7663	-1	0	0	0
	13(OPE)	-793	-7927	-3	0	0	0
	14(OPE)	-806	-8058	-1	0	0	0
	15(OPE)	-712	-7121	-0	0	0	0
	16(OPE)	-895	-8955	-0	0	0	0
	17(OPE)	-751	-8006	278	0	0	0
	18(OPE)	-804	-8038	-0	0	0	0
	19(OPE)	-804	-8038	-0	0	0	0
	20(OCC)	11	110	-3	0	0	0
	21(OCC)	-2	-20	-0	0	0	0
	22(OCC)	92	917	0	0	0	0
	23(OCC)	-92	-917	-0	0	0	0
	24(OCC)	53	31	279	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	-895/L16	-8955/L16	279/L24			
1900		TYPE=Rigid Y; Rigid X; Rigid Z w/gap;					
	4(OPE)	543	13731	-1331	0	0	0
	6(OPE)	6	1773	-67	0	0	0
	9(OPE)	51	1773	-34	0	0	0
	11(SUS)	-44	-9806	-46	0	0	0
	12(SUS)	-44	-9772	-44	0	0	0
	13(OPE)	5115	1445	-951	0	0	0
	14(OPE)	-4764	1924	-1014	0	0	0
	15(OPE)	-108	2987	-114	0	0	0
	16(OPE)	130	560	-84	0	0	0
	17(OPE)	-11601	2329	3713	0	0	0
	18(OPE)	8	1773	-65	0	0	0
	19(OPE)	7	1773	-67	0	0	0
	20(OCC)	5109	-328	-884	0	0	0
	21(OCC)	-4770	151	-947	0	0	0
	22(OCC)	-114	1213	-47	0	0	0
	23(OCC)	124	-1213	-17	0	0	0
	24(OCC)	-11607	556	3780	0	0	0
	25(OCC)	2	0	2	0	0	0
	26(OCC)	1	0	-0	0	0	0
	MAX	-11607/L24	13731/L4	3780/L24			

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
2180		TYPE=Rigid Z w/gap; Rigid +Y;					
	4(OPE)	191	-797	144	0	0	0
	6(OPE)	207	-807	126	0	0	0
	9(OPE)	233	-804	115	0	0	0
	11(SUS)	-9	-836	51	0	0	0
	12(SUS)	-9	-831	51	0	0	0
	13(OPE)	260	-805	129	0	0	0
	14(OPE)	-235	-810	62	0	0	0
	15(OPE)	176	-708	119	0	0	0
	16(OPE)	236	-907	135	0	0	0
	17(OPE)	270	-828	313	0	0	0
	18(OPE)	208	-808	124	0	0	0
	19(OPE)	209	-808	123	0	0	0
	20(OCC)	54	2	2	0	0	0
	21(OCC)	-442	-3	-65	0	0	0
	22(OCC)	-31	99	-8	0	0	0
	23(OCC)	29	-100	9	0	0	0
	24(OCC)	64	-21	187	0	0	0
	25(OCC)	2	-1	-2	0	0	0
	26(OCC)	2	-1	-4	0	0	0
	MAX	-442/L21	-907/L16	313/L17			
2200		TYPE=Rigid +Y;					
	4(OPE)	-119	-419	-41	0	0	0
	6(OPE)	-120	-411	-29	0	0	0
	9(OPE)	115	-414	47	0	0	0
	11(SUS)	-2	-400	-25	0	0	0
	12(SUS)	-2	-398	-25	0	0	0
	13(OPE)	117	-402	-31	0	0	0
	14(OPE)	-124	-419	-20	0	0	0
	15(OPE)	-105	-361	-26	0	0	0
	16(OPE)	-134	-460	-33	0	0	0
	17(OPE)	-108	-400	52	0	0	0
	18(OPE)	-118	-407	-31	0	0	0
	19(OPE)	-119	-408	-31	0	0	0
	20(OCC)	236	9	-1	0	0	0
	21(OCC)	-5	-9	9	0	0	0
	22(OCC)	15	50	3	0	0	0
	23(OCC)	-14	-50	-3	0	0	0
	24(OCC)	12	11	82	0	0	0
	25(OCC)	2	4	-2	0	0	0
	26(OCC)	1	3	-1	0	0	0
	MAX	236/L20	-460/L16	82/L24			

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2220		TYPE=Rigid Z w/gap; Rigid +Y;					
	4(OPE)	-142	-475	-10	0	0	0
	6(OPE)	-147	-493	17	0	0	0
	9(OPE)	-359	-456	-832	0	0	0
	11(SUS)	-1	-478	19	0	0	0
	12(SUS)	-1	-475	19	0	0	0
	13(OPE)	-110	-505	104	0	0	0
	14(OPE)	-144	-481	7	0	0	0
	15(OPE)	-130	-440	20	0	0	0
	16(OPE)	-164	-547	11	0	0	0
	17(OPE)	-241	-493	379	0	0	0
	18(OPE)	-151	-506	17	0	0	0
	19(OPE)	-147	-500	30	0	0	0
	20(OCC)	37	-12	88	0	0	0
	21(OCC)	3	12	-9	0	0	0
	22(OCC)	17	54	3	0	0	0
	23(OCC)	-17	-53	-5	0	0	0
	24(OCC)	-94	0	362	0	0	0
	25(OCC)	-4	-12	0	0	0	0
	26(OCC)	0	-6	14	0	0	0
	MAX	-359/L9	-547/L16	-832/L9			
2270		TYPE=Rigid +Y;					
	4(OPE)	0	-693	0	0	0	0
	6(OPE)	0	-598	0	0	0	0
	9(OPE)	0	-520	0	0	0	0
	11(SUS)	0	-409	0	0	0	0
	12(SUS)	0	-407	0	0	0	0
	13(OPE)	0	-549	0	0	0	0
	14(OPE)	0	-638	0	0	0	0
	15(OPE)	0	-542	0	0	0	0
	16(OPE)	0	-657	0	0	0	0
	17(OPE)	0	-637	0	0	0	0
	18(OPE)	0	-525	0	0	0	0
	19(OPE)	0	-615	0	0	0	0
	20(OCC)	0	49	0	0	0	0
	21(OCC)	0	-40	0	0	0	0
	22(OCC)	0	57	0	0	0	0
	23(OCC)	0	-58	0	0	0	0
	24(OCC)	0	-39	0	0	0	0
	25(OCC)	0	73	0	0	0	0
	26(OCC)	0	-17	0	0	0	0
	MAX		-693/L4				
2320		TYPE=Rigid +Y;					

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	0	-3349	0	0	0	0
	11(SUS)	0	-103	0	0	0	0
	12(SUS)	0	-102	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX		-3349/L9				
2500		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	4(OPE)	1029	276	330	0	0	0
	6(OPE)	1151	309	300	0	0	0
	9(OPE)	-579	171	29	0	0	0
	11(SUS)	42	-2445	0	0	0	0
	12(SUS)	42	-2444	0	0	0	0
	13(OPE)	1965	534	272	0	0	0
	14(OPE)	278	73	297	0	0	0
	15(OPE)	999	270	289	0	0	0
	16(OPE)	1303	348	310	0	0	0
	17(OPE)	1194	322	1071	0	0	0
	18(OPE)	2879	793	342	0	0	0
	19(OPE)	974	265	276	0	0	0
	20(OCC)	814	225	-28	0	0	0
	21(OCC)	-873	-236	-4	0	0	0
	22(OCC)	-152	-39	-11	0	0	0
	23(OCC)	152	39	10	0	0	0
	24(OCC)	44	13	771	0	0	0
	25(OCC)	1728	484	42	0	0	0
	26(OCC)	-176	-44	-24	0	0	0
	MAX	2879/L18	-2445/L11	1071/L17			
2620		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0

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Various Load Cases

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	6(OPE)	0	0	0	0	0	0
	9(OPE)	72	-2601	777	0	0	0
	11(SUS)	-27	-187	-19	0	0	0
	12(SUS)	-27	-187	-19	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	72/L9	-2601/L9	777/L9			
2800		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	4(OPE)	2933	0	573	0	0	0
	6(OPE)	2915	0	551	0	0	0
	9(OPE)	-883	0	0	0	0	0
	11(SUS)	0	-2405	0	0	0	0
	12(SUS)	0	-2404	0	0	0	0
	13(OPE)	3653	0	529	0	0	0
	14(OPE)	2210	0	548	0	0	0
	15(OPE)	2811	0	550	0	0	0
	16(OPE)	3017	0	554	0	0	0
	17(OPE)	2763	0	1352	0	0	0
	18(OPE)	2809	0	538	0	0	0
	19(OPE)	4472	0	530	0	0	0
	20(OCC)	737	0	-22	0	0	0
	21(OCC)	-705	0	-3	0	0	0
	22(OCC)	-104	0	-2	0	0	0
	23(OCC)	101	0	3	0	0	0
	24(OCC)	-152	0	801	0	0	0
	25(OCC)	-106	0	-13	0	0	0
	26(OCC)	1557	0	-21	0	0	0
	MAX	4472/L19	-2405/L11	1352/L17			
4220		TYPE=Rigid ANC;					
	4(OPE)	0	0	0	-0	0	0
	6(OPE)	0	0	0	-0	0	-0

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	9(OPE)	0	0	0	-0	0	0
	11(SUS)	0	0	0	-0	-0	-0
	12(SUS)	0	0	0	-0	-0	-0
	13(OPE)	0	0	0	0	0	-0
	14(OPE)	0	0	0	0	-0	-0
	15(OPE)	0	0	0	-0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	-0	-0	-0
	18(OPE)	0	0	0	-0	0	-0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	-0	0
	21(OCC)	0	0	0	0	-0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	-0	0
	24(OCC)	0	0	0	-0	-0	0
	25(OCC)	0	0	0	-0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX				-0/L4	-0/L24	-0/L6
4260		TYPE=Rigid ANC;					
	4(OPE)	12405	-3634	-1050	485	-3523	5861
	6(OPE)	2195	-2203	-281	357	-442	2399
	9(OPE)	2343	-2203	-340	316	-657	2399
	11(SUS)	-10	-1476	7	258	57	807
	12(SUS)	-9	-1473	7	257	57	804
	13(OPE)	7555	-2211	-427	507	-926	2420
	14(OPE)	-3317	-2197	-70	312	178	2379
	15(OPE)	2082	-2026	-271	314	-408	2302
	16(OPE)	2341	-2381	-296	400	-488	2496
	17(OPE)	1967	-2204	1852	456	4643	2399
	18(OPE)	2198	-2203	-282	357	-442	2399
	19(OPE)	2196	-2203	-281	357	-441	2399
	20(OCC)	5359	-8	-146	150	-485	21
	21(OCC)	-5512	6	212	-45	620	-20
	22(OCC)	-114	177	11	-43	34	-97
	23(OCC)	146	-177	-14	43	-46	97
	24(OCC)	-228	-0	2133	99	5085	-0
	25(OCC)	2	0	-0	-0	-0	-0
	26(OCC)	1	0	0	0	1	-0
	MAX	12405/L4	-3634/L4	2133/L24	507/L13	5085/L24	5861/L4
4320		TYPE=Rigid ANC;					
	4(OPE)	12405	-3634	-1050	-2246	-4006	-24720
	6(OPE)	2195	-2203	-281	-375	-571	-2295
	9(OPE)	2343	-2203	-340	-567	-813	-2680
	11(SUS)	-10	-1476	7	277	60	1512
	12(SUS)	-9	-1473	7	276	60	1505

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	13(OPE)	7555	-2211	-427	-604	-1123	-16205
	14(OPE)	-3317	-2197	-70	132	146	12014
	15(OPE)	2082	-2026	-271	-389	-532	-2178
	16(OPE)	2341	-2381	-296	-369	-624	-2496
	17(OPE)	1967	-2204	1852	5270	5495	-1703
	18(OPE)	2198	-2203	-282	-375	-571	-2301
	19(OPE)	2196	-2203	-281	-374	-570	-2298
	20(OCC)	5359	-8	-146	-229	-552	-13909
	21(OCC)	-5512	6	212	506	718	14309
	22(OCC)	-114	177	11	-14	39	117
	23(OCC)	146	-177	-14	6	-53	-200
	24(OCC)	-228	-0	2133	5645	6066	592
	25(OCC)	2	0	-0	-0	-0	-6
	26(OCC)	1	0	0	0	1	-3
	MAX	12405/L4	-3634/L4	2133/L24	5645/L24	6066/L24	-24720/L4
5370		TYPE=Rigid +Y; Rigid Z w/gap;					
	4(OPE)	-264	-1140	-5	0	0	0
	6(OPE)	-298	-1225	-11	0	0	0
	9(OPE)	125	-533	1	0	0	0
	11(SUS)	80	-746	1	0	0	0
	12(SUS)	80	-746	0	0	0	0
	13(OPE)	333	-1112	-18	0	0	0
	14(OPE)	-311	-1037	-4	0	0	0
	15(OPE)	-333	-1111	-10	0	0	0
	16(OPE)	-292	-1333	-12	0	0	0
	17(OPE)	-271	-1153	394	0	0	0
	18(OPE)	-298	-1225	-11	0	0	0
	19(OPE)	-298	-1225	-11	0	0	0
	20(OCC)	631	113	-8	0	0	0
	21(OCC)	-14	188	7	0	0	0
	22(OCC)	-35	114	1	0	0	0
	23(OCC)	5	-108	-1	0	0	0
	24(OCC)	26	72	405	0	0	0
	25(OCC)	-0	0	-0	0	0	0
	26(OCC)	-0	0	-0	0	0	0
	MAX	631/L20	-1333/L16	405/L24			
5375		TYPE=Rigid +Y;					
	4(OPE)	-206	-688	6	0	0	0
	6(OPE)	-198	-661	8	0	0	0
	9(OPE)	234	-797	-51	0	0	0
	11(SUS)	27	-752	-0	0	0	0
	12(SUS)	27	-752	-0	0	0	0
	13(OPE)	-207	-692	13	0	0	0
	14(OPE)	-201	-670	1	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	15(OPE)	-172	-574	8	0	0	0
	16(OPE)	-225	-749	8	0	0	0
	17(OPE)	-139	-671	146	0	0	0
	18(OPE)	-198	-661	8	0	0	0
	19(OPE)	-198	-661	8	0	0	0
	20(OCC)	-9	-31	4	0	0	0
	21(OCC)	-3	-9	-7	0	0	0
	22(OCC)	26	87	-0	0	0	0
	23(OCC)	-26	-88	-0	0	0	0
	24(OCC)	60	-10	138	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	234/L9	-797/L9	146/L17			
5805		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	418	-3577	-988	0	0	0
	11(SUS)	-426	-1515	159	0	0	0
	12(SUS)	-426	-1514	159	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-426/L11	-3577/L9	-988/L9			
6020		TYPE=Rigid +Y; Rigid Z w/gap;					
	4(OPE)	1041	-3558	-237	0	0	0
	6(OPE)	1059	-3541	-83	0	0	0
	9(OPE)	1060	-3544	-87	0	0	0
	11(SUS)	1056	-3522	-37	0	0	0
	12(SUS)	1055	-3518	-37	0	0	0
	13(OPE)	1113	-3711	29	0	0	0
	14(OPE)	-1055	-3532	-104	0	0	0
	15(OPE)	931	-3115	-79	0	0	0
	16(OPE)	1185	-3961	-88	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OPE)	894	-3552	826	0	0	0
	18(OPE)	1059	-3541	-83	0	0	0
	19(OPE)	1059	-3541	-83	0	0	0
	20(OCC)	54	-170	113	0	0	0
	21(OCC)	-2114	9	-20	0	0	0
	22(OCC)	-128	426	4	0	0	0
	23(OCC)	126	-420	-4	0	0	0
	24(OCC)	-165	-11	910	0	0	0
	25(OCC)	-0	0	0	0	0	0
	26(OCC)	-0	0	0	0	0	0
	MAX	-2114/L21	-3961/L16	910/L24			
6050		TYPE=Rigid +Y;					
	4(OPE)	-640	-8200	-2375	0	0	0
	6(OPE)	-1005	-8262	-2266	0	0	0
	9(OPE)	-1094	-8258	-2223	0	0	0
	11(SUS)	-1423	-8298	33	0	0	0
	12(SUS)	-1421	-8287	33	0	0	0
	13(OPE)	2073	-8063	-1247	0	0	0
	14(OPE)	-2136	-8270	-1262	0	0	0
	15(OPE)	-977	-7270	-1950	0	0	0
	16(OPE)	-1173	-9260	-2518	0	0	0
	17(OPE)	-725	-7950	-2272	0	0	0
	18(OPE)	-1005	-8262	-2266	0	0	0
	19(OPE)	-1005	-8262	-2266	0	0	0
	20(OCC)	3077	199	1018	0	0	0
	21(OCC)	-1131	-8	1004	0	0	0
	22(OCC)	28	992	316	0	0	0
	23(OCC)	-168	-998	-252	0	0	0
	24(OCC)	279	312	-6	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	26(OCC)	0	-0	-0	0	0	0
	MAX	3077/L20	-9260/L16	-2518/L16			
6060		TYPE=Rigid +Y; Rigid X w/gap;					
	4(OPE)	-114	-2058	-607	0	0	0
	6(OPE)	-40	-1997	-598	0	0	0
	9(OPE)	-56	-1999	-597	0	0	0
	11(SUS)	354	-1975	28	0	0	0
	12(SUS)	354	-1972	28	0	0	0
	13(OPE)	644	-2035	-380	0	0	0
	14(OPE)	-692	-1997	-362	0	0	0
	15(OPE)	-61	-1760	-524	0	0	0
	16(OPE)	-28	-2234	-670	0	0	0
	17(OPE)	-146	-2377	-698	0	0	0
	18(OPE)	-40	-1997	-598	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OPE)	-40	-1997	-598	0	0	0
	20(OCC)	683	-38	217	0	0	0
	21(OCC)	-653	-0	236	0	0	0
	22(OCC)	-21	238	74	0	0	0
	23(OCC)	12	-237	-72	0	0	0
	24(OCC)	-106	-380	-100	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-692/L14	-2377/L17	-698/L17			
6070		TYPE=Rigid +Y;					
	4(OPE)	-148	-3927	-1169	0	0	0
	6(OPE)	127	-3969	-1184	0	0	0
	9(OPE)	134	-3968	-1183	0	0	0
	11(SUS)	-88	-3982	42	0	0	0
	12(SUS)	-88	-3977	42	0	0	0
	13(OPE)	1046	-3951	-557	0	0	0
	14(OPE)	-1104	-3972	-449	0	0	0
	15(OPE)	116	-3491	-1041	0	0	0
	16(OPE)	142	-4446	-1326	0	0	0
	17(OPE)	35	-3873	-1161	0	0	0
	18(OPE)	126	-3969	-1184	0	0	0
	19(OPE)	126	-3969	-1184	0	0	0
	20(OCC)	920	18	627	0	0	0
	21(OCC)	-1230	-3	735	0	0	0
	22(OCC)	-10	477	143	0	0	0
	23(OCC)	15	-478	-142	0	0	0
	24(OCC)	-91	95	22	0	0	0
	25(OCC)	-0	-0	-0	0	0	0
	26(OCC)	-0	-0	-0	0	0	0
	MAX	-1230/L21	-4446/L16	-1326/L16			
6080		TYPE=Rigid +Y; Rigid X w/gap;					
	4(OPE)	-511	-3490	-957	0	0	0
	6(OPE)	-59	-3383	1013	0	0	0
	9(OPE)	-78	-3385	1013	0	0	0
	11(SUS)	9	-3352	85	0	0	0
	12(SUS)	9	-3348	85	0	0	0
	13(OPE)	977	-3417	309	0	0	0
	14(OPE)	-961	-3369	314	0	0	0
	15(OPE)	-66	-2979	891	0	0	0
	16(OPE)	-55	-3786	1134	0	0	0
	17(OPE)	139	-3389	1007	0	0	0
	18(OPE)	-59	-3383	1013	0	0	0
	19(OPE)	-59	-3383	1013	0	0	0
	20(OCC)	1036	-34	-704	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	-901	14	-699	0	0	0
	22(OCC)	-7	404	-122	0	0	0
	23(OCC)	5	-403	121	0	0	0
	24(OCC)	198	-6	-6	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	1036/L20	-3786/L16	1134/L16			
6090		TYPE=Rigid +Y;					
	4(OPE)	-977	-3348	-231	0	0	0
	6(OPE)	-432	-3745	1037	0	0	0
	9(OPE)	-442	-3737	1030	0	0	0
	11(SUS)	98	-3870	184	0	0	0
	12(SUS)	97	-3865	184	0	0	0
	13(OPE)	142	-3620	1077	0	0	0
	14(OPE)	-902	-3800	697	0	0	0
	15(OPE)	-400	-3287	901	0	0	0
	16(OPE)	-462	-4207	1174	0	0	0
	17(OPE)	-337	-3825	1097	0	0	0
	18(OPE)	-432	-3745	1037	0	0	0
	19(OPE)	-432	-3745	1037	0	0	0
	20(OCC)	574	126	39	0	0	0
	21(OCC)	-470	-55	-340	0	0	0
	22(OCC)	32	458	-136	0	0	0
	23(OCC)	-30	-461	137	0	0	0
	24(OCC)	94	-79	59	0	0	0
	25(OCC)	0	-0	0	0	0	0
	26(OCC)	0	-0	0	0	0	0
	MAX	-977/L4	-4207/L16	1174/L16			
6110		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	4(OPE)	-5928	-949	7715	0	0	0
	6(OPE)	0	-1932	947	0	0	0
	9(OPE)	0	-1936	474	0	0	0
	11(SUS)	0	-1764	0	0	0	0
	12(SUS)	0	-1761	0	0	0	0
	13(OPE)	0	-1793	0	0	0	0
	14(OPE)	0	-2011	0	0	0	0
	15(OPE)	0	-1710	496	0	0	0
	16(OPE)	0	-2161	1338	0	0	0
	17(OPE)	-75	-1854	8811	0	0	0
	18(OPE)	0	-1932	948	0	0	0
	19(OPE)	0	-1932	948	0	0	0
	20(OCC)	0	139	-947	0	0	0
	21(OCC)	0	-80	-947	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	22(OCC)	0	222	-451	0	0	0
	23(OCC)	0	-229	391	0	0	0
	24(OCC)	-75	77	7864	0	0	0
	25(OCC)	0	0	1	0	0	0
	26(OCC)	0	0	1	0	0	0
	MAX	-5928/L4	-2161/L16	8811/L17			
6220		TYPE=Rigid Z w/gap; Rigid +Y;					
	4(OPE)	-554	-1858	-60	0	0	0
	6(OPE)	-606	-2025	-42	0	0	0
	9(OPE)	-602	-2011	-42	0	0	0
	11(SUS)	-138	-2099	-30	0	0	0
	12(SUS)	-123	-2074	-48	0	0	0
	13(OPE)	-576	-1930	-59	0	0	0
	14(OPE)	-645	-2153	-33	0	0	0
	15(OPE)	-530	-1771	-38	0	0	0
	16(OPE)	-683	-2281	-42	0	0	0
	17(OPE)	-579	-2022	182	0	0	0
	18(OPE)	-606	-2025	-42	0	0	0
	19(OPE)	-606	-2025	-42	0	0	0
	20(OCC)	30	95	-18	0	0	0
	21(OCC)	-39	-127	9	0	0	0
	22(OCC)	76	254	3	0	0	0
	23(OCC)	-77	-256	-1	0	0	0
	24(OCC)	28	4	224	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	26(OCC)	-0	-0	-0	0	0	0
	MAX	-683/L16	-2281/L16	224/L24			
6240		TYPE=Rigid +Y;					
	4(OPE)	0	-194	0	0	0	0
	6(OPE)	0	-178	0	0	0	0
	9(OPE)	0	-148	0	0	0	0
	11(SUS)	0	-194	0	0	0	0
	12(SUS)	0	-194	0	0	0	0
	13(OPE)	0	-246	0	0	0	0
	14(OPE)	0	-234	0	0	0	0
	15(OPE)	0	-149	0	0	0	0
	16(OPE)	0	-209	0	0	0	0
	17(OPE)	0	-243	0	0	0	0
	18(OPE)	0	-178	0	0	0	0
	19(OPE)	0	-178	0	0	0	0
	20(OCC)	0	-68	0	0	0	0
	21(OCC)	0	-57	0	0	0	0
	22(OCC)	0	29	0	0	0	0
	23(OCC)	0	-32	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	24(OCC)	0	-65	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX		-246/L13				
6270		TYPE=Rigid Z w/gap; Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	-175	-1078	-5	0	0	0
	11(SUS)	-148	-601	-1	0	0	0
	12(SUS)	-148	-600	-1	0	0	0
	13(OPE)	0	0	168	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	84	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	168	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	84	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-175/L9	-1078/L9	168/L13			
6290		TYPE=Rigid Z w/gap; Rigid +Y;					
	4(OPE)	314	-1063	55	0	0	0
	6(OPE)	299	-1020	65	0	0	0
	9(OPE)	-151	-503	-3	0	0	0
	11(SUS)	45	-754	-0	0	0	0
	12(SUS)	44	-754	-1	0	0	0
	13(OPE)	307	-1041	57	0	0	0
	14(OPE)	-279	-1111	32	0	0	0
	15(OPE)	259	-887	61	0	0	0
	16(OPE)	340	-1154	68	0	0	0
	17(OPE)	279	-1030	132	0	0	0
	18(OPE)	299	-1020	65	0	0	0
	19(OPE)	299	-1020	65	0	0	0
	20(OCC)	8	-21	-8	0	0	0
	21(OCC)	-578	-91	-33	0	0	0
	22(OCC)	-40	133	-4	0	0	0
	23(OCC)	41	-135	3	0	0	0
	24(OCC)	-20	-10	67	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	-0	0	0	0	0
	MAX	-578/L21	-1154/L16	132/L17			
6310		TYPE=Rigid +Y;					
	4(OPE)	-62	-786	-228	0	0	0
	6(OPE)	-9	-861	-258	0	0	0
	9(OPE)	-9	-863	-259	0	0	0
	11(SUS)	-5	-910	2	0	0	0
	12(SUS)	-40	-913	-17	0	0	0
	13(OPE)	26	-822	-245	0	0	0
	14(OPE)	-22	-986	-285	0	0	0
	15(OPE)	-7	-749	-224	0	0	0
	16(OPE)	-9	-1007	-284	0	0	0
	17(OPE)	-48	-615	-111	0	0	0
	18(OPE)	-9	-861	-258	0	0	0
	19(OPE)	-9	-861	-258	0	0	0
	20(OCC)	35	39	13	0	0	0
	21(OCC)	-13	-125	-27	0	0	0
	22(OCC)	3	112	34	0	0	0
	23(OCC)	-0	-146	-26	0	0	0
	24(OCC)	-38	246	147	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	26(OCC)	0	-0	-0	0	0	0
	MAX	-62/L4	-1007/L16	-285/L14			
6410		TYPE=Rigid Z w/gap; Rigid +Y;					
	4(OPE)	-1330	-1083	-3406	0	0	0
	6(OPE)	-1221	-1491	-2674	0	0	0
	9(OPE)	-1221	-1491	-2672	0	0	0
	11(SUS)	917	-3267	346	0	0	0
	12(SUS)	909	-3240	344	0	0	0
	13(OPE)	-1182	-1393	-2635	0	0	0
	14(OPE)	-1268	-1615	-2713	0	0	0
	15(OPE)	-1096	-1088	-2635	0	0	0
	16(OPE)	-1338	-1891	-2689	0	0	0
	17(OPE)	-891	-1326	-1728	0	0	0
	18(OPE)	-1221	-1491	-2674	0	0	0
	19(OPE)	-1221	-1491	-2674	0	0	0
	20(OCC)	39	98	39	0	0	0
	21(OCC)	-47	-124	-39	0	0	0
	22(OCC)	125	403	39	0	0	0
	23(OCC)	-117	-400	-15	0	0	0
	24(OCC)	330	165	946	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	-0	-0	-0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-1338/L16	-3267/L11	-3406/L4			
6430		TYPE=Rigid +Y;					
	4(OPE)	175	-2264	656	0	0	0
	6(OPE)	216	-3972	1172	0	0	0
	9(OPE)	267	-3748	1092	0	0	0
	11(SUS)	-66	-4827	-91	0	0	0
	12(SUS)	-65	-4784	-90	0	0	0
	13(OPE)	917	-3605	573	0	0	0
	14(OPE)	-1070	-4415	781	0	0	0
	15(OPE)	186	-3381	997	0	0	0
	16(OPE)	232	-4586	1356	0	0	0
	17(OPE)	-8	-3973	1192	0	0	0
	18(OPE)	212	-3978	1174	0	0	0
	19(OPE)	213	-3972	1172	0	0	0
	20(OCC)	701	368	-599	0	0	0
	21(OCC)	-1286	-442	-391	0	0	0
	22(OCC)	-30	592	-175	0	0	0
	23(OCC)	16	-613	184	0	0	0
	24(OCC)	-224	-0	20	0	0	0
	25(OCC)	-4	-5	2	0	0	0
	26(OCC)	-3	0	0	0	0	0
	MAX	-1286/L21	-4827/L11	1356/L16			
6450		TYPE=Rigid +Y;					
	4(OPE)	0	-4473	0	0	0	0
	6(OPE)	0	-4567	0	0	0	0
	9(OPE)	0	-507	0	0	0	0
	11(SUS)	0	-1041	0	0	0	0
	12(SUS)	0	-1040	0	0	0	0
	13(OPE)	0	-4912	0	0	0	0
	14(OPE)	0	-4167	0	0	0	0
	15(OPE)	0	-3681	0	0	0	0
	16(OPE)	0	-5460	0	0	0	0
	17(OPE)	0	-4766	0	0	0	0
	18(OPE)	0	-4195	0	0	0	0
	19(OPE)	0	-3672	0	0	0	0
	20(OCC)	0	-345	0	0	0	0
	21(OCC)	0	400	0	0	0	0
	22(OCC)	0	886	0	0	0	0
	23(OCC)	0	-893	0	0	0	0
	24(OCC)	0	-199	0	0	0	0
	25(OCC)	0	372	0	0	0	0
	26(OCC)	0	895	0	0	0	0
	MAX		-5460/L16				

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
6470		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	11(SUS)	180	-1078	-18	0	0	0
	12(SUS)	180	-1077	-18	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	180/L11	-1078/L11	-18/L11			
6490		TYPE=Rigid +Y;					
	4(OPE)	704	-5365	1447	0	0	0
	6(OPE)	-177	-5317	1585	0	0	0
	9(OPE)	186	-5257	1566	0	0	0
	11(SUS)	-172	-4904	209	0	0	0
	12(SUS)	-172	-4882	206	0	0	0
	13(OPE)	1278	-5350	970	0	0	0
	14(OPE)	-1127	-5050	1013	0	0	0
	15(OPE)	-147	-4710	1405	0	0	0
	16(OPE)	-252	-5927	1760	0	0	0
	17(OPE)	-185	-5233	1559	0	0	0
	18(OPE)	-180	-5314	1584	0	0	0
	19(OPE)	-178	-5316	1585	0	0	0
	20(OCC)	1455	-33	-615	0	0	0
	21(OCC)	-950	267	-572	0	0	0
	22(OCC)	30	607	-180	0	0	0
	23(OCC)	-75	-610	175	0	0	0
	24(OCC)	-8	84	-26	0	0	0
	25(OCC)	-3	3	-1	0	0	0
	26(OCC)	-1	1	-1	0	0	0
	MAX	1455/L20	-5927/L16	1760/L16			
6520		TYPE=Rigid +Y;					
	4(OPE)	319	-3997	1156	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	464	-2816	706	0	0	0
	9(OPE)	-36	-3506	-637	0	0	0
	11(SUS)	36	-3212	-277	0	0	0
	12(SUS)	36	-3194	-277	0	0	0
	13(OPE)	718	-2684	364	0	0	0
	14(OPE)	-658	-3111	662	0	0	0
	15(OPE)	397	-2437	614	0	0	0
	16(OPE)	528	-3167	790	0	0	0
	17(OPE)	159	-2862	844	0	0	0
	18(OPE)	461	-2817	708	0	0	0
	19(OPE)	462	-2817	707	0	0	0
	20(OCC)	254	132	-342	0	0	0
	21(OCC)	-1122	-295	-44	0	0	0
	22(OCC)	-67	380	-92	0	0	0
	23(OCC)	64	-351	84	0	0	0
	24(OCC)	-306	-46	138	0	0	0
	25(OCC)	-3	-1	2	0	0	0
	26(OCC)	-2	-1	2	0	0	0
	MAX	-1122/L21	-3997/L4	1156/L4			
6540		TYPE=Rigid X w/gap; Rigid +Y;					
	4(OPE)	-21	-808	241	0	0	0
	6(OPE)	228	-1054	220	0	0	0
	9(OPE)	-94	-923	-260	0	0	0
	11(SUS)	21	-1651	54	0	0	0
	12(SUS)	21	-1638	53	0	0	0
	13(OPE)	491	-1816	235	0	0	0
	14(OPE)	-341	-1338	212	0	0	0
	15(OPE)	205	-995	217	0	0	0
	16(OPE)	267	-1131	209	0	0	0
	17(OPE)	82	-1847	548	0	0	0
	18(OPE)	225	-1051	221	0	0	0
	19(OPE)	226	-1052	221	0	0	0
	20(OCC)	264	-761	16	0	0	0
	21(OCC)	-569	-283	-8	0	0	0
	22(OCC)	-23	60	-3	0	0	0
	23(OCC)	40	-76	-11	0	0	0
	24(OCC)	-146	-792	328	0	0	0
	25(OCC)	-2	4	1	0	0	0
	26(OCC)	-2	2	1	0	0	0
	MAX	-569/L21	-1847/L17	548/L17			
6560		TYPE=Rigid +Y; Rigid Z w/gap;					
	4(OPE)	-2124	-1225	-6080	0	0	0
	6(OPE)	-387	-1416	-175	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(OPE)	-292	-1485	-337	0	0	0
	11(SUS)	-147	-1386	389	0	0	0
	12(SUS)	-147	-1383	388	0	0	0
	13(OPE)	-334	-1115	-24	0	0	0
	14(OPE)	-469	-1628	-137	0	0	0
	15(OPE)	-347	-1243	-138	0	0	0
	16(OPE)	-422	-1587	-220	0	0	0
	17(OPE)	-728	-1300	2111	0	0	0
	18(OPE)	-387	-1416	-174	0	0	0
	19(OPE)	-388	-1416	-173	0	0	0
	20(OCC)	54	301	151	0	0	0
	21(OCC)	-82	-212	38	0	0	0
	22(OCC)	40	173	37	0	0	0
	23(OCC)	-35	-171	-46	0	0	0
	24(OCC)	-341	116	2286	0	0	0
	25(OCC)	-0	-0	1	0	0	0
	26(OCC)	-1	-0	2	0	0	0
	MAX	-2124/L4	-1628/L14	-6080/L4			
6590		TYPE=Rigid X w/gap; Rigid +Y;					
	4(OPE)	-1062	-3547	-71	0	0	0
	6(OPE)	-627	-3737	-929	0	0	0
	9(OPE)	-536	-4040	-1087	0	0	0
	11(SUS)	-57	-3349	116	0	0	0
	12(SUS)	-57	-3343	114	0	0	0
	13(OPE)	821	-3119	449	0	0	0
	14(OPE)	-1033	-3444	-0	0	0	0
	15(OPE)	-509	-3213	-576	0	0	0
	16(OPE)	-648	-4249	-1098	0	0	0
	17(OPE)	13	-2942	883	0	0	0
	18(OPE)	-631	-3736	-926	0	0	0
	19(OPE)	-628	-3738	-929	0	0	0
	20(OCC)	1448	618	1378	0	0	0
	21(OCC)	-406	293	929	0	0	0
	22(OCC)	118	524	353	0	0	0
	23(OCC)	-21	-512	-169	0	0	0
	24(OCC)	640	795	1812	0	0	0
	25(OCC)	-4	1	3	0	0	0
	26(OCC)	-0	-1	-0	0	0	0
	MAX	1448/L20	-4249/L16	1812/L24			
6610		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	-1809	0	0	0	0
	9(OPE)	0	-1814	0	0	0	0
	11(SUS)	0	-3046	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(SUS)	0	-3040	0	0	0	0
	13(OPE)	0	-1780	0	0	0	0
	14(OPE)	0	-1826	0	0	0	0
	15(OPE)	0	-1443	0	0	0	0
	16(OPE)	0	-2176	0	0	0	0
	17(OPE)	0	-1806	0	0	0	0
	18(OPE)	0	-1810	0	0	0	0
	19(OPE)	0	-1809	0	0	0	0
	20(OCC)	0	29	0	0	0	0
	21(OCC)	0	-16	0	0	0	0
	22(OCC)	0	367	0	0	0	0
	23(OCC)	0	-366	0	0	0	0
	24(OCC)	0	4	0	0	0	0
	25(OCC)	0	-0	0	0	0	0
	26(OCC)	0	-0	0	0	0	0
	MAX		-3046/L11				
6640		TYPE=Rigid Y;					
	4(OPE)	0	-6695	0	0	0	0
	6(OPE)	0	-6051	0	0	0	0
	9(OPE)	0	-6019	0	0	0	0
	11(SUS)	0	-5208	0	0	0	0
	12(SUS)	0	-5203	0	0	0	0
	13(OPE)	0	-6342	0	0	0	0
	14(OPE)	0	-5714	0	0	0	0
	15(OPE)	0	-5417	0	0	0	0
	16(OPE)	0	-6686	0	0	0	0
	17(OPE)	0	-6099	0	0	0	0
	18(OPE)	0	-6052	0	0	0	0
	19(OPE)	0	-6051	0	0	0	0
	20(OCC)	0	-290	0	0	0	0
	21(OCC)	0	337	0	0	0	0
	22(OCC)	0	634	0	0	0	0
	23(OCC)	0	-635	0	0	0	0
	24(OCC)	0	-48	0	0	0	0
	25(OCC)	0	-1	0	0	0	0
	26(OCC)	0	-0	0	0	0	0
	MAX		-6695/L4				
6670		TYPE=Rigid Z w/gap; Rigid +Y;					
	4(OPE)	0	-1211	-673	0	0	0
	6(OPE)	0	-1759	0	0	0	0
	9(OPE)	0	-1666	0	0	0	0
	11(SUS)	0	-2374	0	0	0	0
	12(SUS)	0	-2370	0	0	0	0
	13(OPE)	0	-1779	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	0	-1786	0	0	0	0
	15(OPE)	0	-1491	0	0	0	0
	16(OPE)	0	-2015	0	0	0	0
	17(OPE)	0	-1814	0	0	0	0
	18(OPE)	0	-1758	0	0	0	0
	19(OPE)	0	-1759	0	0	0	0
	20(OCC)	0	-20	0	0	0	0
	21(OCC)	0	-27	0	0	0	0
	22(OCC)	0	268	0	0	0	0
	23(OCC)	0	-256	0	0	0	0
	24(OCC)	0	-55	0	0	0	0
	25(OCC)	0	1	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX		-2374/L11	-673/L4			
6690		TYPE=Rigid +Y;					
	4(OPE)	-1616	-5649	-511	0	0	0
	6(OPE)	-934	-3932	721	0	0	0
	9(OPE)	-979	-4000	694	0	0	0
	11(SUS)	159	-3730	-458	0	0	0
	12(SUS)	159	-3724	-457	0	0	0
	13(OPE)	-1094	-4152	595	0	0	0
	14(OPE)	-898	-3862	732	0	0	0
	15(OPE)	-821	-3484	648	0	0	0
	16(OPE)	-1052	-4382	788	0	0	0
	17(OPE)	-666	-3903	963	0	0	0
	18(OPE)	-934	-3932	721	0	0	0
	19(OPE)	-934	-3932	721	0	0	0
	20(OCC)	-160	-220	-125	0	0	0
	21(OCC)	36	70	12	0	0	0
	22(OCC)	113	448	-73	0	0	0
	23(OCC)	-118	-450	67	0	0	0
	24(OCC)	268	29	242	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-1616/L4	-5649/L4	963/L17			
6710		TYPE=Rigid +Y;					
	4(OPE)	0	-1119	0	0	0	0
	6(OPE)	0	-605	0	0	0	0
	9(OPE)	0	-666	0	0	0	0
	11(SUS)	0	-860	0	0	0	0
	12(SUS)	0	-859	0	0	0	0
	13(OPE)	0	-1219	0	0	0	0
	14(OPE)	0	-54	0	0	0	0
	15(OPE)	0	-454	0	0	0	0
	16(OPE)	0	-754	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OPE)	0	-928	0	0	0	0
	18(OPE)	0	-608	0	0	0	0
	19(OPE)	0	-610	0	0	0	0
	20(OCC)	0	-614	0	0	0	0
	21(OCC)	0	551	0	0	0	0
	22(OCC)	0	152	0	0	0	0
	23(OCC)	0	-148	0	0	0	0
	24(OCC)	0	-322	0	0	0	0
	25(OCC)	0	-3	0	0	0	0
	26(OCC)	0	-4	0	0	0	0
	MAX		-1219/L13				
6730		TYPE=Rigid X w/gap; Rigid +Y;					
	4(OPE)	1035	0	0	0	0	0
	6(OPE)	251	0	0	0	0	0
	9(OPE)	44	-2595	-777	0	0	0
	11(SUS)	13	-1838	-31	0	0	0
	12(SUS)	13	-1837	-32	0	0	0
	13(OPE)	1692	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	279	0	0	0	0	0
	16(OPE)	229	0	0	0	0	0
	17(OPE)	585	0	0	0	0	0
	18(OPE)	266	0	0	0	0	0
	19(OPE)	281	0	0	0	0	0
	20(OCC)	1441	0	0	0	0	0
	21(OCC)	-251	0	0	0	0	0
	22(OCC)	28	0	0	0	0	0
	23(OCC)	-22	0	0	0	0	0
	24(OCC)	334	0	0	0	0	0
	25(OCC)	15	0	0	0	0	0
	26(OCC)	30	0	0	0	0	0
	MAX	1692/L13	-2595/L9	-777/L9			
6750		TYPE=Rigid +Y;					
	4(OPE)	0	-234	0	0	0	0
	6(OPE)	0	-686	0	0	0	0
	9(OPE)	0	-840	0	0	0	0
	11(SUS)	0	-567	0	0	0	0
	12(SUS)	0	-567	0	0	0	0
	13(OPE)	0	-822	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	-491	0	0	0	0
	16(OPE)	0	-879	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	-721	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OPE)	0	-735	0	0	0	0
	20(OCC)	0	-135	0	0	0	0
	21(OCC)	0	686	0	0	0	0
	22(OCC)	0	196	0	0	0	0
	23(OCC)	0	-193	0	0	0	0
	24(OCC)	0	686	0	0	0	0
	25(OCC)	0	-34	0	0	0	0
	26(OCC)	0	-48	0	0	0	0
	MAX		-879/L16				
6770		TYPE=Rigid +Y;					
	4(OPE)	263	-1551	384	0	0	0
	6(OPE)	22	-1677	503	0	0	0
	9(OPE)	102	-1610	472	0	0	0
	11(SUS)	-408	-1554	-225	0	0	0
	12(SUS)	-400	-1519	-218	0	0	0
	13(OPE)	350	-1392	227	0	0	0
	14(OPE)	-373	-1842	408	0	0	0
	15(OPE)	21	-1480	443	0	0	0
	16(OPE)	4	-1881	564	0	0	0
	17(OPE)	19	-1748	524	0	0	0
	18(OPE)	21	-1677	503	0	0	0
	19(OPE)	22	-1677	503	0	0	0
	20(OCC)	328	285	-275	0	0	0
	21(OCC)	-396	-166	-95	0	0	0
	22(OCC)	-1	197	-59	0	0	0
	23(OCC)	-18	-204	62	0	0	0
	24(OCC)	-3	-71	21	0	0	0
	25(OCC)	-1	-0	0	0	0	0
	26(OCC)	-0	-1	0	0	0	0
	MAX	-408/L11	-1881/L16	564/L16			
6845		TYPE=Rigid +Y; Rigid X w/gap;					
	4(OPE)	127	-2200	-648	0	0	0
	6(OPE)	-23	-2262	-678	0	0	0
	9(OPE)	-22	-2268	-680	0	0	0
	11(SUS)	-161	-2278	1	0	0	0
	12(SUS)	-155	-2224	1	0	0	0
	13(OPE)	417	-2269	-538	0	0	0
	14(OPE)	-316	-2244	-594	0	0	0
	15(OPE)	-18	-1988	-596	0	0	0
	16(OPE)	-36	-2535	-760	0	0	0
	17(OPE)	22	-2249	-674	0	0	0
	18(OPE)	-24	-2261	-678	0	0	0
	19(OPE)	-23	-2261	-678	0	0	0
	20(OCC)	440	-8	140	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	-293	18	84	0	0	0
	22(OCC)	5	274	82	0	0	0
	23(OCC)	-13	-273	-82	0	0	0
	24(OCC)	46	12	4	0	0	0
	25(OCC)	-0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	440/L20	-2535/L16	-760/L16			
6870		TYPE=Rigid +Y;					
	4(OPE)	-216	-2168	-614	0	0	0
	6(OPE)	-260	-2044	-556	0	0	0
	9(OPE)	-248	-2037	-559	0	0	0
	11(SUS)	-9	-2003	0	0	0	0
	12(SUS)	-9	-1925	0	0	0	0
	13(OPE)	183	-2035	-582	0	0	0
	14(OPE)	-441	-2049	-429	0	0	0
	15(OPE)	-240	-1804	-485	0	0	0
	16(OPE)	-279	-2285	-626	0	0	0
	17(OPE)	-278	-2061	-552	0	0	0
	18(OPE)	-260	-2044	-556	0	0	0
	19(OPE)	-260	-2044	-556	0	0	0
	20(OCC)	443	9	-27	0	0	0
	21(OCC)	-181	-5	127	0	0	0
	22(OCC)	20	241	70	0	0	0
	23(OCC)	-20	-241	-70	0	0	0
	24(OCC)	-18	-17	3	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	443/L20	-2285/L16	-626/L16			
6890		TYPE=Rigid +Y; Rigid X w/gap;					
	4(OPE)	-985	-1675	-787	0	0	0
	6(OPE)	-106	-1708	-501	0	0	0
	9(OPE)	-101	-1710	-503	0	0	0
	11(SUS)	3	-1719	0	0	0	0
	12(SUS)	2	-1656	0	0	0	0
	13(OPE)	504	-1710	-576	0	0	0
	14(OPE)	-960	-1706	-712	0	0	0
	15(OPE)	-107	-1502	-438	0	0	0
	16(OPE)	-103	-1914	-565	0	0	0
	17(OPE)	-118	-1703	-497	0	0	0
	18(OPE)	-106	-1708	-501	0	0	0
	19(OPE)	-106	-1708	-501	0	0	0
	20(OCC)	610	-2	-75	0	0	0
	21(OCC)	-855	1	-211	0	0	0
	22(OCC)	-1	206	64	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	23(OCC)	3	-206	-64	0	0	0
	24(OCC)	-12	4	4	0	0	0
	25(OCC)	-0	0	0	0	0	0
	26(OCC)	-0	0	0	0	0	0
	MAX	-985/L4	-1914/L16	-787/L4			
6900		TYPE=Rigid +Y;					
	4(OPE)	82	-1732	-513	0	0	0
	6(OPE)	1	-1723	-517	0	0	0
	9(OPE)	1	-1723	-517	0	0	0
	11(SUS)	-1	-1720	0	0	0	0
	12(SUS)	-1	-1656	0	0	0	0
	13(OPE)	343	-1722	-387	0	0	0
	14(OPE)	-235	-1723	-460	0	0	0
	15(OPE)	-5	-1517	-455	0	0	0
	16(OPE)	7	-1930	-579	0	0	0
	17(OPE)	-1	-1724	-517	0	0	0
	18(OPE)	1	-1723	-517	0	0	0
	19(OPE)	1	-1723	-517	0	0	0
	20(OCC)	342	1	130	0	0	0
	21(OCC)	-237	-0	57	0	0	0
	22(OCC)	-6	206	62	0	0	0
	23(OCC)	6	-206	-62	0	0	0
	24(OCC)	-2	-1	-0	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	26(OCC)	-0	-0	-0	0	0	0
	MAX	343/L13	-1930/L16	-579/L16			
6910		TYPE=Rigid +Y; Rigid X w/gap;					
	4(OPE)	114	-1995	-588	0	0	0
	6(OPE)	24	-1997	-599	0	0	0
	9(OPE)	23	-1997	-599	0	0	0
	11(SUS)	0	-1998	0	0	0	0
	12(SUS)	0	-1924	0	0	0	0
	13(OPE)	584	-1997	-132	0	0	0
	14(OPE)	-577	-1997	-162	0	0	0
	15(OPE)	26	-1758	-527	0	0	0
	16(OPE)	22	-2237	-671	0	0	0
	17(OPE)	26	-1997	-599	0	0	0
	18(OPE)	24	-1997	-599	0	0	0
	19(OPE)	24	-1997	-599	0	0	0
	20(OCC)	560	-0	466	0	0	0
	21(OCC)	-601	0	437	0	0	0
	22(OCC)	2	240	72	0	0	0
	23(OCC)	-2	-240	-72	0	0	0
	24(OCC)	2	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-601/L21	-2237/L16	-671/L16			
6920		TYPE=Rigid X w/gap; Rigid Z w/gap; Rigid +Y;					
	4(OPE)	-19	-698	7939	0	0	0
	6(OPE)	89	-697	4072	0	0	0
	9(OPE)	-527	-697	3944	0	0	0
	11(SUS)	-0	-697	0	0	0	0
	12(SUS)	-0	-672	0	0	0	0
	13(OPE)	1038	-697	3426	0	0	0
	14(OPE)	-1067	-697	3533	0	0	0
	15(OPE)	807	-614	3706	0	0	0
	16(OPE)	-356	-781	4438	0	0	0
	17(OPE)	-705	-698	7015	0	0	0
	18(OPE)	86	-697	4072	0	0	0
	19(OPE)	89	-697	4073	0	0	0
	20(OCC)	949	0	-646	0	0	0
	21(OCC)	-1155	-0	-539	0	0	0
	22(OCC)	718	84	-366	0	0	0
	23(OCC)	-445	-84	366	0	0	0
	24(OCC)	-794	-0	2943	0	0	0
	25(OCC)	-3	-0	0	0	0	0
	26(OCC)	0	-0	1	0	0	0
	MAX	-1155/L21	-781/L16	7939/L4			
7010		TYPE=Rigid Z w/gap; Rigid +Y;					
	4(OPE)	672	-2255	819	0	0	0
	6(OPE)	550	-2131	326	0	0	0
	9(OPE)	624	-2171	186	0	0	0
	11(SUS)	632	-2110	-33	0	0	0
	12(SUS)	618	-2064	-31	0	0	0
	13(OPE)	677	-2258	-7	0	0	0
	14(OPE)	-512	-2012	473	0	0	0
	15(OPE)	475	-1875	301	0	0	0
	16(OPE)	637	-2383	326	0	0	0
	17(OPE)	387	-2132	874	0	0	0
	18(OPE)	550	-2131	325	0	0	0
	19(OPE)	550	-2131	326	0	0	0
	20(OCC)	127	-127	-332	0	0	0
	21(OCC)	-1062	119	147	0	0	0
	22(OCC)	-75	256	-25	0	0	0
	23(OCC)	86	-252	-0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	24(OCC)	-163	-1	549	0	0	0
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	-0	0	1	0	0	0
	MAX	-1062/L21	-2383/L16	874/L17			
7130		TYPE=Rigid ANC;					
	4(OPE)	1122	221	516	-363	748	728
	6(OPE)	897	72	483	-285	543	575
	9(OPE)	897	71	483	-285	543	574
	11(SUS)	31	-654	29	128	-12	-78
	12(SUS)	31	-651	28	128	-12	-78
	13(OPE)	1186	277	591	-421	502	615
	14(OPE)	579	-2	415	-240	547	656
	15(OPE)	881	192	458	-317	557	619
	16(OPE)	912	-48	509	-254	528	530
	17(OPE)	873	12	928	-133	226	509
	18(OPE)	897	72	483	-285	543	575
	19(OPE)	897	72	483	-285	543	575
	20(OCC)	288	205	107	-136	-41	40
	21(OCC)	-318	-74	-68	46	4	81
	22(OCC)	-16	120	-26	-32	13	44
	23(OCC)	15	-120	26	32	-15	-45
	24(OCC)	-24	-60	444	152	-317	-66
	25(OCC)	0	-0	-0	0	0	-0
	26(OCC)	-0	0	-0	-0	0	0
	MAX	1186/L13	-654/L11	928/L17	-421/L13	748/L4	728/L4
7170		TYPE=Rigid ANC;					
	4(OPE)	1122	-63	516	-202	748	379
	6(OPE)	897	-212	483	-135	543	296
	9(OPE)	897	-212	483	-135	543	295
	11(SUS)	31	-937	29	137	-12	-88
	12(SUS)	31	-934	28	136	-12	-88
	13(OPE)	1259	-6	591	-238	502	230
	14(OPE)	505	-285	415	-111	547	492
	15(OPE)	881	-58	458	-175	557	345
	16(OPE)	912	-365	509	-95	528	246
	17(OPE)	873	-271	1002	171	226	237
	18(OPE)	897	-212	483	-135	543	296
	19(OPE)	897	-212	483	-135	543	296
	20(OCC)	362	205	107	-103	-41	-65
	21(OCC)	-392	-74	-68	24	4	196
	22(OCC)	-16	154	-26	-40	13	49
	23(OCC)	15	-154	26	40	-15	-49
	24(OCC)	-24	-60	518	306	-317	-58
	25(OCC)	0	-0	-0	0	0	-0
	26(OCC)	-0	0	-0	-0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	1259/L13	-937/L11	1002/L17	306/L24	748/L4	492/L14
7180		TYPE=Rigid ANC;					
	4(OPE)	384	-10002	8813	-4993	439	-43
	6(OPE)	160	-3999	5190	-3221	150	49
	9(OPE)	175	-3986	5185	-3221	167	34
	11(SUS)	106	878	-106	-41	19	217
	12(SUS)	105	870	-104	-41	19	216
	13(OPE)	-611	-4441	5013	-2948	-263	-184
	14(OPE)	1019	-3889	5254	-3305	486	747
	15(OPE)	145	-4106	5203	-3216	145	25
	16(OPE)	178	-3894	5178	-3226	158	69
	17(OPE)	230	-2645	5325	-3832	166	189
	18(OPE)	161	-3999	5190	-3221	150	48
	19(OPE)	160	-4000	5190	-3221	150	48
	20(OCC)	-771	-442	-177	273	-413	-233
	21(OCC)	859	110	65	-84	336	698
	22(OCC)	-15	-106	13	5	-5	-23
	23(OCC)	17	106	-12	-5	8	21
	24(OCC)	69	1354	135	-611	16	140
	25(OCC)	0	0	0	-0	1	-1
	26(OCC)	0	-0	0	0	0	-0
	MAX	1019/L14	-10002/L4	8813/L4	-4993/L4	486/L14	747/L14
7200		TYPE=Rigid ANC;					
	4(OPE)	384	-10286	8813	-2251	439	-163
	6(OPE)	160	-4283	5190	-1606	150	-1
	9(OPE)	175	-4270	5185	-1608	167	-20
	11(SUS)	106	594	-106	-74	19	184
	12(SUS)	105	588	-104	-73	19	184
	13(OPE)	-537	-4725	5013	-1388	-263	-1
	14(OPE)	945	-4173	5254	-1670	486	437
	15(OPE)	145	-4355	5203	-1597	145	-20
	16(OPE)	178	-4211	5178	-1615	158	14
	17(OPE)	230	-2928	5399	-2167	166	118
	18(OPE)	161	-4283	5190	-1606	150	-2
	19(OPE)	160	-4283	5190	-1606	150	-2
	20(OCC)	-698	-442	-177	218	-413	-0
	21(OCC)	785	110	65	-64	336	438
	22(OCC)	-15	-72	13	9	-5	-18
	23(OCC)	17	72	-12	-9	8	15
	24(OCC)	69	1354	209	-561	16	119
	25(OCC)	0	0	0	-0	1	-1
	26(OCC)	0	-0	0	0	0	-0
	MAX	945/L14	-10286/L4	8813/L4	-2251/L4	486/L14	438/L21

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
7370		TYPE=Rigid +Y;					
	4(OPE)	0	-19024	0	0	0	0
	6(OPE)	0	-9965	0	0	0	0
	9(OPE)	0	-10033	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(SUS)	0	0	0	0	0	0
	13(OPE)	0	-11065	0	0	0	0
	14(OPE)	0	-9496	0	0	0	0
	15(OPE)	0	-9967	0	0	0	0
	16(OPE)	0	-9957	0	0	0	0
	17(OPE)	0	-7686	0	0	0	0
	18(OPE)	0	-9964	0	0	0	0
	19(OPE)	0	-9964	0	0	0	0
	20(OCC)	0	-1101	0	0	0	0
	21(OCC)	0	468	0	0	0	0
	22(OCC)	0	-3	0	0	0	0
	23(OCC)	0	7	0	0	0	0
	24(OCC)	0	2279	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	1	0	0	0	0
	MAX		-19024/L4				
7380		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	11(SUS)	-47	-1130	33	0	0	0
	12(SUS)	-47	-1124	33	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-47/L11	-1130/L11	33/L11			
7390		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	11(SUS)	-119	-1279	36	0	0	0
	12(SUS)	-118	-1272	36	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-119/L11	-1279/L11	36/L11			
7400		TYPE=Rigid X w/gap; Rigid +Y;					
	4(OPE)	-2320	-11284	2465	0	0	0
	6(OPE)	-743	-5339	83	0	0	0
	9(OPE)	-856	-5243	269	0	0	0
	11(SUS)	256	-2441	88	0	0	0
	12(SUS)	256	-2413	87	0	0	0
	13(OPE)	1360	-4695	367	0	0	0
	14(OPE)	-1724	-5754	-79	0	0	0
	15(OPE)	-749	-5050	89	0	0	0
	16(OPE)	-756	-5635	64	0	0	0
	17(OPE)	-355	-6051	1780	0	0	0
	18(OPE)	-746	-5340	82	0	0	0
	19(OPE)	-744	-5341	83	0	0	0
	20(OCC)	2102	645	284	0	0	0
	21(OCC)	-982	-415	-162	0	0	0
	22(OCC)	-6	290	5	0	0	0
	23(OCC)	-14	-296	-19	0	0	0
	24(OCC)	388	-712	1697	0	0	0
	25(OCC)	-3	-1	-1	0	0	0
	26(OCC)	-1	-2	-0	0	0	0
	MAX	-2320/L4	-11284/L4	2465/L4			
8000		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	4(OPE)	1611	-1589	9279	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	1600	-1588	9237	0	0	0
	9(OPE)	-949	-1584	-3489	0	0	0
	11(SUS)	-0	-1584	0	0	0	0
	12(SUS)	-0	-1582	0	0	0	0
	13(OPE)	2937	-1587	9832	0	0	0
	14(OPE)	2885	-1592	10004	0	0	0
	15(OPE)	1641	-1398	8950	0	0	0
	16(OPE)	1562	-1779	9530	0	0	0
	17(OPE)	1666	-1588	12292	0	0	0
	18(OPE)	1595	-1588	9195	0	0	0
	19(OPE)	1600	-1587	9243	0	0	0
	20(OCC)	1337	2	595	0	0	0
	21(OCC)	1285	-3	766	0	0	0
	22(OCC)	41	191	-287	0	0	0
	23(OCC)	-39	-191	293	0	0	0
	24(OCC)	65	0	3055	0	0	0
	25(OCC)	-5	1	-43	0	0	0
	26(OCC)	-1	1	5	0	0	0
	MAX	2937/L13	-1779/L16	12292/L17			
8010		TYPE=Rigid +Y;					
	4(OPE)	324	-2871	-798	0	0	0
	6(OPE)	324	-2874	-799	0	0	0
	9(OPE)	-348	-2900	797	0	0	0
	11(SUS)	2	-2899	0	0	0	0
	12(SUS)	2	-2895	0	0	0	0
	13(OPE)	455	-2885	-736	0	0	0
	14(OPE)	347	-2855	-783	0	0	0
	15(OPE)	295	-2529	-699	0	0	0
	16(OPE)	350	-3220	-900	0	0	0
	17(OPE)	347	-2875	-790	0	0	0
	18(OPE)	322	-2879	-802	0	0	0
	19(OPE)	324	-2882	-801	0	0	0
	20(OCC)	132	-11	63	0	0	0
	21(OCC)	23	19	16	0	0	0
	22(OCC)	-29	345	100	0	0	0
	23(OCC)	26	-345	-101	0	0	0
	24(OCC)	23	-0	10	0	0	0
	25(OCC)	-2	-5	-2	0	0	0
	26(OCC)	1	-8	-2	0	0	0
	MAX	455/L13	-3220/L16	-900/L16			
8020		TYPE=Rigid X w/gap; Rigid +Y;					
	4(OPE)	-1209	-5901	-2084	0	0	0
	6(OPE)	-1194	-5898	-2078	0	0	0
	9(OPE)	-322	-5872	1732	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	11(SUS)	-6	-5873	1	0	0	0
	12(SUS)	-6	-5866	1	0	0	0
	13(OPE)	2067	-5888	-2337	0	0	0
	14(OPE)	-5070	-5917	-3246	0	0	0
	15(OPE)	-1317	-5191	-1908	0	0	0
	16(OPE)	-1078	-6606	-2249	0	0	0
	17(OPE)	-880	-5898	-1984	0	0	0
	18(OPE)	-1132	-5893	-2058	0	0	0
	19(OPE)	-1198	-5891	-2077	0	0	0
	20(OCC)	3261	10	-259	0	0	0
	21(OCC)	-3877	-19	-1168	0	0	0
	22(OCC)	-123	708	169	0	0	0
	23(OCC)	116	-708	-172	0	0	0
	24(OCC)	314	1	94	0	0	0
	25(OCC)	61	5	20	0	0	0
	26(OCC)	-4	8	1	0	0	0
	MAX	-5070/L14	-6606/L16	-3246/L14			
8050		TYPE=Rigid +Y;					
	4(OPE)	-1281	-4615	525	0	0	0
	6(OPE)	-1277	-4601	524	0	0	0
	9(OPE)	1319	-4478	-253	0	0	0
	11(SUS)	37	-4483	-2	0	0	0
	12(SUS)	37	-4477	-2	0	0	0
	13(OPE)	-1253	-4551	541	0	0	0
	14(OPE)	-1260	-4692	628	0	0	0
	15(OPE)	-1118	-4050	476	0	0	0
	16(OPE)	-1437	-5153	569	0	0	0
	17(OPE)	-1198	-4599	685	0	0	0
	18(OPE)	-1273	-4577	514	0	0	0
	19(OPE)	-1267	-4564	519	0	0	0
	20(OCC)	24	50	18	0	0	0
	21(OCC)	17	-91	104	0	0	0
	22(OCC)	159	551	-48	0	0	0
	23(OCC)	-160	-551	45	0	0	0
	24(OCC)	79	2	161	0	0	0
	25(OCC)	4	24	-10	0	0	0
	26(OCC)	10	37	-5	0	0	0
	MAX	-1437/L16	-5153/L16	685/L17			
8080		TYPE=Rigid +Y;					
	4(OPE)	-219	-3822	1125	0	0	0
	6(OPE)	-221	-3830	1128	0	0	0
	9(OPE)	-177	-4038	-1198	0	0	0
	11(SUS)	-81	-4034	-27	0	0	0
	12(SUS)	-81	-4029	-27	0	0	0
	13(OPE)	-72	-3893	1166	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	-299	-3721	1075	0	0	0
	15(OPE)	-204	-3374	991	0	0	0
	16(OPE)	-236	-4286	1264	0	0	0
	17(OPE)	-281	-3851	1121	0	0	0
	18(OPE)	-219	-3866	1139	0	0	0
	19(OPE)	-224	-3888	1145	0	0	0
	20(OCC)	149	-63	38	0	0	0
	21(OCC)	-79	108	-52	0	0	0
	22(OCC)	17	456	-136	0	0	0
	23(OCC)	-15	-456	136	0	0	0
	24(OCC)	-60	-21	-7	0	0	0
	25(OCC)	2	-37	12	0	0	0
	26(OCC)	-3	-58	17	0	0	0
	MAX	-299/L14	-4286/L16	1264/L16			
8090		TYPE=Rigid X w/gap; Rigid +Y;					
	4(OPE)	-1	-3860	1158	0	0	0
	6(OPE)	-7	-3910	1173	0	0	0
	9(OPE)	-67	-3840	-1150	0	0	0
	11(SUS)	170	-3764	-46	0	0	0
	12(SUS)	170	-3760	-46	0	0	0
	13(OPE)	2019	-3902	1169	0	0	0
	14(OPE)	-1272	-3897	1168	0	0	0
	15(OPE)	-12	-3387	1016	0	0	0
	16(OPE)	0	-4431	1329	0	0	0
	17(OPE)	-220	-3812	1142	0	0	0
	18(OPE)	-1	-3868	1160	0	0	0
	19(OPE)	-4	-3835	1150	0	0	0
	20(OCC)	2026	8	-4	0	0	0
	21(OCC)	-1266	12	-5	0	0	0
	22(OCC)	-6	523	-157	0	0	0
	23(OCC)	7	-522	157	0	0	0
	24(OCC)	-214	98	-31	0	0	0
	25(OCC)	5	42	-13	0	0	0
	26(OCC)	3	75	-22	0	0	0
	MAX	2026/L20	-4431/L16	1329/L16			
8100		TYPE=Rigid X w/gap; Rigid +Y;					
	4(OPE)	-2600	-8603	780	0	0	0
	6(OPE)	-2466	-8435	740	0	0	0
	9(OPE)	0	-2593	0	0	0	0
	11(SUS)	0	-4076	0	0	0	0
	12(SUS)	0	-4071	0	0	0	0
	13(OPE)	-220	-8326	66	0	0	0
	14(OPE)	-5509	-8818	1653	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	15(OPE)	-2289	-7787	687	0	0	0
	16(OPE)	-2638	-9082	791	0	0	0
	17(OPE)	-2760	-8664	828	0	0	0
	18(OPE)	-2065	-8354	619	0	0	0
	19(OPE)	-1854	-8284	556	0	0	0
	20(OCC)	2246	109	-674	0	0	0
	21(OCC)	-3043	-382	913	0	0	0
	22(OCC)	177	648	-53	0	0	0
	23(OCC)	-172	-647	52	0	0	0
	24(OCC)	-294	-229	88	0	0	0
	25(OCC)	401	81	-120	0	0	0
	26(OCC)	612	151	-184	0	0	0
	MAX	-5509/L14	-9082/L16	1653/L14			
8120		TYPE=Rigid +Y;					
	4(OPE)	-456	-7432	2183	0	0	0
	6(OPE)	-376	-7127	2105	0	0	0
	9(OPE)	897	-3955	-776	0	0	0
	11(SUS)	101	-4490	-37	0	0	0
	12(SUS)	101	-4484	-37	0	0	0
	13(OPE)	-288	-7035	2091	0	0	0
	14(OPE)	-572	-7625	2215	0	0	0
	15(OPE)	-347	-6586	1945	0	0	0
	16(OPE)	-400	-7673	2267	0	0	0
	17(OPE)	-309	-7203	2139	0	0	0
	18(OPE)	-388	-7109	2097	0	0	0
	19(OPE)	-393	-7107	2096	0	0	0
	20(OCC)	88	92	-14	0	0	0
	21(OCC)	-196	-498	110	0	0	0
	22(OCC)	29	541	-160	0	0	0
	23(OCC)	-24	-545	162	0	0	0
	24(OCC)	67	-76	34	0	0	0
	25(OCC)	-12	18	-8	0	0	0
	26(OCC)	-17	20	-9	0	0	0
	MAX	897/L9	-7673/L16	2267/L16			
8130		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	4(OPE)	-117	-1201	-16188	0	0	0
	6(OPE)	-32	-1236	-16287	0	0	0
	9(OPE)	1453	-1390	5240	0	0	0
	11(SUS)	-30	-1352	-22	0	0	0
	12(SUS)	-30	-1351	-22	0	0	0
	13(OPE)	612	-1246	-16308	0	0	0
	14(OPE)	-767	-1183	-16758	0	0	0
	15(OPE)	-33	-1071	-15626	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OPE)	-23	-1401	-16904	0	0	0
	17(OPE)	37	-1197	-9870	0	0	0
	18(OPE)	-40	-1237	-16342	0	0	0
	19(OPE)	-47	-1237	-15937	0	0	0
	20(OCC)	644	-9	-21	0	0	0
	21(OCC)	-735	53	-470	0	0	0
	22(OCC)	-1	165	662	0	0	0
	23(OCC)	9	-165	-617	0	0	0
	24(OCC)	68	39	6417	0	0	0
	25(OCC)	-8	-1	-55	0	0	0
	26(OCC)	-15	-0	350	0	0	0
	MAX	1453/L9	-1401/L16	-16904/L16			
8270		TYPE=Rigid X; Rigid +Y;					
	4(OPE)	21293	-404	121	0	0	0
	6(OPE)	18007	-564	169	0	0	0
	9(OPE)	18023	-562	169	0	0	0
	11(SUS)	-436	-973	53	0	0	0
	12(SUS)	-430	-964	53	0	0	0
	13(OPE)	21228	-539	162	0	0	0
	14(OPE)	14648	-593	178	0	0	0
	15(OPE)	17549	-449	135	0	0	0
	16(OPE)	18447	-686	206	0	0	0
	17(OPE)	17858	-649	195	0	0	0
	18(OPE)	18009	-565	170	0	0	0
	19(OPE)	18006	-564	169	0	0	0
	20(OCC)	3222	26	-8	0	0	0
	21(OCC)	-3358	-28	8	0	0	0
	22(OCC)	-457	115	-35	0	0	0
	23(OCC)	440	-121	36	0	0	0
	24(OCC)	-148	-85	25	0	0	0
	25(OCC)	3	-1	0	0	0	0
	26(OCC)	-1	0	-0	0	0	0
	MAX	21293/L4	-973/L11	206/L16			
8280		TYPE=Rigid Z w/gap; Rigid Y;					
	4(OPE)	-745	-2793	384	0	0	0
	6(OPE)	-695	-2533	307	0	0	0
	9(OPE)	-701	-2553	308	0	0	0
	11(SUS)	137	-1916	13	0	0	0
	12(SUS)	136	-1898	7	0	0	0
	13(OPE)	-754	-2755	339	0	0	0
	14(OPE)	-624	-2279	281	0	0	0
	15(OPE)	-632	-2302	279	0	0	0
	16(OPE)	-756	-2753	332	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OPE)	-493	-2381	974	0	0	0
	18(OPE)	-696	-2536	307	0	0	0
	19(OPE)	-695	-2532	306	0	0	0
	20(OCC)	-59	-222	32	0	0	0
	21(OCC)	72	253	-26	0	0	0
	22(OCC)	63	231	-28	0	0	0
	23(OCC)	-61	-221	26	0	0	0
	24(OCC)	203	151	667	0	0	0
	25(OCC)	-1	-3	0	0	0	0
	26(OCC)	0	1	-0	0	0	0
	MAX	-756/L16	-2793/L4	974/L17			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (OPE) W+D1+T2+P2+H
8 (SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19-L6
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L6-L11
36 (EXP) L36=L4-L6
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L6-L9

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP
CASE 11 (SUS) W+P1+H
CASE 12 (SUS) WNC
CASE 27 (OCC) L27=L20+L11
CASE 28 (OCC) L28=L21+L11
CASE 29 (OCC) L29=L22+L11
CASE 30 (OCC) L30=L23+L11
CASE 31 (OCC) L31=L24+L11
CASE 32 (OCC) L32=L25+L11
CASE 33 (OCC) L33=L26+L11
CASE 34 (EXP) L34=L4-L11
CASE 35 (EXP) L35=L6-L11
CASE 36 (EXP) L36=L4-L6
CASE 37 (EXP) L37=L9-L11
CASE 38 (EXP) L38=L4-L9
CASE 39 (EXP) L39=L6-L9

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 3 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 3 (HYD) WW+HP			
Ratio (%):	53.0	@Node	7000
Code Stress:	91438.9	Allowable Stress:	172368.9
Axial Stress:	48321.3	@Node	4650
Bending Stress:	121378.1	@Node	7000
Torsion Stress:	6568.8	@Node	2140
Hoop Stress:	100724.6	@Node	7250
Max Stress Intensity:	121783.5	@Node	7000

CODE STRESS CHECK PASSED : LOADCASE 11 (SUS) W+P1+H

Highest Stresses: (KPa) LOADCASE 11 (SUS) W+P1+H			
Ratio (%):	58.4	@Node	7000
Code Stress:	67235.8	Allowable Stress:	115142.4
Axial Stress:	32234.4	@Node	4650
Bending Stress:	89246.7	@Node	7000
Torsion Stress:	7663.8	@Node	2140
Hoop Stress:	67149.7	@Node	7250
Max Stress Intensity:	89547.5	@Node	7000

CODE STRESS CHECK PASSED : LOADCASE 12 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 12 (SUS) WNC			
Ratio (%):	57.1	@Node	7000
Code Stress:	65725.6	Allowable Stress:	115142.4
Axial Stress:	2384.0	@Node	6490
Bending Stress:	87241.4	@Node	7000
Torsion Stress:	7620.6	@Node	2140

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Hoop Stress:                  0.0       @Node     20
Max Stress Intensity:     87536.0       @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L20+L11

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L20+L11
Ratio (%):                 50.7       @Node   7000
Code Stress:              77570.5       Allowable Stress:     153139.4
Axial Stress:             32609.6       @Node   4650
Bending Stress:          102964.6       @Node   7000
Torsion Stress:           14637.4       @Node   5188
Hoop Stress:              67149.7       @Node   7250
Max Stress Intensity:    103311.6       @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 28 (OCC) L28=L21+L11

Highest Stresses: (   KPa    ) LOADCASE 28 (OCC) L28=L21+L11
Ratio (%):                 48.4       @Node   7000
Code Stress:              74129.6       Allowable Stress:     153139.4
Axial Stress:             32525.3       @Node   4650
Bending Stress:           97832.5       @Node   7000
Torsion Stress:           13169.3       @Node   5188
Hoop Stress:              67149.7       @Node   7250
Max Stress Intensity:     98587.7       @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 29 (OCC) L29=L22+L11

Highest Stresses: (   KPa    ) LOADCASE 29 (OCC) L29=L22+L11
Ratio (%):                 49.2       @Node   7000
Code Stress:              75362.9       Allowable Stress:     153139.4
Axial Stress:             32313.1       @Node   4650
Bending Stress:          100061.8       @Node   7000
Torsion Stress:           6774.4       @Node   2140
Hoop Stress:              67149.7       @Node   7250
Max Stress Intensity:    100378.4       @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 30 (OCC) L30=L23+L11

Highest Stresses: (   KPa    ) LOADCASE 30 (OCC) L30=L23+L11
Ratio (%):                 49.2       @Node   7000
Code Stress:              75307.4       Allowable Stress:     153139.4
Axial Stress:             32157.8       @Node   4650
Bending Stress:           99937.8       @Node   7000
Torsion Stress:           8566.8       @Node   2140
Hoop Stress:              67149.7       @Node   7250
Max Stress Intensity:    100291.9       @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 31 (OCC) L31=L24+L11

Highest Stresses: (   KPa    ) LOADCASE 31 (OCC) L31=L24+L11
Ratio (%):                 56.6       @Node   7000
Code Stress:              86676.2       Allowable Stress:     153139.4
Axial Stress:             32966.1       @Node   4710
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Bending Stress:            115115.5       @Node   7000
Torsion Stress:              9990.1       @Node   5160
Hoop Stress:                67149.7       @Node   7250
Max Stress Intensity:      120227.2       @Node   3965

 CODE STRESS CHECK PASSED      : LOADCASE 32 (OCC) L32=L25+L11

Highest Stresses: (   KPa    ) LOADCASE 32 (OCC) L32=L25+L11
Ratio (%):                   43.9       @Node   7000
Code Stress:                67278.0       Allowable Stress:     153139.4
Axial Stress:               32236.0       @Node   4650
Bending Stress:             89301.2       @Node   7000
Torsion Stress:              7650.1       @Node   2140
Hoop Stress:                67149.7       @Node   7250
Max Stress Intensity:       89603.3       @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 33 (OCC) L33=L26+L11

Highest Stresses: (   KPa    ) LOADCASE 33 (OCC) L33=L26+L11
Ratio (%):                   43.9       @Node   7000
Code Stress:                67256.1       Allowable Stress:     153139.4
Axial Stress:               32235.3       @Node   4650
Bending Stress:             89273.5       @Node   7000
Torsion Stress:              7666.7       @Node   2140
Hoop Stress:                67149.7       @Node   7250
Max Stress Intensity:       89574.5       @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 34 (EXP) L34=L4-L11

Highest Stresses: (   KPa    ) LOADCASE 34 (EXP) L34=L4-L11
Ratio (%):                   65.7       @Node   6798
Code Stress:               165042.2       Allowable Stress:     251343.0
Axial Stress:               85805.1       @Node   8140
Bending Stress:            163712.8       @Node   6798
Torsion Stress:             21216.0       @Node   6820
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      450230.0       @Node   3965

 CODE STRESS CHECK PASSED      : LOADCASE 35 (EXP) L35=L6-L11

Highest Stresses: (   KPa    ) LOADCASE 35 (EXP) L35=L6-L11
Ratio (%):                   53.7       @Node   3965
Code Stress:               160042.0       Allowable Stress:     298295.1
Axial Stress:               19923.4       @Node   8140
Bending Stress:            157636.4       @Node   3965
Torsion Stress:             12635.0       @Node   5170
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      451514.5       @Node   3965

 CODE STRESS CHECK PASSED      : LOADCASE 36 (EXP) L36=L4-L6

Highest Stresses: (   KPa    ) LOADCASE 36 (EXP) L36=L4-L6
Ratio (%):                   50.6       @Node   6798
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Code Stress:	127129.6	Allowable Stress:	251343.0
Axial Stress:	65899.4	@Node	8140
Bending Stress:	126121.8	@Node	6798
Torsion Stress:	15733.0	@Node	6820
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	127129.6	@Node	6798

CODE STRESS CHECK PASSED : LOADCASE 37 (EXP) L37=L9-L11

Highest Stresses: (KPa) LOADCASE 37 (EXP) L37=L9-L11			
Ratio (%):	31.5	@Node	1483
Code Stress:	98069.2	Allowable Stress:	311052.0
Axial Stress:	19955.3	@Node	8140
Bending Stress:	105152.3	@Node	8260
Torsion Stress:	8653.7	@Node	5670
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	193671.5	@Node	8260

CODE STRESS CHECK PASSED : LOADCASE 38 (EXP) L38=L4-L9

Highest Stresses: (KPa) LOADCASE 38 (EXP) L38=L4-L9			
Ratio (%):	58.5	@Node	3965
Code Stress:	174191.6	Allowable Stress:	297953.9
Axial Stress:	65849.8	@Node	8140
Bending Stress:	171535.5	@Node	3965
Torsion Stress:	17646.5	@Node	5080
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	491494.6	@Node	3965

CODE STRESS CHECK PASSED : LOADCASE 39 (EXP) L39=L6-L9

Highest Stresses: (KPa) LOADCASE 39 (EXP) L39=L6-L9			
Ratio (%):	58.5	@Node	3965
Code Stress:	174489.9	Allowable Stress:	298295.1
Axial Stress:	4372.2	@Node	5740
Bending Stress:	172250.9	@Node	3965
Torsion Stress:	13956.9	@Node	5080
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	492860.3	@Node	3965

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
HANGER REPORT ((TABLE DATA FROM DESIGN RUNS)) 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (OPE) W+D1+T2+P2+H
8 (SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19-L6
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L6-L11
36 (EXP) L36=L4-L6
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L6-L9

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HANGER REPORT
(TABLE DATA FROM DESIGN RUNS)

NODE	NUM RQD	FIG. NO.	SIZE	VERTICAL MOVEMENT (mm.)	HOT LOAD (N.)	THEORETICAL INSTALLED LOAD (N.)	ACTUAL INSTALLED LOAD (N.)	SPRING RATE (N./cm.)	HORIZONTAL MOVEMENT (mm.)
160	1		2921	-0.254	1641.	1633.	0.	333.	0.000
	LISEGA					LOAD VARIATION =	1%		

** VARIABLE SUPPORT SPRING DESIGNED ..... SHORT RANGE
MINIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 831.818
MAXIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 2499.901
RECOMMENDED INSTALLATION CLEARANCE ..... (mm.) 196.850

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Flange Peq : 7 (OPE) W+D1+T2+P2+H 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (OPE) W+D1+T2+P2+H
8 (SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19-L6
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L6-L11
36 (EXP) L36=L4-L6
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L6-L9

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FLANGE PEQ REPORT: Flange (Equiv Pressure Method)
CASE 7 (OPE) W+D1+T2+P2+H

Node	Axial Force N.	Bending Moment N.m.	G/C mm.	P Equivalent KPa	Rating Temperature C	Allowable Pressure /Stress	Ratio %	
1060								
1080	18927	961	192.15	6822.98	149.49	10028.53	68.04	
1080	18927	961	192.15	6822.98	149.49	10028.53	68.04	
1100								
1220								
1240	920	24	192.15	5528.92	149.49	10028.53	55.13	
1300								
1320	17429	1144	192.15	6902.37	149.49	10028.53	68.83	
1340	17429	736	192.15	6609.53	149.49	10028.53	65.91	
1360								
1640								
1660	524	1187	192.15	6350.61	149.49	10028.53	63.33	
7120								
7130	72	642	192.15	5943.42	149.49	10028.53	59.27	
7201	4283	1606	192.15	6710.81	59.99	10342.14	64.89	
7210								
1821	7429	920	192.15	6326.71	59.99	10342.14	61.17	
1920								
4400								
4410	3467	1412	192.15	6543.49	59.89	10342.14	63.27	
4420	3483	1232	192.15	6414.80	59.89	10342.14	62.03	
4430								
4450								
4460	1933	1294	192.15	6405.56	59.89	10342.14	61.94	
4470	1936	1298	192.15	6408.54	59.89	10342.14	61.97	
4480								
4490								
4500	100	1643	192.15	6592.95	59.89	10342.14	63.75	
4505	100	1818	192.15	6718.95	59.89	10342.14	64.97	
6790								

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FLANGE PEQ REPORT: Flange (Equiv Pressure Method)
CASE 7 (OPE) W+D1+T2+P2+H

Node	Axial Force N.	Bending Moment N.m.	G/C mm.	P Equivalent KPa	Rating Temperature C	Allowable Pressure /Stress	Ratio %	
4600								
4610	763	1161	192.15	6269.63	59.99	10342.14	60.62	
4620	763	843	192.15	6041.33	59.99	10342.14	58.41	
4630								
4660								
4670	1406	471	192.15	5796.56	59.99	10342.14	56.05	
4680	1406	413	192.15	5754.81	59.99	10342.14	55.64	
4690								
4720								
4730	1653	378	192.15	5738.40	59.99	10342.14	55.49	
4740	1653	619	192.15	1011.02	36.90	10342.14	9.78	
4750								
4980								
4990	137	1544	192.15	6523.43	59.99	10342.14	63.08	
4990								
5000	137	73	192.15	5467.19	59.99	10342.14	52.86	
5000	137	73	192.15	5467.19	59.99	10342.14	52.86	
5010								
5040								
5060	3299	1017	192.15	6254.23	59.99	10342.14	60.47	
5070	3299	1341	192.15	6486.74	59.99	10342.14	62.72	
5080								
5100								
5110	3299	2458	192.15	7288.39	59.99	10342.14	70.47	

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (OPE) W+D1+T2+P2+H
8 (SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19-L6
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L6-L11
36 (EXP) L36=L4-L6
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L6-L9

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NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 4 (OPE) W+D1+T1+P1+H
CASE 6 (OPE) W+D1+T2+P1+H
CASE 9 (OPE) W+D1+T3+P1+H
CASE 11 (SUS) W+P1+H
CASE 12 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
25		Absolute Method								
	Limits	7000	7000	5000		4000	1200	2200		
	4(OPE)	-32	-254	340	0.068	0	-0	-10	0.005	
	6(OPE)	294	-770	-15	0.110	0	-0	-10	0.005	
	9(OPE)	294	-770	-14	0.110	0	-0	-10	0.005	
	11(SUS)	30	-540	59	0.077	-0	0	-10	0.005	
	12(SUS)	-67	-724	-23	0.103	0	0	-10	0.005	
780		Absolute Method								
	Limits	9600	9600	7200		5760	3840	4990		
	4(OPE)	2526	197	139	0.263	-1107	-480	-1450	0.291	
	6(OPE)	2623	103	-256	0.273	-641	-502	-1163	0.233	
	9(OPE)	3192	97	595	0.332	38	-263	-1620	0.325	
	11(SUS)	3141	24	80	0.327	177	-322	-1303	0.261	
	12(SUS)	3127	35	82	0.326	187	-310	-1308	0.262	
1240		Absolute Method								
	Limits	7000	7000	5000		4000	1200	2200		
	4(OPE)	1243	-1802	-596	0.257	-0	0	24	0.011	
	6(OPE)	920	-1742	-471	0.249	-0	0	24	0.011	
	9(OPE)	923	-1742	-476	0.249	-0	0	24	0.011	

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NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
	11(SUS)	-174	-1394	155	0.199	0	0	24	0.011	
	12(SUS)	-173	-1380	153	0.197	0	0	24	0.011	
1700		Absolute Method								
	Limits	15091	15091	12001		9150	4890	6420		
	4(OPE)	-545	576	1244	0.104	-702	1890	-470	0.386	
	6(OPE)	-241	515	1011	0.084	-529	1487	-351	0.304	
	9(OPE)	-241	514	1011	0.084	-528	1486	-351	0.304	
	11(SUS)	938	-29	-32	0.062	-12	-89	138	0.021	
	12(SUS)	935	-29	-32	0.062	-12	-89	137	0.021	
7170		Absolute Method								
	Limits	15091	15091	12001		9150	4890	6420		
	4(OPE)	63	516	-1122	0.094	-748	379	202	0.082	
	6(OPE)	212	483	-897	0.075	-543	296	135	0.060	
	9(OPE)	212	483	-897	0.075	-543	295	135	0.060	
	11(SUS)	937	29	-31	0.062	12	-88	-137	0.021	
	12(SUS)	934	28	-31	0.062	12	-88	-136	0.021	
1780		Absolute Method								
	Limits	16201	15091	12001		9150	4890	6420		
	4(OPE)	-15689	6587	-1042	0.968	396	801	-944	0.164	
	6(OPE)	-7146	4635	-311	0.441	124	226	531	0.083	
	9(OPE)	-7152	4644	-350	0.441	138	261	535	0.083	
	11(SUS)	632	-170	58	0.039	-6	-96	-77	0.020	
	12(SUS)	627	-166	58	0.039	-6	-96	-76	0.020	

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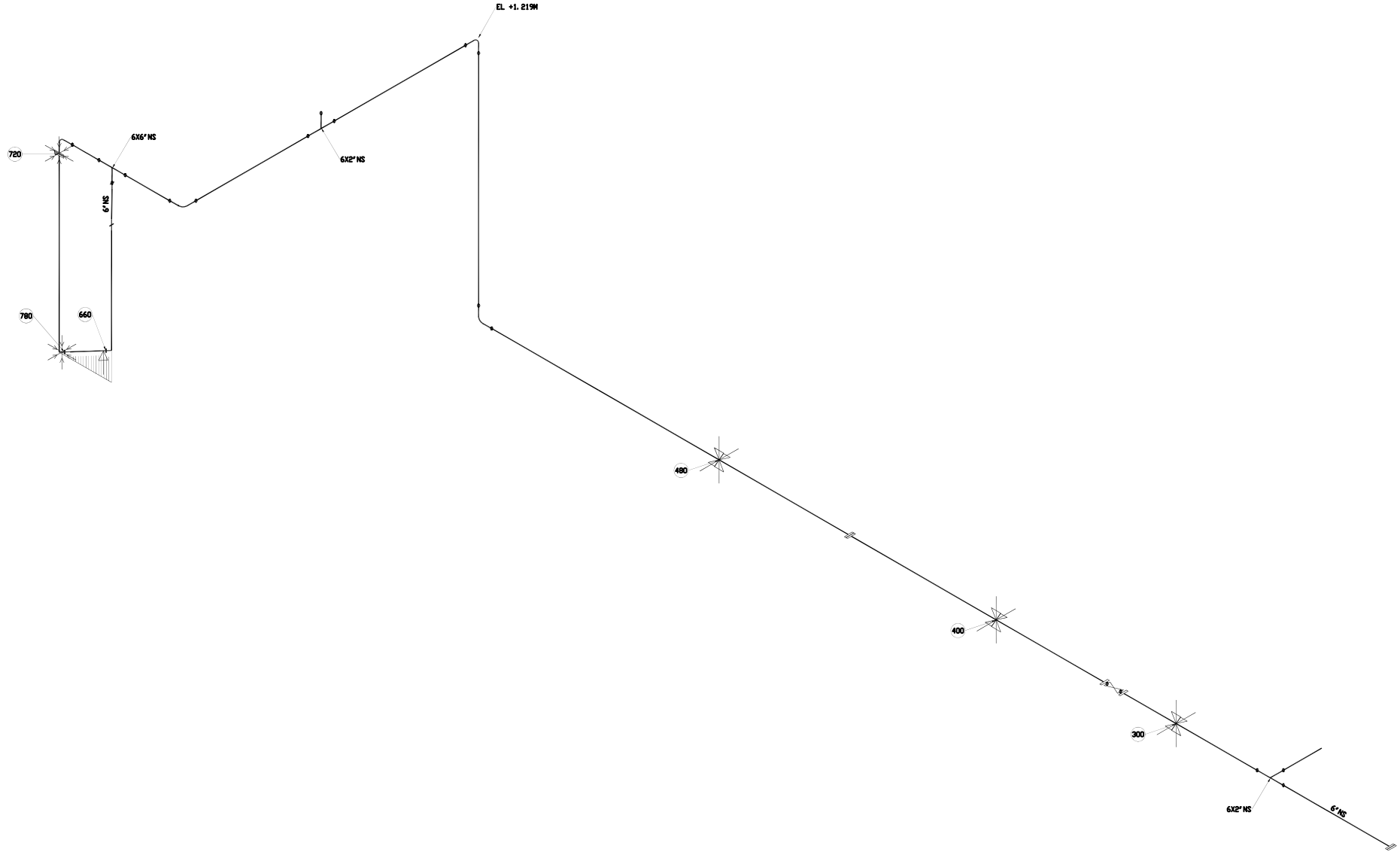
NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
7180		Absolute Method								
	Limits	16201	15091	12001		9150	4890	6420		
	4(OPE)	10002	8813	-384	0.617	-439	-43	4993	0.778	
	6(OPE)	3999	5190	-160	0.344	-150	49	3221	0.502	
	9(OPE)	3986	5185	-175	0.344	-167	34	3221	0.502	
	11(SUS)	-878	-106	-106	0.054	-19	217	41	0.044	
	12(SUS)	-870	-104	-105	0.054	-19	216	41	0.044	
4260		Absolute Method								
	Limits	11201	11201	8400		6720	4400	5020		
	4(OPE)	12405	-3634	-1050	1.107	485	-3523	5861	1.167	*
	6(OPE)	2195	-2203	-281	0.197	357	-442	2399	0.478	
	9(OPE)	2343	-2203	-340	0.209	316	-657	2399	0.478	
	11(SUS)	-10	-1476	7	0.132	258	57	807	0.161	
	12(SUS)	-9	-1473	7	0.132	257	57	804	0.160	

BNK-GCS-CN-007

1. GAS-111-0051B-FN05-6"-IS
2. GAS-111-0044B-CN05-6"-ET
3. GAS-111-0047B-FN05-2"-PT
4. GAS-111-0048B-FN05-2"-PT
5. FL-112-0020B-AN07-6"-PT
6. FL-112-0022B-AN07-6"-PT
7. GAS-111-0058B-FS00-6"-IS
8. GAS-111-0055B-FS00-6"-IS
9. GAS-111-0057B-FS00-4"-IS
10. FL-112-0024B-AN07-4"-PT
11. GAS-111-0045B-FS00-6"-NP
12. GAS-111-0046B-CN07-6"-PT
13. GAS-111-0026B-AN07-8"-PT
14. GAS-111-0049B-CN07-8"-PT
15. GAS-111-0160B-CN05-2"-PT
16. FL-112-0119B-AN07-3"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

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INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 7

REV.	CHANGE	DATE
		22 MAY 2024

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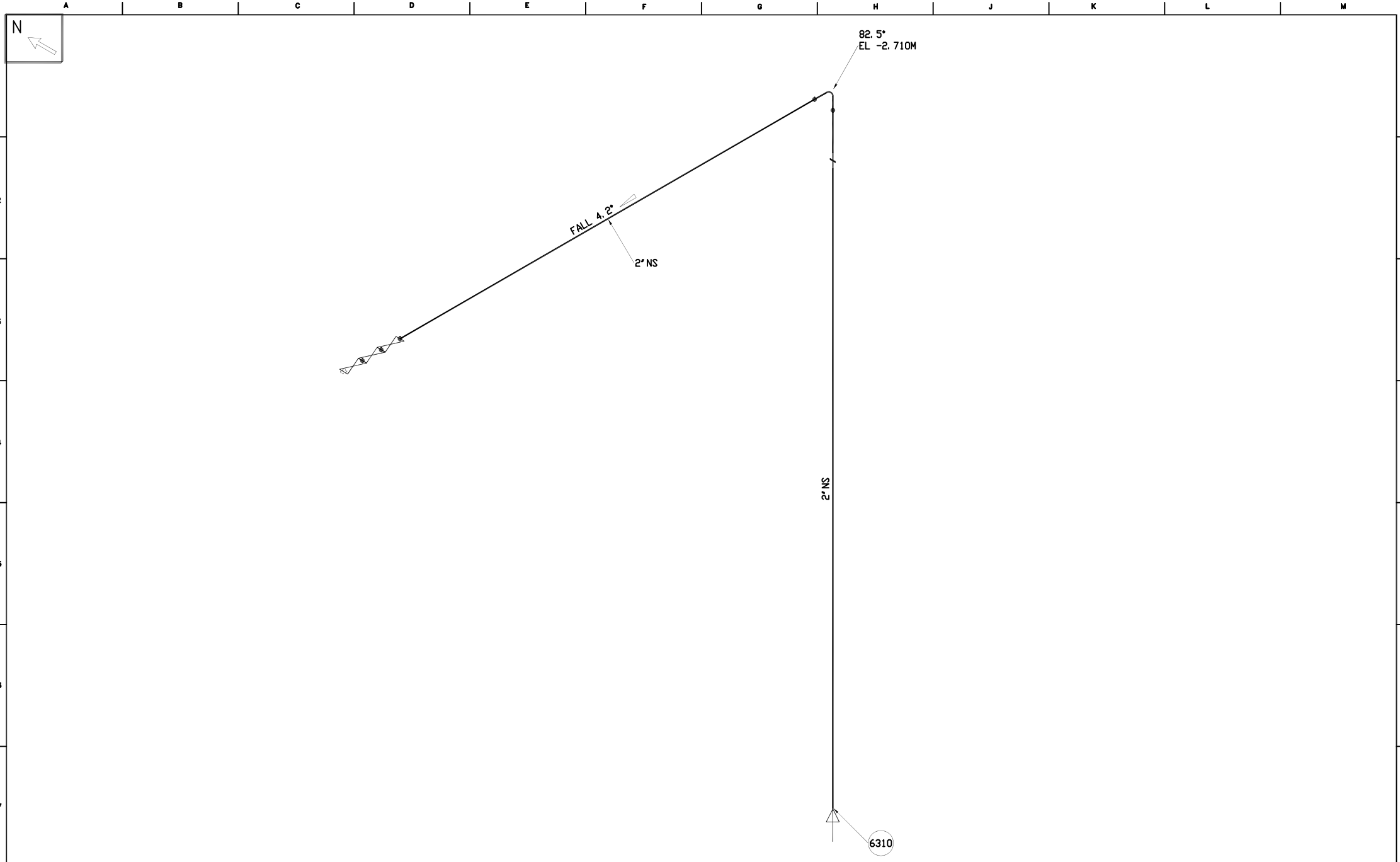

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INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

2 OF 7

REV.	CHANGE	DATE
		22 MAY 2024

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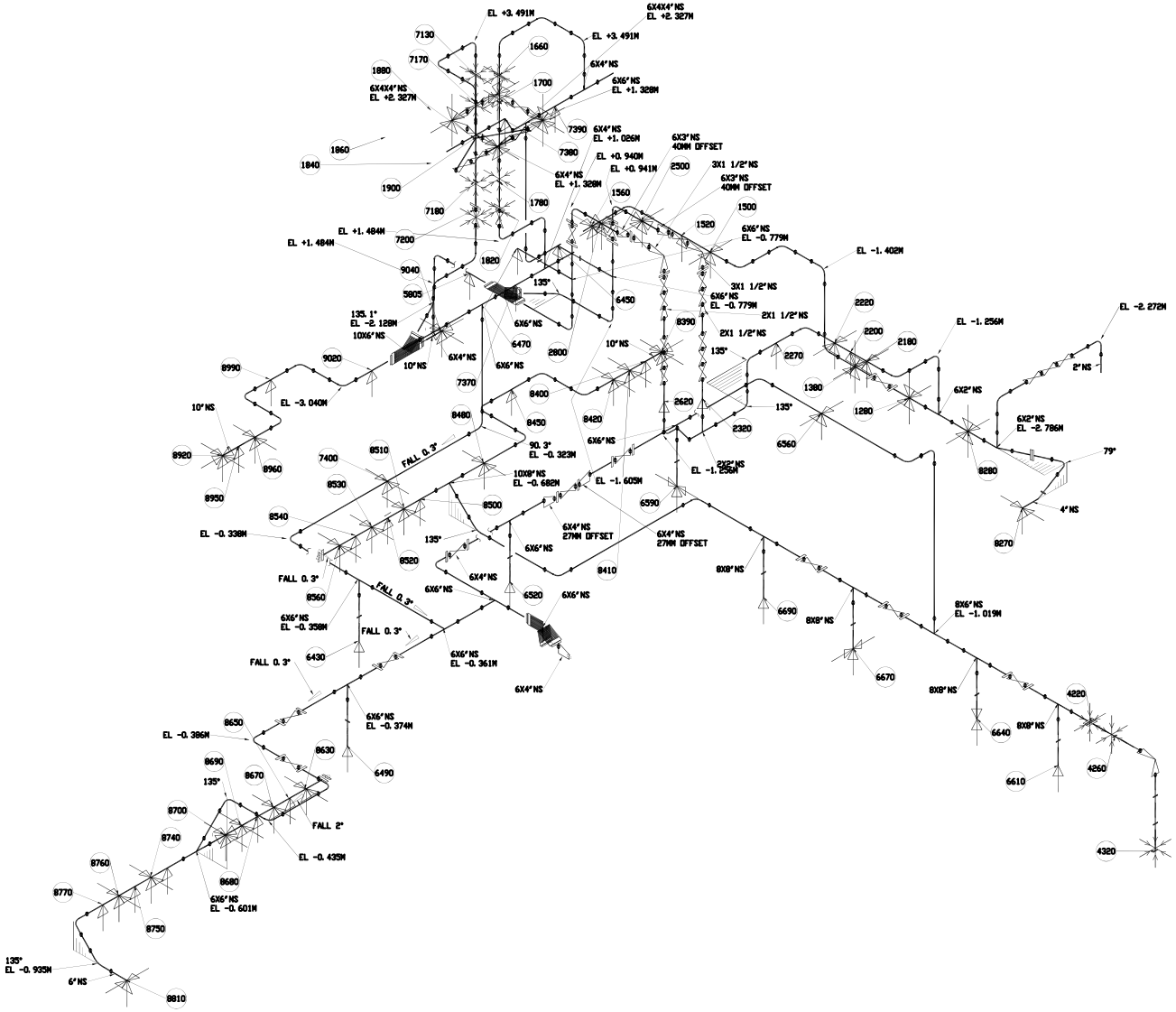

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

3 OF 7

REV.	CHANGE	DATE
		22 MAY 2024

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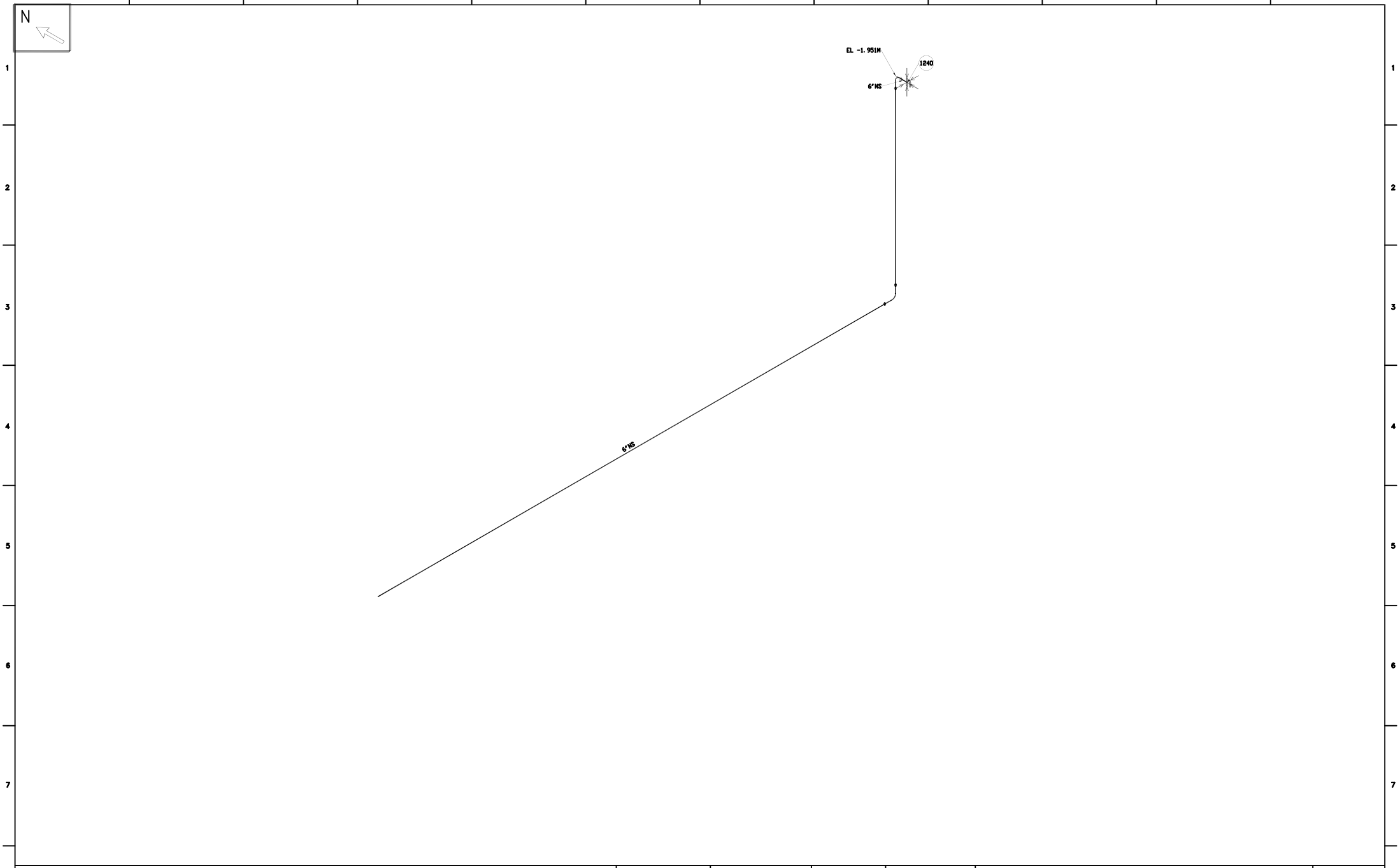

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

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REV.	CHANGE	DATE
		22 MAY 2024

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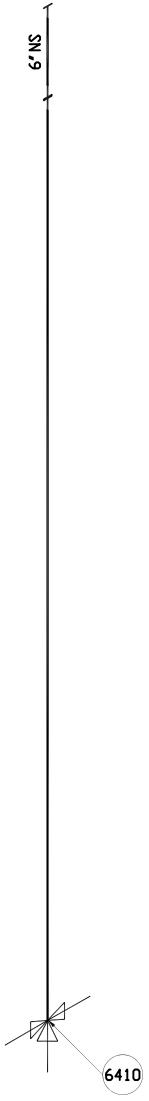

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

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REV.	CHANGE	DATE
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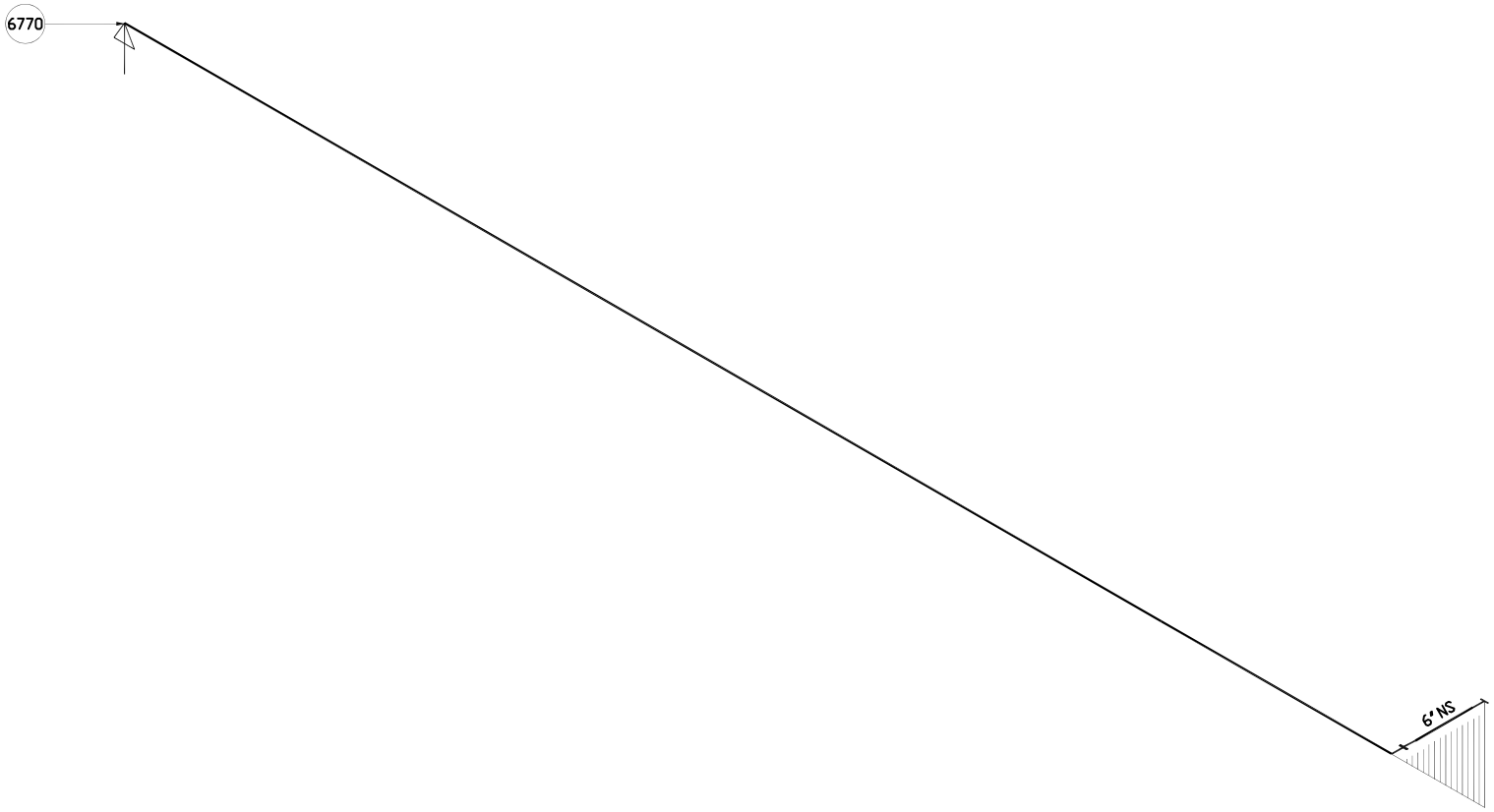

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

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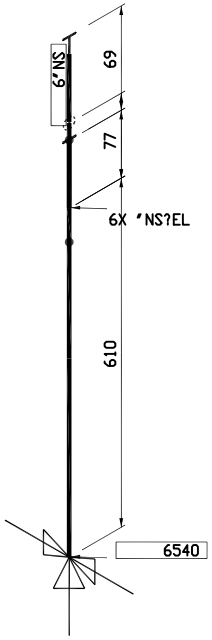
N

FAIL



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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T2+P2+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17-L4
25 (OCC) L25=L18-L4
26 (OCC) L26=L19-L4
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L6-L11
36 (EXP) L36=L4-L6
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L6-L9

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INPUT LISTING

Job Description:

PROJECT:

CLIENT :

ANALYST:

NOTES :

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INPUT LISTING

File created by FEATools
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PIPE DATA

From 10 To 20 DX= -101.600 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= 3.0000 mm.
Element Name= FLANGE_FLG_150
GENERAL
T1= 115 C T2= 60 C T3= 60 C P1= 2,200.0500 KPa P2= 1,810.0413 KPa
PHyd= 3,300.0752 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 197,200,352 KPa EH2= 200,644,016 KPa EH3= 200,644,016 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000181 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001362 kg./cu.cm.
RIGID Weight= 191.27 N.
DISPLACEMENTS
Node 20 DX1= 4.000 mm. DY1= 2.400 mm. DZ1= 1.500 mm.
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 25 To 40 DX= -101.600 mm.
RIGID Weight= 191.27 N.
RESTRAINTS
Node 25 ANC Cnode 20
EQUIPMENT LIMITS
Nozzle Node = 25 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 7,000.35 N.
FB= 7,000.35 N. FC= 5,000.25 N. MA= 4,000.17 N.m. MB= 1,200.05 N.m.
MC= 2,200.09 N.m. Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute

From 40 To 60 DX= -729.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 59
Angle/Node @2= .00 58

From 60 To 80 DY= .000 mm. DZ= 1,587.000 mm.
BEND at "TO" end

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INPUT LISTING
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 79
Angle/Node @2= .00 78

From 80 To 100 DX= .000 mm. DY= -1,404.000 mm.

From 100 To 120 DY= -1,153.000 mm.

From 120 To 140 DY= -229.000 mm.
RIGID Weight= .00 N.

From 140 To 160 DY= -200.000 mm.
PIPE
Dia= 114.300 mm. Wall= 6.020 mm.
GENERAL
T1= 21 C T2= 21 C T3= 21 C P1= .0000 KPa P2= .0000 KPa
PHyd= .0000 KPa Fluid Den= .0000000 kg./cu.cm. Insul Thk= 40.000 mm.
RESTRAINTS
Node 160 -X Mu = .30
Node 160 Z Cnode 121
Node 121 +Y Mu = .10
Node 160 X Cnode 121
HANGERS
Hanger Node = 160 Hanger Connecting Node = 121
Available Space = -1,000.0000 mm. Allowed Load Variation = 25.0000
No. Hangers = 0.0 Short Range Flag = -1 User Operating Load = .00 N.
Free Node = 0 Free Node = 0 Free Code = 0.0 Spring Rate = .00 N./cm.
Theoretical Cold Load = .00 N.
SIF's & TEE's
Node 140 Unreinforced Tee
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 8260 To 8270 DY= .000 mm. DZ= 300.000 mm.
RESTRAINTS
Node 8270 +Y Mu = .10
Node 8270 X Gap= 5.000 mm.

From 120 To 180 DY= -229.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm.
GENERAL
T1= 115 C T2= 60 C T3= 60 C P1= 2,200.0500 KPa P2= 1,810.0413 KPa
PHyd= 3,300.0752 KPa Fluid Den= .0000181 kg./cu.cm.
Insul Thk= 40.000 mm.
DOUBLE FLANGED BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 179
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

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INPUT LISTING
From 180 To 200 DX= -229.000 mm.

From 200 To 220 DX= -101.600 mm.
Element Name= FLANGE_FLG_300
RIGID Weight= 191.27 N.

From 220 To 240 DX= -101.600 mm.
Element Name= FLANGE_FLG_300
RIGID Weight= 191.27 N.

From 240 To 260 DX= -500.000 mm.

From 260 To 280 DX= -344.500 mm.
SIF's & TEE's
Node 280 Weldolet

From 280 To 300 DX= -500.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= 3.0000 mm.
GENERAL
P1= 2,200.0500 KPa PHyd= 3,300.0752 KPa Mat= (106)A106 Grade B
E= 203,401,232 KPa EH1= 197,200,352 KPa EH2= 200,644,016 KPa
EH3= 200,644,016 KPa EH4= 203,401,232 KPa EH5= 203,401,232 KPa
EH6= 203,401,232 KPa EH7= 203,401,232 KPa EH8= 203,401,232 KPa
EH9= 203,401,232 KPa v = .292 Pipe Den= .0078334 kg./cu.cm.
Fluid Den= .0000181 kg./cu.cm. Insul Thk= .000 mm.
Insul Den= .0000000 kg./cu.cm.
RESTRAINTS
Node 300 Y Mu = .30
Node 300 Z Gap= 3.000 mm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 300 To 320 DX= -203.000 mm.

From 320 To 340 DX= -101.600 mm.
Element Name= FLANGE_FLG_300
RIGID Weight= 191.27 N.

From 340 To 360 DX= -489.000 mm.
Element Name= GATE_NOFLG_300
RIGID Weight= 1,023.41 N.

From 360 To 380 DX= -101.600 mm.
Element Name= FLANGE_FLG_300
RIGID Weight= 191.27 N.

From 380 To 400 DX= -861.000 mm.
RESTRAINTS
Node 400 Y Mu = .30
Node 400 Z Gap= 3.000 mm. Mu = .30

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INPUT LISTING
From 400 To 420 DX= -1,557.000 mm.

From 420 To 440 DX= -101.600 mm.
Element Name= FLANGE_FLG_300
RIGID Weight= 191.27 N.

From 440 To 460 DX= -101.600 mm.
Element Name= FLANGE_FLG_300
RIGID Weight= 191.27 N.

From 460 To 480 DX= -1,243.000 mm.
RESTRAINTS
Node 480 Y Mu = .30
Node 480 Z Gap= 3.000 mm. Mu = .30

From 480 To 490 DX= -2,035.000 mm.

From 500 To 6210 DY= -76.200 mm.
RIGID Weight= .00 N.

From 490 To 500 DX= -2,035.000 mm.
SINGLE FLANGED BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 499
Angle/Node @2= .00 498

From 500 To 580 DY= 4,005.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= .0000 mm.
GENERAL
P1= 2,200.0500 KPa PHyd= 3,300.0752 KPa Mat= (106)A106 Grade B
E= 203,401,232 KPa EH1= 197,200,352 KPa EH2= 200,644,016 KPa
EH3= 200,644,016 KPa EH4= 203,401,232 KPa EH5= 203,401,232 KPa
EH6= 203,401,232 KPa EH7= 203,401,232 KPa EH8= 203,401,232 KPa
EH9= 203,401,232 KPa v = .292 Pipe Den= .0078334 kg./cu.cm.
Fluid Den= .0000058 kg./cu.cm. Insul Thk= .000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 579
Angle/Node @2= .00 578
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 580 To 590 DZ= 1,548.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= 3.0000 mm.
GENERAL
P1= 2,200.0500 KPa PHyd= 3,300.0752 KPa Fluid Den= .0000181 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001500 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

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INPUT LISTING

From 590 To 600 DZ= 1,202.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 599
Angle/Node @2= .00 598

From 600 To 610 DX= -385.000 mm.

From 610 To 620 DX= -345.000 mm.
GENERAL
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 197,200,352 KPa
EH2= 200,644,016 KPa EH3= 200,644,016 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 590 To 5190 DY= 398.000 mm.
PIPE
Dia= 60.325 mm. Wall= 5.537 mm.
GENERAL
P2= 1,810.0413 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 197,200,352 KPa EH2= 200,644,016 KPa EH3= 200,644,016 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Insul Thk= 40.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5189
Angle/Node @2= .00 5188
SIF's & TEE's
Node 590 Weldolet
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 5190 To 8160 DX= -229.000 mm. DZ= 229.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 8159
Angle/Node @2= .00 8158

From 8160 To 8170 DZ= 523.000 mm.

From 8170 To 8180 DZ= 77.000 mm.

From 8180 To 8190 DZ= 101.600 mm.
REDUCER
Diam2= 114.300 mm. Wall2= 6.020 mm.

From 8190 To 8200 DZ= 210.000 mm.

INPUT LISTING
PIPE
Dia= 114.300 mm. Wall= 6.020 mm.
Insul Thk= 40.000 mm.

From 8200 To 8210 DZ= 102.000 mm.
REDUCER
Diam2= 60.325 mm. Wall2= 5.537 mm.

From 8210 To 5200 DZ= 290.000 mm.
PIPE
Dia= 60.325 mm. Wall= 5.537 mm.
Insul Thk= 40.000 mm.

From 5200 To 5210 DZ= 73.025 mm.
RIGID Weight= 44.48 N.

From 5210 To 5220 DZ= 301.000 mm.
RIGID Weight= 93.41 N.

From 5220 To 5230 DZ= 73.025 mm.
RIGID Weight= 44.48 N.

From 5230 To 5240 DZ= 77.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5239
Angle/Node @2= .00 5238

From 5240 To 5245 DX= -539.000 mm.

From 5240 To 6230 DY= -17.961 mm. DZ= 17.961 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6230 Unreinforced Tee

From 5245 To 5250 DX= -539.000 mm.

From 5250 To 5260 DX= -73.025 mm.
RIGID Weight= 44.48 N.

From 5260 To 5270 DX= -73.025 mm.
RIGID Weight= 44.48 N.

From 5270 To 5275 DX= -150.000 mm.

From 5275 To 6260 DY= -25.400 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6260 Unreinforced Tee

From 5275 To 5280 DX= -150.000 mm.

From 5280 To 5290 DX= -73.025 mm.
RIGID Weight= 44.48 N.

From 5290 To 5300 DX= -200.000 mm.

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INPUT LISTING
RIGID Weight= 258.00 N.

From 5300 To 5310 DX= -66.675 mm.
PIPE
Dia= 60.325 mm. Wall= 8.738 mm. Cor= 6.0000 mm.
GENERAL
T1= 270 C T2= 272 C T3= -28 C P1= 600.0137 KPa P2= 50.0011 KPa
PHyd= 900.0205 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 187,483,936 KPa EH2= 187,335,024 KPa EH3= 205,934,864 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= 40.000 mm.
RIGID Weight= 31.14 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 5310 To 5320 DX= -89.000 mm.
REDUCER
Diam2= 88.900 mm. Wall2= 7.620 mm.

From 5320 To 5330 DX= -287.000 mm.
PIPE
Dia= 88.900 mm. Wall= 7.620 mm.
Insul Thk= 40.000 mm.
BEND at "TO" end
Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5329
Angle/Node @2= .00 5328

From 5330 To 5340 DY= -918.000 mm.

From 5340 To 6280 DX= 38.100 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6280 Unreinforced Tee

From 5340 To 5350 DY= -1,940.000 mm.
BEND at "TO" end
Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5349
Angle/Node @2= .00 5348

From 5350 To 5370 DX= -3,156.000 mm.
RESTRAINTS
Node 5370 +Y Mu = .30
Node 5370 Z Gap= 3.000 mm. Mu = .30

From 5370 To 5375 DX= -4,413.000 mm.
RESTRAINTS
Node 5375 +Y

From 5375 To 5380 DX= -561.000 mm.
BEND at "TO" end

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INPUT LISTING
Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5379
Angle/Node @2= .00 5378

From 5380 To 5390 DY= -1,219.000 mm.
BEND at "TO" end
Radius= 114.300 mm. (LONG) Bend Angle= 42.270 Angle/Node @1= 21.14 5389
Angle/Node @2= .00 5388

From 5390 To 6130 DX= -11.600 mm. DY= -579.250 mm. DZ= 526.400 mm.

From 610 To 640 DY= -84.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.110 mm.
GENERAL
T1= 115 C T2= 60 C T3= 60 C P1= 2,200.0500 KPa P2= 1,810.0413 KPa
PHyd= 3,300.0752 KPa Insul Thk= 40.000 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 640 Unreinforced Tee
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 640 To 660 DY= -300.000 mm.
PIPE
Dia= 114.300 mm. Wall= 6.020 mm. Cor= .0000 mm.
GENERAL
T1= 21 C T2= 21 C T3= 21 C P1= .0000 KPa P2= .0000 KPa
PHyd= .0000 KPa Mat= (102)A53 Grade B E= 203,401,232 KPa
EH1= 203,401,232 KPa EH2= 203,401,232 KPa EH3= 203,401,232 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000000 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RESTRAINTS
Node 660 +Y Cnode 800 Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 620 To 680 DX= -578.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= 3.0000 mm.
GENERAL
T1= 115 C T2= 60 C T3= 60 C P1= 2,200.0500 KPa P2= 1,810.0413 KPa
PHyd= 3,300.0752 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 197,200,352 KPa EH2= 200,644,016 KPa EH3= 200,644,016 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000181 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001500 kg./cu.cm.

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INPUT LISTING
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 679
Angle/Node @2= .00 678
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 680 To 700 DY= -229.000 mm.

From 700 To 720 DY= -126.000 mm.
Element Name= FLANGE_FLG_300
RIGID Weight= 286.91 N.
RESTRAINTS
Node 720 ANC Cnode 721

From 721 To 760 DY= -104.775 mm.
Element Name= FLANGE_FLG_300
RIGID Weight= 177.93 N.

From 760 To 780 DY= -196.000 mm.
RESTRAINTS
Node 780 ANC Cnode 820
EQUIPMENT LIMITS
Nozzle Node = 780 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 9,600.48 N.
FB= 9,600.48 N. FC= 7,200.36 N. MA= 5,760.24 N.m. MB= 3,840.16 N.m.
MC= 4,990.21 N.m. Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute

From 780 To 800 DX= 923.000 mm. DY= 271.775 mm. DZ= .000 mm.
RIGID Weight= .00 N.

From 780 To 6241 DX= 1,079.000 mm. DY= 1,035.814 mm. DZ= 1,172.611 mm.
RIGID Weight= .00 N.

From 780 To 6271 DX= -295.050 mm. DY= 678.375 mm. DZ= 854.650 mm.
RIGID Weight= .00 N.

From 780 To 6291 DX= -822.649 mm. DY= 135.775 mm. DZ= 854.650 mm.
RIGID Weight= .00 N.

From 820 To 840 DY= -3,570.000 mm.
PIPE
Dia= 914.400 mm. Wall= 15.000 mm.
GENERAL
Mat= (383)A516 70 E= 203,401,232 KPa EH1= 197,200,352 KPa
EH2= 200,644,016 KPa EH3= 200,644,016 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Insul Thk= 40.000 mm.
RIGID Weight= .00 N.
RESTRAINTS
Node 840 ANC
ALLOWABLE STRESSES

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INPUT LISTING
B31.3 (2016) Cycle Max Switch = --- Sc= 160,648 KPa
Sh1= 157,769 KPa Sh2= 160,373 KPa Sh3= 160,373 KPa Sh4= 160,648 KPa
Sh5= 160,648 KPa Sh6= 160,648 KPa Sh7= 160,648 KPa Sh8= 160,648 KPa
Sh9= 160,648 KPa Sy= 262,001 KPa

From 280 To 4350 DZ= -122.000 mm.
PIPE
Dia= 60.325 mm. Wall= 5.537 mm. Cor= 3.0000 mm.
GENERAL
P1= 2,200.0500 KPa PHyd= 3,300.0752 KPa Mat= (106)A106 Grade B
E= 203,401,232 KPa EH1= 197,200,352 KPa EH2= 200,644,016 KPa
EH3= 200,644,016 KPa EH4= 203,401,232 KPa EH5= 203,401,232 KPa
EH6= 203,401,232 KPa EH7= 203,401,232 KPa EH8= 203,401,232 KPa
EH9= 203,401,232 KPa v = .292 Pipe Den= .0078334 kg./cu.cm.
Fluid Den= .0000181 kg./cu.cm. Insul Thk= 40.000 mm.
Insul Den= .0001500 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 4350 To 4360 DZ= -73.025 mm.
RIGID Weight= 44.48 N.

From 4360 To 4370 DZ= -301.000 mm.
PIPE
Dia= 60.325 mm. Wall= 8.738 mm.
GENERAL
T1= 175 C T2= 142 C T3= 142 C P1= 6,200.1411 KPa P2= 5,480.1250 KPa
PHyd= 9,300.2119 KPa Fluid Den= .0000430 kg./cu.cm.
Insul Thk= 60.000 mm.
RIGID Weight= 311.38 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 4370 To 4380 DZ= -82.550 mm.
RIGID Weight= 57.83 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 4380 To 4390 DZ= -576.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4389
Angle/Node @2= .00 4388

From 4390 To 4395 DY= 257.000 mm.

From 4390 To 6300 DY= -25.400 mm.

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INPUT LISTING
RIGID Weight= .00 N.
SIF's & TEE's
Node 6300 Unreinforced Tee

From 4395 To 880 DY= 257.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 879
Angle/Node @2= .00 878

From 880 To 900 DZ= 77.000 mm.

From 900 To 920 DZ= 82.550 mm.
Element Name= BALL_FLG_600
GENERAL
P1= 6,200.1411 KPa PHyd= 9,300.2119 KPa Fluid Den= .0000430 kg./cu.cm.
RIGID Weight= 57.83 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 920 To 940 DZ= 301.000 mm.
Element Name= CHECK_FLG_150
RIGID Weight= 427.03 N.

From 940 To 960 DZ= 82.550 mm.
RIGID Weight= 57.83 N.

From 960 To 980 DZ= 1,222.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 979
Angle/Node @2= .00 978

From 980 To 1000 DY= -100.000 mm.

From 1000 To 1020 DY= -414.000 mm.
Element Name= CHECK_FLG_600
SIF's & TEE's
Node 1020 Weldolet

From 1020 To 1040 DX= 195.000 mm.
PIPE
Dia= 168.275 mm. Wall= 10.973 mm. Cor= 3.0000 mm.
GENERAL
T1= 175 C T2= 149 C T3= 149 C P1= 6,200.1411 KPa
PHyd= 9,300.2119 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 193,178,448 KPa EH2= 195,077,104 KPa EH3= 195,077,104 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000430 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001362 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,888 KPa Sh3= 137,888 KPa Sh4= 137,895 KPa

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INPUT LISTING
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 1040 To 1060 DX= 150.000 mm.

From 1060 To 1080 DX= 127.000 mm.
Element Name= FLG.PR_FLG_150
RIGID Weight= 364.75 N.
FLANGES
Location= To Method= Peq Class/Grade= ASME-2009-600-3.19
G/C= 192.151 mm. T/P table (1)= 37.8 C -> 10,342.1 KPa (2)= 93.3 C
-> 10,342.1 KPa (3)= 148.9 C -> 10,031.9 KPa (4)= 204.4 C
-> 9,721.6 KPa (5)= 260.0 C -> 9,170.0 KPa (6)= 315.6 C
-> 8,342.7 KPa (7)= 343.3 C -> 8,101.3 KPa (8)= 371.1 C
-> 7,825.5 KPa (9)= 398.9 C -> 7,342.9 KPa (10)= 426.7 C
-> 6,998.2 KPa (11)= 454.4 C -> 6,722.4 KPa (12)= 482.2 C
-> 6,205.3 KPa (13)= 510.0 C -> 5,343.4 KPa (14)= 537.8 C
-> 4,998.7 KPa (15)= 565.6 C -> 4,964.2 KPa (16)= 593.3 C
-> 4,447.1 KPa (17)= 621.1 C -> 3,792.1 KPa (18)= 648.9 C
-> 2,826.9 KPa (19)= 676.7 C -> 2,516.6 KPa (20)= 704.4 C
-> 1,896.1 KPa (21)= 732.2 C -> 1,413.4 KPa (22)= 760.0 C
-> 1,034.2 KPa (23)= 787.8 C -> 792.9 KPa (24)= 815.6 C
-> 586.1 KPa

From 1080 To 1100 DX= 126.000 mm.
Element Name= FLG.PR_FLG_150
RIGID Weight= 364.75 N.
FLANGES
Location= From Method= Peq

From 1100 To 1120 DX= 1,152.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1119
Angle/Node @2= .00 1118

From 1120 To 1160 DZ= -461.500 mm.

From 1120 To 8260 DY= -54.000 mm. DZ= 54.000 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 8260 Unreinforced Tee

From 1160 To 1180 DX= .000 mm. DZ= -1,725.500 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1179
Angle/Node @2= .00 1178

From 1180 To 1200 DY= 835.000 mm. DZ= .000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1199
Angle/Node @2= .00 1198

From 1200 To 1220 DX= 229.000 mm.

From 1220 To 1240 DX= 127.000 mm.

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INPUT LISTING
Element Name= FLANGE_FLG_600
RIGID Weight= 364.75 N.
RESTRAINTS
Node 1240 ANC Cnode 1241
FLANGES
Location= To Method= Peq Class/Grade= ASME-2009-600-3.19
G/C= 192.151 mm. T/P table (1)= 37.8 C -> 10,342.1 KPa (2)= 93.3 C
-> 10,342.1 KPa (3)= 148.9 C -> 10,031.9 KPa (4)= 204.4 C
-> 9,721.6 KPa (5)= 260.0 C -> 9,170.0 KPa (6)= 315.6 C
-> 8,342.7 KPa (7)= 343.3 C -> 8,101.3 KPa (8)= 371.1 C
-> 7,825.5 KPa (9)= 398.9 C -> 7,342.9 KPa (10)= 426.7 C
-> 6,998.2 KPa (11)= 454.4 C -> 6,722.4 KPa (12)= 482.2 C
-> 6,205.3 KPa (13)= 510.0 C -> 5,343.4 KPa (14)= 537.8 C
-> 4,998.7 KPa (15)= 565.6 C -> 4,964.2 KPa (16)= 593.3 C
-> 4,447.1 KPa (17)= 621.1 C -> 3,792.1 KPa (18)= 648.9 C
-> 2,826.9 KPa (19)= 676.7 C -> 2,516.6 KPa (20)= 704.4 C
-> 1,896.1 KPa (21)= 732.2 C -> 1,413.4 KPa (22)= 760.0 C
-> 1,034.2 KPa (23)= 787.8 C -> 792.9 KPa (24)= 815.6 C
-> 586.1 KPa
EQUIPMENT LIMITS
Nozzle Node = 1240
Limiting Loads: A=pipe; B=ref; C=AxB; FA= 7,000.35 N. FB= 7,000.35 N.
FC= 5,000.25 N. MA= 4,000.17 N.m. MB= 1,200.05 N.m. MC= 2,200.09 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute

From 1241 To 8300 DX= 127.000 mm.
RIGID Weight= 364.75 N.
DISPLACEMENTS
Node 1241 DX1= 4.000 mm. DY1= 2.400 mm. DZ1= 1.500 mm.

From 1020 To 8280 DX= -500.000 mm.
PIPE
Dia= 168.275 mm. Wall= 10.973 mm. Cor= 3.0000 mm.
GENERAL
P1= 6,200.1411 KPa PHyd= 9,300.2119 KPa Mat= (106)A106 Grade B
E= 203,401,232 KPa EH1= 193,178,448 KPa EH2= 195,077,104 KPa
EH3= 195,077,104 KPa EH4= 203,401,232 KPa EH5= 203,401,232 KPa
EH6= 203,401,232 KPa EH7= 203,401,232 KPa EH8= 203,401,232 KPa
EH9= 203,401,232 KPa v = .292 Pipe Den= .0078334 kg./cu.cm.
Fluid Den= .0000430 kg./cu.cm. Insul Thk= 60.000 mm.
Insul Den= .0001500 kg./cu.cm.
RESTRAINTS
Node 8280 Y Mu = .30
Node 8280 Z Gap= 3.000 mm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,888 KPa Sh3= 137,888 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 8280 To 1260 DX= -900.000 mm.
SIF's & TEE's
Node 1260 Weldolet

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INPUT LISTING
From 1260 To 1280 DX= -850.000 mm.
RESTRAINTS
Node 1280 Y Mu = .30
Node 1280 Z Gap= 3.000 mm. Mu = .30

From 1280 To 1300 DX= -650.000 mm.

From 1300 To 1320 DX= -127.000 mm.
Element Name= FLANGE_FLG_600
RIGID Weight= 364.75 N.
FLANGES
Location= To Method= Peq

From 1320 To 1340 DX= -568.000 mm.
Element Name= CHECK_NOFLG_600
RIGID Weight= 3,087.07 N.

From 1340 To 1360 DX= -127.000 mm.
Element Name= FLANGE_NOFLG_600
RIGID Weight= 364.75 N.
FLANGES
Location= From Method= Peq

From 1360 To 1380 DX= -1,549.000 mm.
RESTRAINTS
Node 1380 Y Mu = .30
Node 1380 Z Gap= 3.000 mm. Mu = .30

From 1380 To 1390 DX= -2,035.000 mm.

From 1400 To 6400 DY= -76.200 mm.
RIGID Weight= .00 N.

From 1390 To 1400 DX= -2,035.000 mm.
SINGLE FLANGED BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1399
Angle/Node @2= .00 1398

From 1400 To 1480 DY= 1,384.000 mm.
PIPE
Dia= 168.275 mm. Wall= 10.973 mm.
GENERAL
P1= 6,200.1411 KPa PHyd= 9,300.2119 KPa Mat= (106)A106 Grade B
E= 203,401,232 KPa EH1= 193,178,448 KPa EH2= 195,077,104 KPa
EH3= 195,077,104 KPa EH4= 203,401,232 KPa EH5= 203,401,232 KPa
EH6= 203,401,232 KPa EH7= 203,401,232 KPa EH8= 203,401,232 KPa
EH9= 203,401,232 KPa v = .292 Pipe Den= .0078334 kg./cu.cm.
Fluid Den= .0000154 kg./cu.cm. Insul Thk= 40.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1479
Angle/Node @2= .00 1478
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,888 KPa Sh3= 137,888 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa

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INPUT LISTING
Sh9= 137,895 KPa Sy= 241,316 KPa

From 1480 To 1485 DX= -4,760.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1484
Angle/Node @2= .00 1483

From 1485 To 1490 DZ= 1,800.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1489
Angle/Node @2= .00 1488

From 1490 To 1500 DX= -876.000 mm.
RESTRAINTS
Node 1500 +Y Mu = .30
Node 1500 Z Gap= 3.000 mm.

From 1500 To 1520 DX= -5,893.000 mm.
RESTRAINTS
Node 1520 +Y Mu = .30

From 1520 To 1540 DX= -2,916.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1539
Angle/Node @2= .00 1538

From 1540 To 1560 DZ= 1,068.000 mm.
RESTRAINTS
Node 1560 +Y Mu = .30
Node 1560 X Gap= 3.000 mm. Mu = .30

From 1560 To 1580 DZ= 1,068.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1579
Angle/Node @2= .00 1578

From 1580 To 1600 DY= 2,730.000 mm.
SIF's & TEE's
Node 1600 Welding Tee

From 1600 To 7390 DZ= -393.000 mm.
RESTRAINTS
Node 7390 +Y Mu = .30

From 7390 To 7020 DZ= -393.000 mm.
SIF's & TEE's
Node 7020 Welding Tee

From 7020 To 7030 DZ= -245.000 mm.

From 1600 To 7380 DZ= 393.000 mm.
RESTRAINTS
Node 7380 +Y Mu = .30

From 7380 To 7040 DZ= 393.000 mm.

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INPUT LISTING
SIF's & TEE's
Node 7040 Welding Tee

From 7040 To 7050 DZ= 245.000 mm.

From 7020 To 7060 DY= 2,163.000 mm.
PIPE
Dia= 114.300 mm. Wall= 8.560 mm.
Insul Thk= 40.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7059
Angle/Node @2= .00 7058

From 7060 To 7065 DX= -989.000 mm.

From 7065 To 7070 DX= -511.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1621
Angle/Node @2= .00 1622

From 7070 To 7080 DZ= 531.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7079
Angle/Node @2= .00 7078

From 7080 To 1640 DY= -501.500 mm.

From 1640 To 1660 DY= -111.125 mm.
Element Name= FLANGE_NOFLG_600
RIGID Weight= 191.27 N.
RESTRAINTS
Node 1660 ANC Cnode 1661
FLANGES
Location= To Method= Peq

From 7040 To 7090 DY= 2,163.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7089
Angle/Node @2= .00 7088

From 7090 To 7095 DX= -989.000 mm.

From 7095 To 7100 DX= -511.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7099
Angle/Node @2= .00 7098

From 7100 To 7110 DZ= -531.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7109
Angle/Node @2= .00 7108

From 7110 To 7120 DY= -501.500 mm.

From 7120 To 7130 DY= -111.125 mm.

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INPUT LISTING
RIGID Weight= 191.27 N.
RESTRAINTS
Node 7130 ANC Cnode 7131
FLANGES
Location= To Method= Peq

From 1660 To 1680 DY= -111.125 mm.
PIPE
Dia= 114.300 mm. Wall= 17.120 mm. Cor= .0000 mm.
Element Name= FLANGE_NOFLG_600
GENERAL
T1= 155 C T2= 129 C T3= 129 C P1= 2,200.0500 KPa P2= 1,810.0413 KPa
PHyd= 2,800.0637 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 194,667,600 KPa EH2= 196,356,512 KPa EH3= 196,356,512 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000430 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001362 kg./cu.cm.
RIGID Weight= 191.27 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,819 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 1680 To 1700 DY= -200.000 mm.
RESTRAINTS
Node 1700 ANC Cnode 1720
EQUIPMENT LIMITS
Nozzle Node = 1700
Limiting Loads: A=pipe; B=ref; C=AxB; FA= 15,090.75 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute

From 1720 To 7140 DY= -240.000 mm.
RIGID Weight= .00 N.

From 7131 To 7160 DY= -111.125 mm.
PIPE
Dia= 114.300 mm. Wall= 17.120 mm.
Insul Thk= 40.000 mm.
RIGID Weight= 191.27 N.

From 7160 To 7170 DY= -200.000 mm.
RESTRAINTS
Node 7170 ANC Cnode 7171
EQUIPMENT LIMITS
Nozzle Node = 7170
Limiting Loads: A=pipe; B=ref; C=AxB; FA= 15,090.75 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute

From 7171 To 7150 DX= .000 mm. DY= -240.000 mm. DZ= .000 mm.

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INPUT LISTING
RIGID Weight= .00 N.

From 7140 To 1760 DY= -240.000 mm.
GENERAL
P1= 2,200.0500 KPa
RIGID Weight= .00 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,819 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 1780 To 1800 DY= -200.000 mm.
RESTRAINTS
Node 1780 ANC Cnode 1760
EQUIPMENT LIMITS
Nozzle Node = 1780
Limiting Loads: A=pipe; B=ref; C=AxB; FA= 16,200.81 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute

From 1800 To 1820 DY= -111.125 mm.
PIPE
Dia= 114.300 mm. Wall= 17.120 mm. Element Name= FLANGE_NOFLG_150
Insul Thk= 40.000 mm.
RIGID Weight= 191.27 N.
RESTRAINTS
Node 1820 ANC Cnode 1821

From 7150 To 7180 DY= -240.000 mm.
RIGID Weight= .00 N.
RESTRAINTS
Node 7180 ANC Cnode 7181
EQUIPMENT LIMITS
Nozzle Node = 7180
Limiting Loads: A=pipe; B=ref; C=AxB; FA= 16,200.81 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute

From 7181 To 7190 DY= -200.000 mm.

From 7190 To 7200 DY= -111.125 mm.
PIPE
Dia= 114.300 mm. Wall= 17.120 mm.
Insul Thk= 40.000 mm.
RIGID Weight= 191.27 N.
RESTRAINTS
Node 7200 ANC Cnode 7201

From 7201 To 7210 DY= -139.125 mm.
GENERAL
T1= 175 C T2= 60 C T3= 60 C P1= 6,200.1411 KPa P2= 5,410.1230 KPa
PHyd= 9,300.2119 KPa

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INPUT LISTING
RIGID Weight= 191.27 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa
FLANGES
Location= From Method= Peq

From 7210 To 7220 DY= -153.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7219

From 7220 To 7225 DZ= 265.500 mm.

From 7225 To 7230 DZ= 265.500 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7229
Angle/Node @2= .00 7228

From 7230 To 7240 DY= -458.000 mm.

From 7240 To 7250 DZ= 245.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm.
Insul Thk= 40.000 mm.

From 7240 To 7360 DZ= -494.000 mm.

From 7360 To 7260 DZ= -292.000 mm.

From 7260 To 7370 DZ= -393.000 mm.
RESTRAINTS
Node 7370 +Y

From 7370 To 7270 DZ= -393.000 mm.

From 7270 To 7280 DZ= -245.000 mm.

From 1740 To 7150 DZ= 255.000 mm.
GENERAL
T1= 155 C T2= 129 C T3= 129 C P1= 2,200.0500 KPa P2= 1,810.0413 KPa
PHyd= 2,860.0652 KPa
RIGID Weight= 382.52 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,819 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 7150 To 1840 DZ= 550.000 mm.
RIGID Weight= 1,867.59 N.
RESTRAINTS
Node 1840 +Y
Node 1840 X Mu = .30

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INPUT LISTING
Node 1840 Z Gap= 6.000 mm. Mu = .30

From 1840 To 1860 DX= -5,100.000 mm.
RIGID Weight=10,500.52 N.
RESTRAINTS
Node 1860 Y Mu = .10
Node 1860 Z Gap= 6.000 mm. Mu = .30

From 1860 To 1880 DZ= -1,400.000 mm.
RIGID Weight= 4,500.22 N.
RESTRAINTS
Node 1880 Y Mu = .10
Node 1880 Z Gap= 6.000 mm. Mu = .30

From 1880 To 1900 DX= 5,100.000 mm.
RIGID Weight=10,500.52 N.
RESTRAINTS
Node 1900 Y Mu = .10
Node 1900 X Mu = .30
Node 1900 Z Gap= 6.000 mm. Mu = .30

From 1900 To 7140 DX= .000 mm. DY= .000 mm. DZ= 340.000 mm.
RIGID Weight= 1,867.59 N.

From 7140 To 1740 DZ= 255.000 mm.
RIGID Weight= 382.52 N.

From 1821 To 1920 DY= -139.125 mm.
PIPE
Dia= 114.300 mm. Wall= 6.020 mm. Cor= .0000 mm.
Element Name= FLANGE_NOFLG_150
GENERAL
T1= 175 C T2= 60 C T3= 60 C P1= 6,200.1411 KPa P2= 5,410.1230 KPa
PHyd= 9,300.2119 KPa Mat= (165)A312 TP316L E= 195,127,520 KPa
EH1= 184,539,120 KPa EH2= 192,364,096 KPa EH3= 192,364,096 KPa
EH4= 195,127,520 KPa EH5= 195,127,520 KPa EH6= 195,127,520 KPa
EH7= 195,127,520 KPa EH8= 195,127,520 KPa EH9= 195,127,520 KPa
v = .292 Pipe Den= .0080272 kg./cu.cm. Fluid Den= .0000596 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001500 kg./cu.cm.
RIGID Weight= 191.27 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa
FLANGES
Location= From Method= Peq

From 1920 To 1940 DY= -153.000 mm.
GENERAL
P1= 2,200.0500 KPa P2= 1,810.0413 KPa Fluid Den= .0000183 kg./cu.cm.
SINGLE FLANGED BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1939

From 1940 To 1960 DY= .000 mm. DZ= -531.000 mm.

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INPUT LISTING
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1959
Angle/Node @2= .00 1958

From 1960 To 7270 DY= -458.000 mm. DZ= .000 mm.
SIF's & TEE's
Node 7270 Welding Tee

From 7260 To 7290 DX= .000 mm. DY= -1,349.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm.
Insul Thk= 40.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 89.719 Angle/Node @1= 44.86 7289
Angle/Node @2= .00 7288

From 7290 To 7400 DY= -4.725 mm. DZ= 962.988 mm.
RESTRAINTS
Node 7400 +Y Mu = .30
Node 7400 X Gap= 3.000 mm.

From 7400 To 7300 DY= -10.275 mm. DZ= 2,094.011 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 89.999 Angle/Node @1= 45.00 7299
Angle/Node @2= .00 7298

From 7300 To 2000 DX= 4,199.000 mm. DY= -20.000 mm.

From 2000 To 6420 DY= -76.200 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= .0000 mm.
GENERAL
P1= 2,200.0500 KPa PHyd= 9,300.2119 KPa Mat= (165)A312 TP316L
E= 195,127,520 KPa EH1= 184,539,120 KPa EH2= 192,364,096 KPa
EH3= 192,364,096 KPa EH4= 195,127,520 KPa EH5= 195,127,520 KPa
EH6= 195,127,520 KPa EH7= 195,127,520 KPa EH8= 195,127,520 KPa
EH9= 195,127,520 KPa v = .292 Pipe Den= .0080272 kg./cu.cm.
Fluid Den= .0000183 kg./cu.cm. Insul Thk= .000 mm.
Insul Den= .0000000 kg./cu.cm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6420 Unreinforced Tee
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 2000 To 4100 DX= 550.000 mm. DY= -2.750 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= .0000 mm.
GENERAL
P1= 6,200.1411 KPa P2= 5,410.1230 KPa PHyd= 9,300.2119 KPa
Mat= (165)A312 TP316L E= 195,127,520 KPa EH1= 184,539,120 KPa
EH2= 192,364,096 KPa EH3= 192,364,096 KPa EH4= 195,127,520 KPa

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INPUT LISTING
EH5= 195,127,520 KPa EH6= 195,127,520 KPa EH7= 195,127,520 KPa
EH8= 195,127,520 KPa EH9= 195,127,520 KPa v = .292
Pipe Den= .0080272 kg./cu.cm. Fluid Den= .0000600 kg./cu.cm.
Insul Thk= .000 mm.
SIF's & TEE's
Node 4100 Welding Tee
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 4100 To 4400 DY= -7.210 mm. DZ= 1,447.982 mm.

From 4400 To 4410 DY= -.632 mm. DZ= 126.998 mm.
RIGID Weight= 364.75 N.
FLANGES
Location= To Method= Peq

From 4410 To 4420 DY= -2.828 mm. DZ= 567.993 mm.
RIGID Weight= 3,087.07 N.

From 4420 To 4430 DY= -.632 mm. DZ= 126.998 mm.
RIGID Weight= 364.75 N.
FLANGES
Location= From Method= Peq

From 4430 To 4440 DY= -1.661 mm. DZ= 333.496 mm.

From 4440 To 6480 DY= -76.200 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6480 Unreinforced Tee Pad= 7.110 mm.

From 4440 To 4450 DY= -1.661 mm. DZ= 333.496 mm.

From 4450 To 4460 DY= -.632 mm. DZ= 126.998 mm.
RIGID Weight= 364.75 N.
FLANGES
Location= To Method= Peq

From 4460 To 4470 DY= -2.828 mm. DZ= 567.993 mm.
RIGID Weight= 733.96 N.

From 4470 To 4480 DY= -.632 mm. DZ= 126.998 mm.
RIGID Weight= 364.75 N.
FLANGES
Location= From Method= Peq

From 4480 To 4482 DY= -3.070 mm. DZ= 564.500 mm.

From 4485 To 6760 DX= -53.882 mm. DY= -53.882 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6760 Unreinforced Tee Pad= 7.110 mm.

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From 4482 To 4485 DY= -3.070 mm. DZ= 564.500 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4484
Angle/Node @2= .00 4483

From 4485 To 4490 DX= 1,042.000 mm. DY= .000 mm. DZ= .000 mm.

From 4490 To 4500 DX= 127.000 mm. DY= .000 mm. DZ= .000 mm.
RIGID Weight= 364.75 N.
FLANGES
Location= To Method= Peq

From 4500 To 4505 DX= 598.000 mm. DY= .000 mm. DZ= .000 mm.
RIGID Weight= 1,005.30 N.

From 4505 To 6790 DX= 127.000 mm. DY= .000 mm. DZ= .000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= .0000 mm.
GENERAL
P1= 6,200.1411 KPa PHyd= 9,300.2119 KPa Mat= (165)A312 TP316L
E= 195,127,520 KPa EH1= 184,539,120 KPa EH2= 192,364,096 KPa
EH3= 192,364,096 KPa EH4= 195,127,520 KPa EH5= 195,127,520 KPa
EH6= 195,127,520 KPa EH7= 195,127,520 KPa EH8= 195,127,520 KPa
EH9= 195,127,520 KPa v = .292 Pipe Den= .0080272 kg./cu.cm.
Fluid Den= .0000600 kg./cu.cm. Insul Thk= .000 mm.
Insul Den= .0000000 kg./cu.cm.
RIGID Weight= 364.75 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa
FLANGES
Location= From Method= Peq

From 6790 To 6780 DX= 324.000 mm.

From 6795 To 7000 DX= 53.882 mm. DY= -53.882 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 7000 Unreinforced Tee Pad= 7.110 mm.

From 6780 To 6795 DX= 324.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6794
Angle/Node @2= .00 6793

From 6795 To 6800 DY= -49.000 mm. DZ= 1,406.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6799
Angle/Node @2= .00 6798

From 6800 To 6810 DX= -2,068.000 mm. DY= .000 mm. DZ= .000 mm.

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INPUT LISTING
From 6810 To 6820 DX= -2,000.000 mm. DY= .000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 6819
Angle/Node @2= .00 6818

From 6820 To 6830 DX= -166.000 mm. DY= -166.000 mm.

From 4100 To 4560 DZ= -285.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= .0000 mm.
GENERAL
P1= 6,200.1411 KPa P2= 5,410.1230 KPa PHyd= 9,300.2119 KPa
Mat= (165)A312 TP316L E= 195,127,520 KPa EH1= 184,539,120 KPa
EH2= 192,364,096 KPa EH3= 192,364,096 KPa EH4= 195,127,520 KPa
EH5= 195,127,520 KPa EH6= 195,127,520 KPa EH7= 195,127,520 KPa
EH8= 195,127,520 KPa EH9= 195,127,520 KPa v = .292
Pipe Den= .0080272 kg./cu.cm. Fluid Den= .0000600 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001500 kg./cu.cm.
SIF's & TEE's
Node 4560 Welding Tee
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 4560 To 4570 DX= 143.000 mm.

From 4570 To 8140 DX= 140.000 mm. DY= -27.000 mm.
REDUCER
Diam2= 114.300 mm. Wall2= 6.020 mm.

From 4560 To 4580 DX= -143.000 mm.

From 4580 To 4590 DX= -372.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm.
GENERAL
P2= 5,410.1230 KPa Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4589
Angle/Node @2= .00 4588

From 4590 To 4600 DZ= -229.000 mm.

From 4600 To 4610 DZ= -127.000 mm.
RIGID Weight= 364.75 N.
FLANGES
Location= To Method= Peq

From 4610 To 4620 DZ= -568.000 mm.
RIGID Weight= 2,708.97 N.

From 4620 To 4630 DZ= -127.000 mm.
RIGID Weight= 364.75 N.

INPUT LISTING
FLANGES
Location= From Method= Peq

From 4630 To 4640 DZ= -200.000 mm.

From 4640 To 6510 DY= -76.200 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6510 Unreinforced Tee Pad= 7.110 mm.

From 4640 To 4650 DZ= -532.500 mm.

From 4650 To 4660 DY= -27.000 mm. DZ= -140.000 mm.
REDUCER
Diam2= 114.300 mm. Wall2= 6.020 mm.

From 4660 To 4670 DZ= -111.125 mm.
PIPE
Dia= 114.300 mm. Wall= 6.020 mm.
Insul Thk= .000 mm.
RIGID Weight= 191.27 N.
FLANGES
Location= To Method= Peq

From 4670 To 4680 DZ= -441.000 mm.
RIGID Weight= 387.00 N.

From 4680 To 4690 DZ= -111.125 mm.
RIGID Weight= 191.27 N.
FLANGES
Location= From Method= Peq

From 4690 To 4700 DY= 27.000 mm. DZ= -140.000 mm.
REDUCER
Diam2= 168.275 mm. Wall2= 7.112 mm.

From 4700 To 4710 DZ= -300.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm.
Insul Thk= .000 mm.

From 4710 To 6530 DY= -76.200 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6530 Unreinforced Tee Pad= 7.112 mm.

From 4710 To 4720 DZ= -300.000 mm.

From 4720 To 4730 DZ= -127.000 mm.
RIGID Weight= 364.75 N.
FLANGES
Location= To Method= Peq

From 4730 To 4740 DZ= -568.000 mm.
RIGID Weight= 2,708.97 N.

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From 4740 To 4750 DZ= -101.600 mm.
PIPE
Dia= 168.275 mm. Wall= 10.973 mm. Cor= 6.0000 mm.
GENERAL
T1= 85 C T2= 37 C T3= 37 C P1= 900.0205 KPa P2= 510.0116 KPa
PHyd= 1,350.0308 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 199,086,608 KPa EH2= 202,089,360 KPa EH3= 202,089,360 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000060 kg./cu.cm.
Insul Thk= .000 mm.
RIGID Weight= 191.27 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 8150 To 4140 DZ= -3,792.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4139
Angle/Node @2= .00 4138

From 4140 To 6560 DX= 429.000 mm.
RESTRAINTS
Node 6560 +Y Mu = .30
Node 6560 Z Gap= 3.000 mm.

From 6560 To 4760 DX= 2,876.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4759
Angle/Node @2= .00 4758

From 4760 To 4770 DZ= -457.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4769

From 4770 To 7330 DY= -658.000 mm.
SIF's & TEE's
Node 7330 Welding Tee

From 4780 To 4160 DX= 900.000 mm.
PIPE
Dia= 219.075 mm. Wall= 12.700 mm. Cor= 6.0000 mm.
GENERAL
P1= 900.0205 KPa PHyd= 1,350.0308 KPa Fluid Den= .0000060 kg./cu.cm.
Insul Thk= .000 mm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 4160 To 6600 DY= -101.600 mm.

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INPUT LISTING
RIGID Weight= .00 N.
SIF's & TEE's
Node 6600 Unreinforced Tee

From 4160 To 4180 DX= 3,188.000 mm.

From 4180 To 4200 DX= 114.300 mm.
Element Name= FLANGE_FLG_300
RIGID Weight= 302.48 N.

From 4200 To 4220 DX= 20.000 mm.
Element Name= FLANGE_FLG_300
RIGID Weight= 30.00 N.
RESTRAINTS
Node 4220 ANC Cnode 4221

From 4220 To 4240 DX= 104.775 mm.
Element Name= FLANGE_FLG_300
RIGID Weight= 177.93 N.

From 4240 To 4260 DX= 155.000 mm.
RESTRAINTS
Node 4260 ANC Cnode 4261
EQUIPMENT LIMITS
Nozzle Node = 4260
Limiting Loads: A=pipe; B=ref; C=AxB; FA= 11,200.56 N. FB= 11,200.56 N.
FC= 8,400.42 N. MA= 6,720.29 N.m. MB= 4,400.19 N.m. MC= 5,020.21 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute

From 4261 To 4280 DX= 460.000 mm.
PIPE
Dia= 920.000 mm. Wall= 12.000 mm.
Insul Thk= .000 mm.
RIGID Weight= .00 N.

From 4280 To 4300 DY= -1,300.000 mm.
RIGID Weight= .00 N.

From 4300 To 4310 DY= -1,000.000 mm.
RIGID Weight= .00 N.

From 4310 To 4320 DY= -300.000 mm.
GENERAL
T1= 21 C T2= 21 C T3= 21 C
RIGID Weight= .00 N.
RESTRAINTS
Node 4320 ANC
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 4780 To 6620 DX= -242.000 mm.

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INPUT LISTING
PIPE
Dia= 219.075 mm. Wall= 12.700 mm.
GENERAL
T1= 85 C T2= 37 C T3= 37 C Insul Thk= .000 mm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 7320 To 6630 DY= -101.600 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6630 Unreinforced Tee

From 6620 To 4800 DX= -242.000 mm.

From 4800 To 4810 DX= -114.300 mm.
RIGID Weight= 302.48 N.

From 4810 To 4820 DX= -542.000 mm.
RIGID Weight= 3,362.86 N.

From 4820 To 4830 DX= -114.300 mm.
RIGID Weight= 302.48 N.

From 4830 To 7320 DX= -290.000 mm.

From 7320 To 7330 DX= -478.000 mm.

From 7330 To 4840 DX= -288.000 mm.

From 4840 To 4850 DX= -114.300 mm.
RIGID Weight= 302.48 N.

From 4850 To 4860 DX= -606.000 mm.
RIGID Weight= 360.31 N.

From 4860 To 4870 DX= -104.775 mm.
RIGID Weight= 177.93 N.

From 4870 To 4880 DX= -200.000 mm.

From 4880 To 6650 DX= -287.000 mm.

From 6650 To 6660 DY= -101.600 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6660 Unreinforced Tee

From 6650 To 4890 DX= -487.000 mm.

From 4890 To 4900 DX= -104.775 mm.
RIGID Weight= 177.93 N.

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INPUT LISTING
From 4900 To 4910 DX= -486.500 mm.
RIGID Weight= 2,259.70 N.

From 4910 To 4920 DX= -104.775 mm.
RIGID Weight= 177.93 N.

From 4920 To 4930 DX= -542.000 mm.

From 4930 To 6680 DY= -101.600 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6680 Unreinforced Tee

From 4930 To 4940 DX= -605.000 mm.
BEND at "TO" end
Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4939
Angle/Node @2= .00 4938

From 4940 To 4950 DZ= 1,500.000 mm.
BEND at "TO" end
Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4949
Angle/Node @2= .00 4948

From 4950 To 4960 DX= -871.500 mm. DY= .000 mm.
BEND at "TO" end
Radius= 304.800 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 4959
Angle/Node @2= .00 4958

From 4960 To 4970 DX= -337.000 mm. DY= 337.000 mm.

From 8140 To 4980 DX= 383.000 mm.
PIPE
Dia= 114.300 mm. Wall= 6.020 mm. Cor= .0000 mm.
GENERAL
T1= 175 C T2= 60 C T3= 60 C P1= 6,200.1411 KPa P2= 5,410.1230 KPa
PHyd= 9,300.2119 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 193,178,448 KPa EH2= 200,637,808 KPa EH3= 200,637,808 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000060 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001500 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 4570 To 8140 DX= 140.000 mm. DY= -27.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm.
Insul Thk= 40.000 mm.
REDUCER
Diam2= 114.300 mm. Wall2= 6.020 mm.

From 4980 To 4990 DX= 111.125 mm.

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INPUT LISTING
PIPE
Dia= 114.300 mm. Wall= 6.020 mm.
E= 203,401,232 KPa EH1= 193,178,448 KPa EH2= 200,637,808 KPa
EH3= 200,637,808 KPa EH4= 203,401,232 KPa EH5= 203,401,232 KPa
EH6= 203,401,232 KPa EH7= 203,401,232 KPa EH8= 203,401,232 KPa
EH9= 203,401,232 KPa v = .292 Pipe Den= .0078334 kg./cu.cm.
Insul Thk= 40.000 mm.
RIGID Weight= 191.27 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa
FLANGES
Location= To Method= Peq

From 4990 To 5000 DX= 441.000 mm.
RIGID Weight= 1,116.50 N.

From 5000 To 5010 DX= 111.125 mm.
RIGID Weight= 191.27 N.
FLANGES
Location= From Method= Peq

From 5010 To 5020 DX= 153.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5019

From 5020 To 5025 DZ= -498.350 mm.

From 5020 To 6700 DX= 35.355 mm. DY= -35.355 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6700 Unreinforced Tee Pad= 7.112 mm.

From 5025 To 5030 DZ= -498.350 mm.

From 5030 To 5040 DY= -13.000 mm. DZ= -102.000 mm.
REDUCER
Diam2= 88.900 mm. Wall2= 5.486 mm.

From 5040 To 5060 DZ= -92.075 mm.
PIPE
Dia= 88.900 mm. Wall= 5.486 mm.
Insul Thk= 40.000 mm.
RIGID Weight= 106.76 N.
FLANGES
Location= To Method= Peq

From 5060 To 5070 DZ= -452.000 mm.
RIGID Weight= 217.96 N.

From 5070 To 5080 DZ= -92.075 mm.
RIGID Weight= 106.76 N.
FLANGES

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INPUT LISTING
Location= From Method= Peq

From 5080 To 5090 DY= 12.500 mm. DZ= -102.000 mm.
REDUCER
Diam2= 114.300 mm. Wall2= 6.020 mm.

From 5090 To 5095 DZ= -248.500 mm.
PIPE
Dia= 114.300 mm. Wall= 6.020 mm.
Insul Thk= 40.000 mm.

From 5095 To 6720 DY= -50.800 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6720 Reinforced Tee Pad= 6.020 mm.

From 5095 To 5100 DZ= -248.500 mm.

From 5100 To 5110 DZ= -111.125 mm.
RIGID Weight= 191.27 N.
FLANGES
Location= To Method= Peq

From 5110 To 5120 DZ= -441.000 mm.
RIGID Weight= 1,116.50 N.

From 5120 To 5130 DZ= -79.375 mm.
PIPE
Dia= 114.300 mm. Wall= 8.560 mm. Cor= 6.0000 mm.
GENERAL
T1= 270 C T2= 272 C T3= -28 C P1= 600.0137 KPa P2= 50.0011 KPa
PHyd= 900.0205 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 187,483,936 KPa EH2= 187,335,024 KPa EH3= 205,934,864 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RIGID Weight= 71.17 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 5130 To 5140 DZ= -153.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5139

From 5140 To 5145 DY= -624.000 mm.

From 5145 To 6740 DZ= -50.800 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6740 Unreinforced Tee

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INPUT LISTING
From 5145 To 5150 DY= -424.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5149
Angle/Node @2= .00 5148

From 5150 To 5160 DX= -885.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5159
Angle/Node @2= .00 5158

From 5160 To 5170 DY= -1,073.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 44.939 Angle/Node @1= 22.47 5169
Angle/Node @2= .00 5168

From 5170 To 3965 DX= .000 mm. DY= -530.000 mm. DZ= 528.876 mm.

From 4710 To 6530 DY= -76.200 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= .0000 mm.
GENERAL
T1= 175 C T2= 60 C T3= 60 C P1= 6,200.1411 KPa P2= 5,410.1230 KPa
PHyd= 9,300.2119 KPa Mat= (165)A312 TP316L E= 195,127,520 KPa
EH1= 184,539,120 KPa EH2= 192,364,096 KPa EH3= 192,364,096 KPa
EH4= 195,127,520 KPa EH5= 195,127,520 KPa EH6= 195,127,520 KPa
EH7= 195,127,520 KPa EH8= 195,127,520 KPa EH9= 195,127,520 KPa
v = .292 Pipe Den= .0080272 kg./cu.cm. Fluid Den= .0000600 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6530 Unreinforced Tee Pad= 7.112 mm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 1260 To 2140 DY= 1,530.000 mm.
PIPE
Dia= 60.325 mm. Wall= 8.738 mm. Cor= 3.0000 mm.
GENERAL
T1= 175 C T2= 142 C T3= 142 C P1= 6,200.1411 KPa P2= 5,480.1250 KPa
PHyd= 9,300.2119 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 193,178,448 KPa EH2= 195,549,872 KPa EH3= 195,549,872 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000430 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2139
Angle/Node @2= .00 2138
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa

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INPUT LISTING
Sh9= 137,895 KPa Sy= 241,316 KPa

From 2140 To 2160 DX= .000 mm. DZ= 3,672.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2159
Angle/Node @2= .00 2158

From 2160 To 2180 DX= -3,864.000 mm.
RESTRAINTS
Node 2180 +Y Mu = .30
Node 2180 Z Gap= 3.000 mm. Mu = .30

From 2180 To 2200 DX= -4,915.000 mm.
RESTRAINTS
Node 2200 +Y Mu = .30

From 2200 To 2220 DX= -4,791.000 mm.
RESTRAINTS
Node 2220 +Y Mu = .30
Node 2220 Z Gap= 3.000 mm. Mu = .30

From 2220 To 2260 DX= -738.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000

From 2260 To 2270 DZ= 3,646.000 mm.
RESTRAINTS
Node 2270 +Y

From 2270 To 7340 DZ= 1,259.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 7339
Angle/Node @2= .00 7338

From 7340 To 2280 DX= 226.000 mm. DZ= 226.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 2279
Angle/Node @2= .00 2278

From 2280 To 7350 DZ= 99.000 mm.
SIF's & TEE's
Node 7350 Unreinforced Tee

From 7350 To 2320 DY= 658.000 mm.
RESTRAINTS
Node 2320 +Y

From 2320 To 2330 DY= 228.000 mm.

From 2330 To 2340 DY= 213.000 mm.

From 2340 To 2360 DY= 82.550 mm.
Element Name= GATE_FLG_600
RIGID Weight= 57.83 N.

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INPUT LISTING
From 2360 To 5650 DY= 301.000 mm.
RIGID Weight= 311.38 N.

From 5650 To 5660 DY= 82.550 mm.
RIGID Weight= 57.83 N.

From 5660 To 2400 DY= 365.000 mm.

From 2400 To 5670 DY= 106.000 mm.
REDUCER
Diam2= 48.260 mm. Wall2= 7.137 mm.

From 5670 To 5680 DY= 79.375 mm.
PIPE
Dia= 48.260 mm. Wall= 7.137 mm.
Insul Thk= .000 mm.
RIGID Weight= 35.59 N.

From 5680 To 5690 DY= 79.375 mm.
RIGID Weight= 35.59 N.

From 5690 To 2420 DY= 41.500 mm.
RIGID Weight= 25.00 N.
FORCES & MOMENTS
Node 2420 FX1= 2,000.10 N. FY1= 1,000.05 N. FZ1= .00 N.

From 2420 To 2440 DX= -156.000 mm.
PIPE
Dia= 88.900 mm. Wall= 7.620 mm.
Insul Thk= .000 mm.
RIGID Weight= 100.00 N.

From 2440 To 2460 DX= -73.025 mm. DZ= .000 mm.
PIPE
Cor= 6.0000 mm. Element Name= FLANGE_FLG_150
GENERAL
T1= 272 C T2= 270 C T3= -28 C P1= 600.0137 KPa P2= 50.0011 KPa
PHyd= 900.0205 KPa Fluid Den= .0000015 kg./cu.cm.
RIGID Weight= 54.49 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,638 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 2460 To 2480 DX= -140.000 mm. DY= -39.700 mm. DZ= .000 mm.
PIPE
Dia= 88.900 mm. Wall= 7.620 mm.
Insul Thk= .000 mm.
REDUCER
Diam2= 168.275 mm. Wall2= 10.973 mm.

From 2480 To 2500 DX= -345.000 mm.
PIPE
Dia= 168.275 mm. Wall= 10.973 mm.

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INPUT LISTING
Insul Thk= .000 mm.
RESTRAINTS
Node 2500 +Y Mu = .30
Node 2500 Z Gap= 3.000 mm.
Node 2500 X Gap= 3.000 mm. Mu = .30

From 2500 To 2520 DX= -574.000 mm. DZ= .000 mm.
SINGLE FLANGED BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2519
Angle/Node @2= .00 2518

From 2520 To 2540 DY= -229.000 mm.

From 2540 To 5700 DY= -92.075 mm.
Element Name= BALL_FLG_150
RIGID Weight= 111.21 N.

From 5700 To 2560 DY= -276.000 mm.
RIGID Weight= 1,005.30 N.

From 2560 To 2570 DY= -92.075 mm.
RIGID Weight= 111.21 N.

From 2570 To 5710 DY= -1,030.000 mm.

From 5710 To 6440 DX= -76.200 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 6440 Unreinforced Tee

From 5710 To 2580 DY= -826.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2579
Angle/Node @2= .00 2578

From 2580 To 5840 DX= -324.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 5839

From 5840 To 5800 DX= -500.000 mm. DZ= 500.000 mm.

From 7350 To 2300 DZ= 500.000 mm.
PIPE
Dia= 60.325 mm. Wall= 8.738 mm. Cor= 3.0000 mm.
GENERAL
T1= 175 C T2= 142 C T3= 142 C P1= 6,200.1411 KPa P2= 5,480.1250 KPa
PHyd= 9,300.2119 KPa Fluid Den= .0000430 kg./cu.cm. Insul Thk= .000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2299
Angle/Node @2= .00 2298
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

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INPUT LISTING

From 2300 To 2620 DY= 658.000 mm.
PIPE
Dia= 60.325 mm. Wall= 8.738 mm. Cor= 3.0000 mm.
GENERAL
P1= 6,200.1411 KPa P2= 5,480.1250 KPa PHyd= 9,300.2119 KPa
Fluid Den= .0000154 kg./cu.cm. Insul Thk= .000 mm.
RESTRAINTS
Node 2620 +Y Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,571 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 2620 To 2640 DY= 441.000 mm.

From 2640 To 5720 DY= 82.550 mm.
RIGID Weight= 57.83 N.

From 5720 To 2660 DY= 301.000 mm.
Element Name= GATE_FLG_600
RIGID Weight= 311.38 N.

From 2660 To 5730 DY= 82.550 mm.
RIGID Weight= 57.83 N.

From 5730 To 2700 DY= 365.000 mm.

From 2700 To 5740 DY= 106.000 mm.
REDUCER
Diam2= 48.260 mm. Wall2= 7.137 mm.

From 5740 To 5750 DY= 79.375 mm.
PIPE
Dia= 48.260 mm. Wall= 7.137 mm.
Insul Thk= .000 mm.
RIGID Weight= 35.59 N.

From 5750 To 5760 DY= 79.375 mm.
RIGID Weight= 35.59 N.

From 5760 To 2720 DY= 41.000 mm.
RIGID Weight= 35.59 N.
FORCES & MOMENTS
Node 2720 FX2= 2,000.10 N. FY2= 1,000.05 N. FZ2= .00 N.

From 2720 To 2740 DX= -156.000 mm. DZ= .000 mm.
PIPE
Dia= 88.900 mm. Wall= 7.620 mm.
Insul Thk= .000 mm.
RIGID Weight= 100.00 N.

From 2740 To 2760 DX= -73.025 mm. DZ= .000 mm.
PIPE

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INPUT LISTING
Dia= 88.900 mm. Wall= 7.620 mm. Cor= 6.0000 mm.
Element Name= FLANGE_FLG_150
GENERAL
T1= 272 C T2= 270 C T3= -28 C P1= 600.0137 KPa P2= 50.0011 KPa
PHyd= 900.0205 KPa Fluid Den= .0000015 kg./cu.cm. Insul Thk= .000 mm.
RIGID Weight= 54.49 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,638 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 2760 To 2780 DX= -140.000 mm. DY= -39.700 mm. DZ= .000 mm.
REDUCER
Diam2= 168.275 mm. Wall2= 10.973 mm.

From 2780 To 2800 DX= -345.000 mm.
PIPE
Dia= 168.275 mm. Wall= 10.973 mm.
Insul Thk= .000 mm.
RESTRAINTS
Node 2800 +Y
Node 2800 Z Gap= 3.000 mm.
Node 2800 X Gap= 3.000 mm.

From 2800 To 2820 DX= -574.000 mm. DZ= .000 mm.
SINGLE FLANGED BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2819
Angle/Node @2= .00 2818

From 2820 To 2840 DY= -229.000 mm.

From 2840 To 2846 DY= -92.075 mm.
Element Name= BALL_FLG_150
RIGID Weight= 111.21 N.

From 2846 To 2852 DY= -276.000 mm.
RIGID Weight= 1,005.30 N.

From 2852 To 2860 DY= -92.075 mm.
RIGID Weight= 111.21 N.

From 2860 To 2870 DY= -1,030.000 mm.

From 2870 To 6460 DX= -76.200 mm.
RIGID Weight= .00 N.

From 2870 To 2880 DY= -826.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2879
Angle/Node @2= .00 2878

From 2880 To 5800 DX= -824.000 mm.
SIF's & TEE's
Node 5800 Welding Tee

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INPUT LISTING

From 5800 To 5805 DX= -1,228.000 mm.
RESTRAINTS
Node 5805 +Y Mu = .30

From 5805 To 5810 DX= -1,118.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5809
Angle/Node @2= .00 5808

From 5810 To 5820 DY= -523.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 44.937 Angle/Node @1= 22.47 5819
Angle/Node @2= .00 5818

From 5820 To 6120 DX= .000 mm. DY= -912.000 mm. DZ= 910.000 mm.

From 4750 To 8150 DZ= -178.000 mm.
PIPE
Dia= 168.275 mm. Wall= 10.973 mm. Cor= 6.0000 mm.
GENERAL
T1= 85 C T2= 37 C T3= 37 C P1= 900.0205 KPa P2= 510.0116 KPa
PHyd= 1,350.0308 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 199,086,608 KPa EH2= 202,089,360 KPa EH3= 202,089,360 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000060 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 8150 To 6550 DY= -76.200 mm.
RIGID Weight= .00 N.

From 6210 To 6220 DY= -300.000 mm.
PIPE
Dia= 114.300 mm. Wall= 6.020 mm. Cor= .0000 mm.
GENERAL
T1= 21 C T2= 21 C T3= 21 C P1= .0000 KPa P2= .0000 KPa
PHyd= .0000 KPa Mat= (102)A53 Grade B E= 203,401,232 KPa
EH1= 203,401,232 KPa EH2= 203,401,232 KPa EH3= 203,401,232 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000000 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RESTRAINTS
Node 6220 +Y Mu = .30
Node 6220 Z Gap= 3.000 mm. Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa

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INPUT LISTING
Sh9= 137,895 KPa Sy= 241,316 KPa

From 6230 To 6240 DZ= 300.000 mm.
PIPE
Dia= 48.260 mm. Wall= 3.683 mm.
Insul Thk= .000 mm.
RESTRAINTS
Node 6240 +Y Cnode 6241

From 6260 To 6270 DY= -350.000 mm.
RESTRAINTS
Node 6270 +Y Cnode 6271
Node 6270 Z Cnode 6271 Gap= 3.000 mm.

From 6280 To 6290 DX= 300.000 mm.
PIPE
Dia= 60.325 mm. Wall= 3.912 mm.
Insul Thk= .000 mm.
RESTRAINTS
Node 6290 +Y Cnode 6291
Node 6290 Z Cnode 6291

From 6300 To 6310 DY= -900.000 mm.
RESTRAINTS
Node 6310 +Y Mu = .30

From 6400 To 6410 DY= -300.000 mm.
PIPE
Dia= 114.300 mm. Wall= 6.020 mm.
Insul Thk= .000 mm.
RESTRAINTS
Node 6410 +Y Mu = .30
Node 6410 Z Gap= 3.000 mm. Mu = .30

From 6420 To 6425 DY= -230.000 mm.
GENERAL
Mat= (165)A312 TP316L E= 195,127,520 KPa EH1= 195,127,520 KPa
EH2= 195,127,520 KPa EH3= 195,127,520 KPa EH4= 195,127,520 KPa
EH5= 195,127,520 KPa EH6= 195,127,520 KPa EH7= 195,127,520 KPa
EH8= 195,127,520 KPa EH9= 195,127,520 KPa v = .292
Pipe Den= .0080272 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 115,142 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 6425 To 6430 DY= -380.000 mm.
GENERAL
Mat= (102)A53 Grade B E= 203,401,232 KPa EH1= 203,401,232 KPa
EH2= 203,401,232 KPa EH3= 203,401,232 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm.
RESTRAINTS

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INPUT LISTING
Node 6430 +Y Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 6440 To 6450 DX= -300.000 mm.
RESTRAINTS
Node 6450 +Y

From 6460 To 6470 DX= -300.000 mm.
RESTRAINTS
Node 6470 +Y

From 6480 To 6485 DY= -230.000 mm.
GENERAL
Mat= (165)A312 TP316L E= 195,127,520 KPa EH1= 195,127,520 KPa
EH2= 195,127,520 KPa EH3= 195,127,520 KPa EH4= 195,127,520 KPa
EH5= 195,127,520 KPa EH6= 195,127,520 KPa EH7= 195,127,520 KPa
EH8= 195,127,520 KPa EH9= 195,127,520 KPa v = .292
Pipe Den= .0080272 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 115,142 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 6485 To 6490 DY= -380.000 mm.
GENERAL
Mat= (102)A53 Grade B E= 203,401,232 KPa EH1= 203,401,232 KPa
EH2= 203,401,232 KPa EH3= 203,401,232 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm.
RESTRAINTS
Node 6490 +Y Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 6510 To 6515 DY= -230.000 mm.
GENERAL
Mat= (165)A312 TP316L E= 195,127,520 KPa EH1= 195,127,520 KPa
EH2= 195,127,520 KPa EH3= 195,127,520 KPa EH4= 195,127,520 KPa
EH5= 195,127,520 KPa EH6= 195,127,520 KPa EH7= 195,127,520 KPa
EH8= 195,127,520 KPa EH9= 195,127,520 KPa v = .292
Pipe Den= .0080272 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 115,142 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

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INPUT LISTING

From 6515 To 6520 DY= -380.000 mm.
GENERAL
Mat= (102)A53 Grade B E= 203,401,232 KPa EH1= 203,401,232 KPa
EH2= 203,401,232 KPa EH3= 203,401,232 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm.
RESTRAINTS
Node 6520 +Y Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 6530 To 6535 DY= -230.000 mm.
GENERAL
Mat= (165)A312 TP316L E= 195,127,520 KPa EH1= 195,127,520 KPa
EH2= 195,127,520 KPa EH3= 195,127,520 KPa EH4= 195,127,520 KPa
EH5= 195,127,520 KPa EH6= 195,127,520 KPa EH7= 195,127,520 KPa
EH8= 195,127,520 KPa EH9= 195,127,520 KPa v = .292
Pipe Den= .0080272 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 115,142 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 6535 To 6540 DY= -380.000 mm.
GENERAL
Mat= (102)A53 Grade B E= 203,401,232 KPa EH1= 203,401,232 KPa
EH2= 203,401,232 KPa EH3= 203,401,232 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm.
RESTRAINTS
Node 6540 +Y Mu = .30
Node 6540 X Gap= 3.000 mm. Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 6550 To 6590 DY= -610.000 mm.
RESTRAINTS
Node 6590 +Y Mu = .30
Node 6590 X Gap= 3.000 mm. Mu = .30

From 6600 To 6610 DY= -500.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm.
Insul Thk= .000 mm.
RESTRAINTS

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INPUT LISTING
Node 6610 +Y

From 6630 To 6640 DY= -500.000 mm.
RESTRAINTS
Node 6640 Y

From 6660 To 6670 DY= -500.000 mm.
RESTRAINTS
Node 6670 +Y Mu = .30
Node 6670 Z Gap= 3.000 mm.

From 6680 To 6690 DY= -500.000 mm.
RESTRAINTS
Node 6690 +Y Mu = .30

From 6700 To 6705 DX= 100.000 mm.
PIPE
Dia= 88.900 mm. Wall= 5.486 mm.
GENERAL
Mat= (165)A312 TP316L E= 195,127,520 KPa EH1= 195,127,520 KPa
EH2= 195,127,520 KPa EH3= 195,127,520 KPa EH4= 195,127,520 KPa
EH5= 195,127,520 KPa EH6= 195,127,520 KPa EH7= 195,127,520 KPa
EH8= 195,127,520 KPa EH9= 195,127,520 KPa v = .292
Pipe Den= .0080272 kg./cu.cm. Insul Thk= .000 mm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 115,142 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 6705 To 6710 DX= 400.000 mm.
GENERAL
Mat= (102)A53 Grade B E= 203,401,232 KPa EH1= 203,401,232 KPa
EH2= 203,401,232 KPa EH3= 203,401,232 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm.
RESTRAINTS
Node 6710 +Y
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 6720 To 6730 DY= -700.000 mm.
PIPE
Dia= 88.900 mm. Wall= 5.486 mm.
Insul Thk= .000 mm.
RESTRAINTS
Node 6730 +Y Mu = .30
Node 6730 X Gap= 3.000 mm.

From 6740 To 6750 DZ= -300.000 mm.
RESTRAINTS

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INPUT LISTING
Node 6750 +Y

From 6760 To 6765 DX= -100.000 mm.
PIPE
Dia= 114.300 mm. Wall= 6.020 mm.
GENERAL
Mat= (165)A312 TP316L E= 195,127,520 KPa EH1= 195,127,520 KPa
EH2= 195,127,520 KPa EH3= 195,127,520 KPa EH4= 195,127,520 KPa
EH5= 195,127,520 KPa EH6= 195,127,520 KPa EH7= 195,127,520 KPa
EH8= 195,127,520 KPa EH9= 195,127,520 KPa v = .292
Pipe Den= .0080272 kg./cu.cm. Insul Thk= .000 mm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 115,142 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 6765 To 6770 DX= -450.000 mm.
GENERAL
Mat= (102)A53 Grade B E= 203,401,232 KPa EH1= 203,401,232 KPa
EH2= 203,401,232 KPa EH3= 203,401,232 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm.
RESTRAINTS
Node 6770 +Y Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 7000 To 7005 DX= 100.000 mm.
GENERAL
Mat= (165)A312 TP316L E= 195,127,520 KPa EH1= 195,127,520 KPa
EH2= 195,127,520 KPa EH3= 195,127,520 KPa EH4= 195,127,520 KPa
EH5= 195,127,520 KPa EH6= 195,127,520 KPa EH7= 195,127,520 KPa
EH8= 195,127,520 KPa EH9= 195,127,520 KPa v = .292
Pipe Den= .0080272 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 115,142 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 7005 To 7010 DX= 400.000 mm.
GENERAL
Mat= (102)A53 Grade B E= 203,401,232 KPa EH1= 203,401,232 KPa
EH2= 203,401,232 KPa EH3= 203,401,232 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm.
RESTRAINTS
Node 7010 +Y Mu = .30
Node 7010 Z Gap= 3.000 mm.

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INPUT LISTING
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 8390 To 8400 DX= .000 mm. DZ= 6,000.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
GENERAL
T1= 85 C T2= 37 C T3= 37 C P1= 900.0205 KPa P2= 510.0116 KPa
PHyd= 1,350.0308 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 199,086,608 KPa EH2= 202,089,360 KPa EH3= 202,089,360 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000059 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RESTRAINTS
Node 8390 +Y Mu = .30
Node 8390 Z Gap= 3.000 mm. Mu = .30
Node 8390 X Gap= 3.000 mm.
Node 8400 +Y
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 8400 To 8410 DX= .000 mm. DZ= 6,000.000 mm.
RESTRAINTS
Node 8410 +Y Mu = .30
Node 8410 X Gap= 3.000 mm.

From 8410 To 8420 DX= .000 mm. DZ= 6,000.000 mm.
RESTRAINTS
Node 8420 +Y Mu = .30
Node 8420 X Gap= 3.000 mm.

From 8420 To 8430 DY= .000 mm. DZ= 1,250.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8429
Angle/Node @2= .00 8428

From 8430 To 8440 DX= -6,000.000 mm. DY= .000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8439
Angle/Node @2= .00 8438

From 8440 To 8450 DZ= 1,900.000 mm.
RESTRAINTS
Node 8450 +Y Mu = .30

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INPUT LISTING

From 8450 To 8460 DZ= 1,900.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8459
Angle/Node @2= .00 8458

From 8460 To 8470 DX= 6,000.000 mm. DZ= .000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8469
Angle/Node @2= .00 8468

From 8470 To 8480 DZ= 800.000 mm.
RESTRAINTS
Node 8480 +Y Mu = .30
Node 8480 X Gap= 3.000 mm.

From 8480 To 4970 DZ= 4,700.000 mm.
SIF's & TEE's
Node 4970 Welding Tee

From 4970 To 8500 DZ= 1,300.000 mm.
RESTRAINTS
Node 8500 +Y Mu = .30

From 8500 To 8510 DZ= 6,000.000 mm.
RESTRAINTS
Node 8510 +Y Mu = .30
Node 8510 X Gap= 3.000 mm. Mu = .30

From 8510 To 8520 DZ= 6,000.000 mm.
RESTRAINTS
Node 8520 +Y Mu = .30
Node 8520 LIM Gap= 3.000 mm.

From 8520 To 8530 DZ= 6,000.000 mm.
RESTRAINTS
Node 8530 +Y Mu = .30
Node 8530 X Gap= 3.000 mm.

From 8530 To 8540 DZ= 6,000.000 mm.
RESTRAINTS
Node 8540 +Y Mu = .30

From 8540 To 8550 DZ= 4,700.000 mm.
SIF's & TEE's
Node 8550 Welding Tee

From 8550 To 8560 DZ= 1,300.000 mm.
RESTRAINTS
Node 8560 +Y Mu = .30
Node 8560 X Gap= 3.000 mm.

From 8560 To 8570 DZ= 500.000 mm.

From 8570 To 8580 DZ= 120.650 mm.

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INPUT LISTING
RIGID Weight= 409.24 N.

From 8580 To 8590 DZ= 120.650 mm.
RIGID Weight= 409.24 N.

From 8600 To 8610 DX= .000 mm. DZ= 142.875 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= .0000 mm.
GENERAL
T1= 175 C T2= 60 C T3= 60 C P1= 6,200.1411 KPa P2= 5,410.1230 KPa
PHyd= 9,300.2119 KPa Mat= (165)A312 TP316L E= 195,127,520 KPa
EH1= 184,539,120 KPa EH2= 192,364,096 KPa EH3= 192,364,096 KPa
EH4= 195,127,520 KPa EH5= 195,127,520 KPa EH6= 195,127,520 KPa
EH7= 195,127,520 KPa EH8= 195,127,520 KPa EH9= 195,127,520 KPa
v = .292 Pipe Den= .0080272 kg./cu.cm. Fluid Den= .0000596 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001362 kg./cu.cm.
RIGID Weight= 524.89 N.
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa
FLANGES
Location= To Method= Peq

From 8610 To 8620 DZ= 142.875 mm.
PIPE
Cor= .0000 mm.
GENERAL
P1= 6,200.1411 KPa PHyd= 9,300.2119 KPa
RIGID Weight= 524.89 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa
FLANGES
Location= From Method= Peq

From 8620 To 8630 DZ= 369.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= .0000 mm.
GENERAL
P1= 6,200.1411 KPa PHyd= 9,300.2119 KPa Mat= (165)A312 TP316L
E= 195,127,520 KPa EH1= 184,539,120 KPa EH2= 192,364,096 KPa
EH3= 192,364,096 KPa EH4= 195,127,520 KPa EH5= 195,127,520 KPa
EH6= 195,127,520 KPa EH7= 195,127,520 KPa EH8= 195,127,520 KPa
EH9= 195,127,520 KPa v = .292 Pipe Den= .0080272 kg./cu.cm.
Fluid Den= .0000596 kg./cu.cm. Insul Thk= 40.000 mm.
Insul Den= .0001362 kg./cu.cm.
RESTRAINTS

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INPUT LISTING
Node 8630 +Y Mu = .30
Node 8630 X Gap= 15.000 mm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 8630 To 8640 DZ= 424.000 mm.

From 8640 To 8650 DZ= 5,576.000 mm.
RESTRAINTS
Node 8650 +Y

From 8650 To 8660 DZ= 2,000.000 mm.

From 8660 To 8670 DZ= 4,000.000 mm.
RESTRAINTS
Node 8670 +Y Mu = .30
Node 8670 X Gap= 3.000 mm. Mu = .30

From 8670 To 8680 DZ= 6,000.000 mm.
RESTRAINTS
Node 8680 +Y Mu = .30

From 8680 To 8690 DZ= 6,000.000 mm.
RESTRAINTS
Node 8690 +Y Mu = .30
Node 8690 X Gap= 3.000 mm. Mu = .30

From 8690 To 8700 DZ= 6,000.000 mm.
RESTRAINTS
Node 8700 +Y Mu = .30
Node 8700 X Gap= 3.000 mm.
Node 8700 Z Gap= 3.000 mm.

From 8700 To 6830 DZ= 423.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= .0000 mm.
GENERAL
P1= 6,200.1411 KPa PHyd= 9,300.2119 KPa Mat= (165)A312 TP316L
E= 195,127,520 KPa EH1= 184,539,120 KPa EH2= 192,364,096 KPa
EH3= 192,364,096 KPa EH4= 195,127,520 KPa EH5= 195,127,520 KPa
EH6= 195,127,520 KPa EH7= 195,127,520 KPa EH8= 195,127,520 KPa
EH9= 195,127,520 KPa v = .292 Pipe Den= .0080272 kg./cu.cm.
Fluid Den= .0000596 kg./cu.cm. Insul Thk= 40.000 mm.
Insul Den= .0001362 kg./cu.cm.
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
SIF's & TEE's
Node 6830 Welding Tee
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa

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INPUT LISTING
Sh1= 111,904 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 6830 To 8720 DZ= 5,576.000 mm.
RESTRAINTS
Node 8720 +Y Mu = .30

From 8720 To 8730 DZ= 2,000.000 mm.

From 8730 To 8740 DZ= 4,000.000 mm.
RESTRAINTS
Node 8740 +Y Mu = .30
Node 8740 X Gap= 3.000 mm. Mu = .30

From 8740 To 8750 DZ= 6,000.000 mm.
RESTRAINTS
Node 8750 +Y Mu = .30

From 8750 To 8760 DZ= 6,000.000 mm.
RESTRAINTS
Node 8760 +Y Mu = .30
Node 8760 X Gap= 3.000 mm. Mu = .30

From 8760 To 8770 DZ= 6,000.000 mm.
RESTRAINTS
Node 8770 +Y Mu = .30

From 8770 To 8780 DZ= 1,200.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8779
Angle/Node @2= .00 8778

From 8780 To 8790 DX= 334.000 mm. DY= -334.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 8789
Angle/Node @2= .00 8788

From 8790 To 8800 DX= 816.000 mm.

From 8800 To 8810 DX= 5,847.000 mm.
RESTRAINTS
Node 8810 +Y Mu = .30
Node 8810 Z Gap= 3.000 mm.

From 8920 To 8930 DZ= -3,000.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
GENERAL
T1= 272 C T2= 270 C T3= -28 C P1= 600.0137 KPa P2= 50.0011 KPa
PHyd= 900.0205 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 187,335,024 KPa EH2= 187,483,936 KPa EH3= 205,934,864 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.

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INPUT LISTING
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RESTRAINTS
Node 8920 +Y Mu = .30
Node 8920 X Gap= 3.000 mm.
Node 8920 Z Gap= 3.000 mm.
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,638 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 8930 To 8940 DZ= -400.000 mm.

From 8940 To 8950 DZ= -3,000.000 mm.
RESTRAINTS
Node 8950 +Y Mu = .30

From 8950 To 8960 DZ= -6,000.000 mm.
RESTRAINTS
Node 8960 +Y Mu = .30
Node 8960 X Gap= 3.000 mm.

From 8960 To 8970 DZ= -2,750.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8969
Angle/Node @2= .00 8968

From 8970 To 8980 DX= -6,000.000 mm. DZ= .000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8979
Angle/Node @2= .00 8978

From 8980 To 8990 DZ= -1,000.000 mm.
RESTRAINTS
Node 8990 +Y Mu = .30

From 8990 To 9000 DZ= -1,000.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8999
Angle/Node @2= .00 8998

From 9000 To 9010 DX= 6,000.000 mm. DZ= .000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 9009
Angle/Node @2= .00 9008

From 9010 To 9020 DZ= -1,250.000 mm.
RESTRAINTS
Node 9020 +Y Mu = .30

From 9020 To 6120 DZ= -3,834.000 mm.

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INPUT LISTING
SIF's & TEE's
Node 6120 Welding Tee

From 6120 To 9040 DZ= -2,166.000 mm.
RESTRAINTS
Node 9040 +Y
Node 9040 X Gap= 3.000 mm.
Node 9040 Z Gap= 3.000 mm.

From 9040 To 3965 DZ= -4,028.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
GENERAL
T1= 272 C T2= 270 C T3= -28 C P1= 600.0137 KPa P2= 50.0011 KPa
PHyd= 900.0205 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 187,335,024 KPa EH2= 187,483,936 KPa EH3= 205,934,864 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
SIF's & TEE's
Node 3965 Welding Tee
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,638 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 3965 To 6130 DZ= -598.000 mm.

From 6130 To 9060 DZ= -1,374.000 mm.
RESTRAINTS
Node 9060 +Y Mu = .30

From 9060 To 9070 DZ= -6,000.000 mm.
RESTRAINTS
Node 9070 +Y Mu = .30
Node 9070 X Gap= 3.000 mm.

From 9070 To 9080 DZ= -2,950.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 9079
Angle/Node @2= .00 9078

From 9080 To 9090 DX= -6,000.000 mm. DZ= .000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 9089
Angle/Node @2= .00 9088

From 9090 To 9100 DZ= -1,000.000 mm.
RESTRAINTS
Node 9100 +Y Mu = .30

From 9100 To 9110 DZ= -1,000.000 mm.
BEND at "TO" end

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INPUT LISTING
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 9109
Angle/Node @2= .00 9108

From 9110 To 9120 DX= 6,000.000 mm. DZ= .000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 9119
Angle/Node @2= .00 9118

From 9120 To 9130 DZ= -850.000 mm.
RESTRAINTS
Node 9130 +Y Mu = .30

From 9130 To 9140 DX= .000 mm. DZ= -6,000.000 mm.
RESTRAINTS
Node 9140 +Y Mu = .30
Node 9140 X Gap= 3.000 mm.

From 9140 To 9150 DX= .000 mm. DZ= -6,000.000 mm.
RESTRAINTS
Node 9150 +Y
Node 9150 X Gap= 3.000 mm.

From 9150 To 9160 DZ= -6,000.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
GENERAL
T1= 272 C T2= 270 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,335,024 KPa
EH2= 187,483,936 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0001362 kg./cu.cm.
RESTRAINTS
Node 9160 +Y Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,638 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 9160 To 9170 DZ= -6,000.000 mm.
RESTRAINTS
Node 9170 +Y Mu = .30
Node 9170 X
Node 9170 Z Gap= 3.000 mm.
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MATERIAL Changes:
10 20 Mat= (106)A106 Grade B E= 203,401,232 KPa
v = .292 Density= .0078 kg./cu.cm.
280 300 Mat= (106)A106 Grade B E= 203,401,232 KPa
v = .292 Density= .0078 kg./cu.cm.

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INPUT LISTING

500	580	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
610	620	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
590	5190	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
5300	5310	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
640	660	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
620	680	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
820	840	Mat= (383)A516 70 E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
280	4350	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
1020	1040	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
1020	8280	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
1400	1480	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
1660	1680	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
1821	1920	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
2000	6420	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
2000	4100	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
4505	6790	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
4100	4560	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
4740	4750	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
8140	4980	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
4980	4990	E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
5120	5130	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
4710	6530	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
1260	2140	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
4750	8150	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
6210	6220	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
6420	6425	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
6425	6430	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
6480	6485	Mat= (165)A312 TP316L E= 195,127,520 KPa

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INPUT LISTING

		v = .292 Density= .0080 kg./cu.cm.
6485	6490	Mat= (102)A53 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
6510	6515	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
6515	6520	Mat= (102)A53 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
6530	6535	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
6535	6540	Mat= (102)A53 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
6700	6705	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
6705	6710	Mat= (102)A53 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
6760	6765	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
6765	6770	Mat= (102)A53 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
7000	7005	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
7005	7010	Mat= (102)A53 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
8390	8400	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
8600	8610	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
8620	8630	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
8700	6830	Mat= (165)A312 TP316L E= 195,127,520 KPa
		v = .292 Density= .0080 kg./cu.cm.
8920	8930	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
9040	3965	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.
9150	9160	Mat= (106)A106 Grade B E= 203,401,232 KPa
		v = .292 Density= .0078 kg./cu.cm.

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 22,2024 14:50:44
JOBNAME: D:\BINAK PRO\NATIVE CAESAR FILE\NATIVE CEASAR FILE-D03\BNK-GCS-CN-007-

ALLOWABLE STRESS Changes

10	20	B31.3 (2016) Cycle Max Switch = ---
		Sc= 137,895 KPa Sh1= 137,895 KPa
		Sh2= 137,895 KPa Sh3= 137,895 KPa
		Sh4= 137,895 KPa Sh5= 137,895 KPa
		Sh6= 137,895 KPa Sh7= 137,895 KPa
		Sh8= 137,895 KPa Sh9= 137,895 KPa
		Sy= 241,316 KPa
140	160	B31.3 (2016) Cycle Max Switch = ---
		Sc= 137,895 KPa Sh1= 137,895 KPa
		Sh2= 137,895 KPa Sh3= 137,895 KPa
		Sh4= 137,895 KPa Sh5= 137,895 KPa
		Sh6= 137,895 KPa Sh7= 137,895 KPa
		Sh8= 137,895 KPa Sh9= 137,895 KPa
		Sy= 241,316 KPa

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
Job:: BNK-GCS-CN-007-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

120	180	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
280	300	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
500	580	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
580	590	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
610	620	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
590	5190	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
5300	5310	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 129,638 KPa
		Sh2= 129,365 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
610	640	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa

INPUT LISTING

Sy= 241,316 KPa
640 660 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa
620 680 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa
820 840 B31.3 (2016) Cycle Max Switch = ---
Sc= 160,648 KPa Sh1= 157,769 KPa
Sh2= 160,373 KPa Sh3= 160,373 KPa
Sh4= 160,648 KPa Sh5= 160,648 KPa
Sh6= 160,648 KPa Sh7= 160,648 KPa
Sh8= 160,648 KPa Sh9= 160,648 KPa
Sy= 262,001 KPa
280 4350 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa
4360 4370 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa
4370 4380 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa
900 920 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa
1020 1040 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,888 KPa Sh3= 137,888 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa

INPUT LISTING

Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

1020 8280 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,888 KPa Sh3= 137,888 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

1400 1480 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,888 KPa Sh3= 137,888 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

1660 1680 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,819 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

7140 1760 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,819 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

7201 7210 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

1740 7150 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,819 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

1821 1920 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 111,904 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

2000 6420 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 111,904 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa

INPUT LISTING

Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

2000 4100 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 111,904 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

4505 6790 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 111,904 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

4100 4560 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 111,904 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

4740 4750 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

4780 4160 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

4310 4320 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

4780 6620 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

8140 4980 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa

INPUT LISTING

Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

4980 4990 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

5120 5130 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 129,638 KPa
Sh2= 129,365 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

4710 6530 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 111,904 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

1260 2140 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

2440 2460 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 129,365 KPa
Sh2= 129,638 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

7350 2300 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

2300 2620 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,571 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

2740 2760 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 129,365 KPa

INPUT LISTING

Sh2= 129,638 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

4750 8150 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

6210 6220 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

6420 6425 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 115,142 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

6425 6430 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

6480 6485 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 115,142 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

6485 6490 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

6510 6515 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 115,142 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

6515 6520 B31.3 (2016) Cycle Max Switch = ---

INPUT LISTING

Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

6530 6535 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 115,142 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

6535 6540 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

6700 6705 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 115,142 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

6705 6710 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

6760 6765 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 115,142 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

6765 6770 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

7000 7005 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 115,142 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
Job:: BNK-GCS-CN-007-D03
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INPUT LISTING

7005 7010 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

8390 8400 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

8600 8610 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 111,904 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

8610 8620 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 111,904 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

8620 8630 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 111,904 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

8700 6830 B31.3 (2016) Cycle Max Switch = ---
Sc= 115,142 KPa Sh1= 111,904 KPa
Sh2= 115,142 KPa Sh3= 115,142 KPa
Sh4= 115,142 KPa Sh5= 115,142 KPa
Sh6= 115,142 KPa Sh7= 115,142 KPa
Sh8= 115,142 KPa Sh9= 115,142 KPa
Sy= 172,369 KPa

8920 8930 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 129,365 KPa
Sh2= 129,638 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa

9040 3965 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 129,365 KPa
Sh2= 129,638 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa

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INPUT LISTING

Sy= 241,316 KPa
9150 9160 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 129,365 KPa
Sh2= 129,638 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa
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BEND ELEMENTS
40 60 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00 59
Angle/Node @2= .00 58
60 80 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00 79
Angle/Node @2= .00 78
120 180 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
179
490 500 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
499 Angle/Node @2= .00 498
500 580 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
579 Angle/Node @2= .00 578
590 600 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
599 Angle/Node @2= .00 598
590 5190 Radius= 76.200 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
5189 Angle/Node @2= .00 5188
5190 8160 Radius= 76.200 mm. (LONG)
Bend Angle= 45.000 Angle/Node @1= 22.50
8159 Angle/Node @2= .00 8158
5230 5240 Radius= 76.200 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
5239 Angle/Node @2= .00 5238
5320 5330 Radius= 114.300 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
5329 Angle/Node @2= .00 5328
5340 5350 Radius= 114.300 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
5349 Angle/Node @2= .00 5348
5375 5380 Radius= 114.300 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
5379 Angle/Node @2= .00 5378
5380 5390 Radius= 114.300 mm. (LONG)
Bend Angle= 42.270 Angle/Node @1= 21.14
5389 Angle/Node @2= .00 5388
620 680 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
679 Angle/Node @2= .00 678

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INPUT LISTING

4380	4390	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4389 Angle/Node @2= .00 4388
4395	880	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		879 Angle/Node @2= .00 878
960	980	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		979 Angle/Node @2= .00 978
1100	1120	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		1119 Angle/Node @2= .00 1118
1160	1180	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		1179 Angle/Node @2= .00 1178
1180	1200	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		1199 Angle/Node @2= .00 1198
1390	1400	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		1399 Angle/Node @2= .00 1398
1400	1480	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		1479 Angle/Node @2= .00 1478
1480	1485	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		1484 Angle/Node @2= .00 1483
1485	1490	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		1489 Angle/Node @2= .00 1488
1520	1540	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		1539 Angle/Node @2= .00 1538
1560	1580	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		1579 Angle/Node @2= .00 1578
7020	7060	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		7059 Angle/Node @2= .00 7058
7065	7070	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		1621 Angle/Node @2= .00 1622
7070	7080	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		7079 Angle/Node @2= .00 7078
7040	7090	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		7089 Angle/Node @2= .00 7088
7095	7100	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		7099 Angle/Node @2= .00 7098
7100	7110	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		7109 Angle/Node @2= .00 7108
7210	7220	Radius= 152.400 mm. (LONG)

INPUT LISTING

Bend Angle= 90.000 Angle/Node @1= 45.00
7219
7225 7230 Radius= 152.400 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
7229 Angle/Node @2= .00 7228
1920 1940 Radius= 152.400 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
1939
1940 1960 Radius= 152.400 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
1959 Angle/Node @2= .00 1958
7260 7290 Radius= 228.600 mm. (LONG)
Bend Angle= 89.719 Angle/Node @1= 44.86
7289 Angle/Node @2= .00 7288
7400 7300 Radius= 228.600 mm. (LONG)
Bend Angle= 89.999 Angle/Node @1= 45.00
7299 Angle/Node @2= .00 7298
4482 4485 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
4484 Angle/Node @2= .00 4483
6780 6795 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
6794 Angle/Node @2= .00 6793
6795 6800 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
6799 Angle/Node @2= .00 6798
6810 6820 Radius= 228.600 mm. (LONG)
Bend Angle= 45.000 Angle/Node @1= 22.50
6819 Angle/Node @2= .00 6818
4580 4590 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
4589 Angle/Node @2= .00 4588
8150 4140 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
4139 Angle/Node @2= .00 4138
6560 4760 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
4759 Angle/Node @2= .00 4758
4760 4770 Radius= 228.600 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
4769
4930 4940 Radius= 304.800 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
4939 Angle/Node @2= .00 4938
4940 4950 Radius= 304.800 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
4949 Angle/Node @2= .00 4948
4950 4960 Radius= 304.800 mm. (LONG)
Bend Angle= 45.000 Angle/Node @1= 22.50
4959 Angle/Node @2= .00 4958
5010 5020 Radius= 152.400 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00
5019
5130 5140 Radius= 152.400 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00

INPUT LISTING

		5139
5145	5150	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5149 Angle/Node @2= .00 5148
5150	5160	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5159 Angle/Node @2= .00 5158
5160	5170	Radius= 152.400 mm. (LONG)
		Bend Angle= 44.939 Angle/Node @1= 22.47
		5169 Angle/Node @2= .00 5168
1260	2140	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2139 Angle/Node @2= .00 2138
2140	2160	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2159 Angle/Node @2= .00 2158
2220	2260	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000
2270	7340	Radius= 76.200 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		7339 Angle/Node @2= .00 7338
7340	2280	Radius= 76.200 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		2279 Angle/Node @2= .00 2278
2500	2520	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2519 Angle/Node @2= .00 2518
5710	2580	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2579 Angle/Node @2= .00 2578
2580	5840	Radius= 228.600 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		5839
7350	2300	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2299 Angle/Node @2= .00 2298
2800	2820	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2819 Angle/Node @2= .00 2818
2870	2880	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2879 Angle/Node @2= .00 2878
5805	5810	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5809 Angle/Node @2= .00 5808
5810	5820	Radius= 228.600 mm. (LONG)
		Bend Angle= 44.937 Angle/Node @1= 22.47
		5819 Angle/Node @2= .00 5818
8420	8430	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		8429 Angle/Node @2= .00 8428
8430	8440	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		8439 Angle/Node @2= .00 8438
8450	8460	Radius= 381.000 mm. (LONG)

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INPUT LISTING

		Bend Angle= 90.000 Angle/Node @1= 45.00
		8459 Angle/Node @2= .00 8458
8460	8470	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		8469 Angle/Node @2= .00 8468
8770	8780	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		8779 Angle/Node @2= .00 8778
8780	8790	Radius= 228.600 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		8789 Angle/Node @2= .00 8788
8960	8970	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		8969 Angle/Node @2= .00 8968
8970	8980	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		8979 Angle/Node @2= .00 8978
8990	9000	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		8999 Angle/Node @2= .00 8998
9000	9010	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		9009 Angle/Node @2= .00 9008
9070	9080	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		9079 Angle/Node @2= .00 9078
9080	9090	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		9089 Angle/Node @2= .00 9088
9100	9110	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		9109 Angle/Node @2= .00 9108
9110	9120	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		9119 Angle/Node @2= .00 9118

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RIGIDS

10	20	RIGID Weight= 191.27 N.
25	40	RIGID Weight= 191.27 N.
120	140	RIGID Weight= .00 N.
200	220	RIGID Weight= 191.27 N.
220	240	RIGID Weight= 191.27 N.
320	340	RIGID Weight= 191.27 N.
340	360	RIGID Weight= 1,023.41 N.
360	380	RIGID Weight= 191.27 N.
420	440	RIGID Weight= 191.27 N.
440	460	RIGID Weight= 191.27 N.
500	6210	RIGID Weight= .00 N.
5200	5210	RIGID Weight= 44.48 N.
5210	5220	RIGID Weight= 93.41 N.
5220	5230	RIGID Weight= 44.48 N.
5240	6230	RIGID Weight= .00 N.

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INPUT LISTING

5250	5260	RIGID Weight= 44.48 N.
5260	5270	RIGID Weight= 44.48 N.
5275	6260	RIGID Weight= .00 N.
5280	5290	RIGID Weight= 44.48 N.
5290	5300	RIGID Weight= 258.00 N.
5300	5310	RIGID Weight= 31.14 N.
5340	6280	RIGID Weight= .00 N.
610	640	RIGID Weight= .00 N.
700	720	RIGID Weight= 286.91 N.
721	760	RIGID Weight= 177.93 N.
780	800	RIGID Weight= .00 N.
780	6241	RIGID Weight= .00 N.
780	6271	RIGID Weight= .00 N.
780	6291	RIGID Weight= .00 N.
820	840	RIGID Weight= .00 N.
4350	4360	RIGID Weight= 44.48 N.
4360	4370	RIGID Weight= 311.38 N.
4370	4380	RIGID Weight= 57.83 N.
4390	6300	RIGID Weight= .00 N.
900	920	RIGID Weight= 57.83 N.
920	940	RIGID Weight= 427.03 N.
940	960	RIGID Weight= 57.83 N.
1060	1080	RIGID Weight= 364.75 N.
1080	1100	RIGID Weight= 364.75 N.
1120	8260	RIGID Weight= .00 N.
1220	1240	RIGID Weight= 364.75 N.
1241	8300	RIGID Weight= 364.75 N.
1300	1320	RIGID Weight= 364.75 N.
1320	1340	RIGID Weight= 3,087.07 N.
1340	1360	RIGID Weight= 364.75 N.
1400	6400	RIGID Weight= .00 N.
1640	1660	RIGID Weight= 191.27 N.
7120	7130	RIGID Weight= 191.27 N.
1660	1680	RIGID Weight= 191.27 N.
1720	7140	RIGID Weight= .00 N.
7131	7160	RIGID Weight= 191.27 N.
7171	7150	RIGID Weight= .00 N.
7140	1760	RIGID Weight= .00 N.
1800	1820	RIGID Weight= 191.27 N.
7150	7180	RIGID Weight= .00 N.
7190	7200	RIGID Weight= 191.27 N.
7201	7210	RIGID Weight= 191.27 N.
1740	7150	RIGID Weight= 382.52 N.
7150	1840	RIGID Weight= 1,867.59 N.
1840	1860	RIGID Weight=10,500.52 N.
1860	1880	RIGID Weight= 4,500.22 N.
1880	1900	RIGID Weight=10,500.52 N.
1900	7140	RIGID Weight= 1,867.59 N.
7140	1740	RIGID Weight= 382.52 N.
1821	1920	RIGID Weight= 191.27 N.
2000	6420	RIGID Weight= .00 N.
4400	4410	RIGID Weight= 364.75 N.
4410	4420	RIGID Weight= 3,087.07 N.
4420	4430	RIGID Weight= 364.75 N.
4440	6480	RIGID Weight= .00 N.

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INPUT LISTING

4450	4460	RIGID	Weight= 364.75 N.
4460	4470	RIGID	Weight= 733.96 N.
4470	4480	RIGID	Weight= 364.75 N.
4485	6760	RIGID	Weight= .00 N.
4490	4500	RIGID	Weight= 364.75 N.
4500	4505	RIGID	Weight= 1,005.30 N.
4505	6790	RIGID	Weight= 364.75 N.
6795	7000	RIGID	Weight= .00 N.
4600	4610	RIGID	Weight= 364.75 N.
4610	4620	RIGID	Weight= 2,708.97 N.
4620	4630	RIGID	Weight= 364.75 N.
4640	6510	RIGID	Weight= .00 N.
4660	4670	RIGID	Weight= 191.27 N.
4670	4680	RIGID	Weight= 387.00 N.
4680	4690	RIGID	Weight= 191.27 N.
4710	6530	RIGID	Weight= .00 N.
4720	4730	RIGID	Weight= 364.75 N.
4730	4740	RIGID	Weight= 2,708.97 N.
4740	4750	RIGID	Weight= 191.27 N.
4160	6600	RIGID	Weight= .00 N.
4180	4200	RIGID	Weight= 302.48 N.
4200	4220	RIGID	Weight= 30.00 N.
4220	4240	RIGID	Weight= 177.93 N.
4261	4280	RIGID	Weight= .00 N.
4280	4300	RIGID	Weight= .00 N.
4300	4310	RIGID	Weight= .00 N.
4310	4320	RIGID	Weight= .00 N.
7320	6630	RIGID	Weight= .00 N.
4800	4810	RIGID	Weight= 302.48 N.
4810	4820	RIGID	Weight= 3,362.86 N.
4820	4830	RIGID	Weight= 302.48 N.
4840	4850	RIGID	Weight= 302.48 N.
4850	4860	RIGID	Weight= 360.31 N.
4860	4870	RIGID	Weight= 177.93 N.
6650	6660	RIGID	Weight= .00 N.
4890	4900	RIGID	Weight= 177.93 N.
4900	4910	RIGID	Weight= 2,259.70 N.
4910	4920	RIGID	Weight= 177.93 N.
4930	6680	RIGID	Weight= .00 N.
4980	4990	RIGID	Weight= 191.27 N.
4990	5000	RIGID	Weight= 1,116.50 N.
5000	5010	RIGID	Weight= 191.27 N.
5020	6700	RIGID	Weight= .00 N.
5040	5060	RIGID	Weight= 106.76 N.
5060	5070	RIGID	Weight= 217.96 N.
5070	5080	RIGID	Weight= 106.76 N.
5095	6720	RIGID	Weight= .00 N.
5100	5110	RIGID	Weight= 191.27 N.
5110	5120	RIGID	Weight= 1,116.50 N.
5120	5130	RIGID	Weight= 71.17 N.
5145	6740	RIGID	Weight= .00 N.
4710	6530	RIGID	Weight= .00 N.
2340	2360	RIGID	Weight= 57.83 N.
2360	5650	RIGID	Weight= 311.38 N.
5650	5660	RIGID	Weight= 57.83 N.

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INPUT LISTING

5670	5680	RIGID Weight= 35.59 N.
5680	5690	RIGID Weight= 35.59 N.
5690	2420	RIGID Weight= 25.00 N.
2420	2440	RIGID Weight= 100.00 N.
2440	2460	RIGID Weight= 54.49 N.
2540	5700	RIGID Weight= 111.21 N.
5700	2560	RIGID Weight= 1,005.30 N.
2560	2570	RIGID Weight= 111.21 N.
5710	6440	RIGID Weight= .00 N.
2640	5720	RIGID Weight= 57.83 N.
5720	2660	RIGID Weight= 311.38 N.
2660	5730	RIGID Weight= 57.83 N.
5740	5750	RIGID Weight= 35.59 N.
5750	5760	RIGID Weight= 35.59 N.
5760	2720	RIGID Weight= 35.59 N.
2720	2740	RIGID Weight= 100.00 N.
2740	2760	RIGID Weight= 54.49 N.
2840	2846	RIGID Weight= 111.21 N.
2846	2852	RIGID Weight= 1,005.30 N.
2852	2860	RIGID Weight= 111.21 N.
2870	6460	RIGID Weight= .00 N.
8150	6550	RIGID Weight= .00 N.
8570	8580	RIGID Weight= 409.24 N.
8580	8590	RIGID Weight= 409.24 N.
8600	8610	RIGID Weight= 524.89 N.
8610	8620	RIGID Weight= 524.89 N.

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SIF's & TEE's

140	160	Node 140 Unreinforced Tee
260	280	Node 280 Weldolet
590	5190	Node 590 Weldolet
5240	6230	Node 6230 Unreinforced Tee
5275	6260	Node 6260 Unreinforced Tee
5340	6280	Node 6280 Unreinforced Tee
610	640	Node 640 Unreinforced Tee
4390	6300	Node 6300 Unreinforced Tee
1000	1020	Node 1020 Weldolet
1120	8260	Node 8260 Unreinforced Tee
8280	1260	Node 1260 Weldolet
1580	1600	Node 1600 Welding Tee
7390	7020	Node 7020 Welding Tee
7380	7040	Node 7040 Welding Tee
1960	7270	Node 7270 Welding Tee
2000	6420	Node 6420 Unreinforced Tee
2000	4100	Node 4100 Welding Tee
4440	6480	Node 6480 Unreinforced Tee
		Pad= 7.110 mm.
4485	6760	Node 6760 Unreinforced Tee
		Pad= 7.110 mm.
6795	7000	Node 7000 Unreinforced Tee
		Pad= 7.110 mm.
4100	4560	Node 4560 Welding Tee

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INPUT LISTING

4640	6510	Node 6510	Unreinforced Tee
		Pad= 7.110 mm.	
4710	6530	Node 6530	Unreinforced Tee
		Pad= 7.112 mm.	
4770	7330	Node 7330	Welding Tee
4160	6600	Node 6600	Unreinforced Tee
7320	6630	Node 6630	Unreinforced Tee
6650	6660	Node 6660	Unreinforced Tee
4930	6680	Node 6680	Unreinforced Tee
5020	6700	Node 6700	Unreinforced Tee
		Pad= 7.112 mm.	
5095	6720	Node 6720	Reinforced Tee Pad= 6.020 mm.
5145	6740	Node 6740	Unreinforced Tee
4710	6530	Node 6530	Unreinforced Tee
		Pad= 7.112 mm.	
2280	7350	Node 7350	Unreinforced Tee
5710	6440	Node 6440	Unreinforced Tee
2880	5800	Node 5800	Welding Tee
8480	4970	Node 4970	Welding Tee
8540	8550	Node 8550	Welding Tee
8700	6830	Node 6830	Welding Tee
9020	6120	Node 6120	Welding Tee
9040	3965	Node 3965	Welding Tee

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REDUCERS

8180	8190	Diam2= 114.300 mm.	Wall2= 6.020 mm.
8200	8210	Diam2= 60.325 mm.	Wall2= 5.537 mm.
5310	5320	Diam2= 88.900 mm.	Wall2= 7.620 mm.
4570	8140	Diam2= 114.300 mm.	Wall2= 6.020 mm.
4650	4660	Diam2= 114.300 mm.	Wall2= 6.020 mm.
4690	4700	Diam2= 168.275 mm.	Wall2= 7.112 mm.
4570	8140	Diam2= 114.300 mm.	Wall2= 6.020 mm.
5030	5040	Diam2= 88.900 mm.	Wall2= 5.486 mm.
5080	5090	Diam2= 114.300 mm.	Wall2= 6.020 mm.
2400	5670	Diam2= 48.260 mm.	Wall2= 7.137 mm.
2460	2480	Diam2= 168.275 mm.	Wall2= 10.973 mm.
2700	5740	Diam2= 48.260 mm.	Wall2= 7.137 mm.
2760	2780	Diam2= 168.275 mm.	Wall2= 10.973 mm.

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RESTRAINTS

NODE	TYPE	CNODE	Len GAP	MU YIELD	STIF1	STIF2	FORCE	Dir Vectors
25	ANC	20			.000	.000	.000	
160	-X			.30	1.000	.000	.000	
160	Z	121			.000	.000	1.000	
121	+Y			.10	.000	1.000	.000	
160	X	121			1.000	.000	.000	
8270	+Y			.10	.000	1.000	.000	
8270	X		5.00		1.000	.000	.000	
300	Y			.30	.000	1.000	.000	

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300	Z		3.00		.000	.000	1.000	
400	Y			.30	.000	1.000	.000	
400	Z		3.00	.30	.000	.000	1.000	
480	Y			.30	.000	1.000	.000	
480	Z		3.00	.30	.000	.000	1.000	
5370	+Y			.30	.000	1.000	.000	
5370	Z		3.00	.30	.000	.000	1.000	
5375	+Y				.000	1.000	.000	
660	+Y	800		.30	.000	1.000	.000	
720	ANC	721			.000	.000	.000	
780	ANC	820			.000	.000	.000	
840	ANC				.000	.000	.000	
1240	ANC	1241			.000	.000	.000	
8280	Y			.30	.000	1.000	.000	
8280	Z		3.00		.000	.000	1.000	
1280	Y			.30	.000	1.000	.000	
1280	Z		3.00	.30	.000	.000	1.000	
1380	Y			.30	.000	1.000	.000	
1380	Z		3.00	.30	.000	.000	1.000	
1500	+Y			.30	.000	1.000	.000	
1500	Z		3.00		.000	.000	1.000	
1520	+Y			.30	.000	1.000	.000	
1560	+Y			.30	.000	1.000	.000	
1560	X		3.00	.30	1.000	.000	.000	
7390	+Y			.30	.000	1.000	.000	
7380	+Y			.30	.000	1.000	.000	
1660	ANC	1661			.000	.000	.000	
7130	ANC	7131			.000	.000	.000	
1700	ANC	1720			.000	.000	.000	
7170	ANC	7171			.000	.000	.000	
1780	ANC	1760			.000	.000	.000	
1820	ANC	1821			.000	.000	.000	
7180	ANC	7181			.000	.000	.000	
7200	ANC	7201			.000	.000	.000	
7370	+Y				.000	1.000	.000	
1840	+Y				.000	1.000	.000	
1840	X			.30	1.000	.000	.000	
1840	Z		6.00	.30	.000	.000	1.000	
1860	Y			.10	.000	1.000	.000	
1860	Z		6.00	.30	.000	.000	1.000	
1880	Y			.10	.000	1.000	.000	
1880	Z		6.00	.30	.000	.000	1.000	
1900	Y			.10	.000	1.000	.000	
1900	X			.30	1.000	.000	.000	
1900	Z		6.00	.30	.000	.000	1.000	
7400	+Y			.30	.000	1.000	.000	
7400	X		3.00		1.000	.000	.000	
6560	+Y			.30	.000	1.000	.000	
6560	Z		3.00		.000	.000	1.000	
4220	ANC	4221			.000	.000	.000	
4260	ANC	4261			.000	.000	.000	
4320	ANC				.000	.000	.000	
2180	+Y			.30	.000	1.000	.000	
2180	Z		3.00	.30	.000	.000	1.000	
2200	+Y			.30	.000	1.000	.000	

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2220	+Y			.30	.000	1.000	.000	
2220	Z		3.00	.30	.000	.000	1.000	
2270	+Y				.000	1.000	.000	
2320	+Y				.000	1.000	.000	
2500	+Y			.30	.000	1.000	.000	
2500	Z		3.00		.000	.000	1.000	
2500	X		3.00	.30	1.000	.000	.000	
2620	+Y			.30	.000	1.000	.000	
2800	+Y				.000	1.000	.000	
2800	Z		3.00		.000	.000	1.000	
2800	X		3.00		1.000	.000	.000	
5805	+Y			.30	.000	1.000	.000	
6220	+Y			.30	.000	1.000	.000	
6220	Z		3.00	.30	.000	.000	1.000	
6240	+Y	6241			.000	1.000	.000	
6270	+Y	6271			.000	1.000	.000	
6270	Z	6271	3.00		.000	.000	1.000	
6290	+Y	6291			.000	1.000	.000	
6290	Z	6291			.000	.000	1.000	
6310	+Y			.30	.000	1.000	.000	
6410	+Y			.30	.000	1.000	.000	
6410	Z		3.00	.30	.000	.000	1.000	
6430	+Y			.30	.000	1.000	.000	
6450	+Y				.000	1.000	.000	
6470	+Y				.000	1.000	.000	
6490	+Y			.30	.000	1.000	.000	
6520	+Y			.30	.000	1.000	.000	
6540	+Y			.30	.000	1.000	.000	
6540	X		3.00	.30	1.000	.000	.000	
6590	+Y			.30	.000	1.000	.000	
6590	X		3.00	.30	1.000	.000	.000	
6610	+Y				.000	1.000	.000	
6640	Y				.000	1.000	.000	
6670	+Y			.30	.000	1.000	.000	
6670	Z		3.00		.000	.000	1.000	
6690	+Y			.30	.000	1.000	.000	
6710	+Y				.000	1.000	.000	
6730	+Y			.30	.000	1.000	.000	
6730	X		3.00		1.000	.000	.000	
6750	+Y				.000	1.000	.000	
6770	+Y			.30	.000	1.000	.000	
7010	+Y			.30	.000	1.000	.000	
7010	Z		3.00		.000	.000	1.000	
8390	+Y			.30	.000	1.000	.000	
8390	Z		3.00	.30	.000	.000	1.000	
8390	X		3.00		1.000	.000	.000	
8400	+Y				.000	1.000	.000	
8410	+Y			.30	.000	1.000	.000	
8410	X		3.00		1.000	.000	.000	
8420	+Y			.30	.000	1.000	.000	
8420	X		3.00		1.000	.000	.000	
8450	+Y			.30	.000	1.000	.000	
8480	+Y			.30	.000	1.000	.000	
8480	X		3.00		1.000	.000	.000	
8500	+Y			.30	.000	1.000	.000	

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8510	+Y		.30	.000	1.000	.000
8510	X	3.00	.30	1.000	.000	.000
8520	+Y		.30	.000	1.000	.000
8520	LIM	3.00		.000	.000	.000
8530	+Y		.30	.000	1.000	.000
8530	X	3.00		1.000	.000	.000
8540	+Y		.30	.000	1.000	.000
8560	+Y		.30	.000	1.000	.000
8560	X	3.00		1.000	.000	.000
8630	+Y		.30	.000	1.000	.000
8630	X	15.00		1.000	.000	.000
8650	+Y			.000	1.000	.000
8670	+Y		.30	.000	1.000	.000
8670	X	3.00	.30	1.000	.000	.000
8680	+Y		.30	.000	1.000	.000
8690	+Y		.30	.000	1.000	.000
8690	X	3.00	.30	1.000	.000	.000
8700	+Y		.30	.000	1.000	.000
8700	X	3.00		1.000	.000	.000
8700	Z	3.00		.000	.000	1.000
8720	+Y		.30	.000	1.000	.000
8740	+Y		.30	.000	1.000	.000
8740	X	3.00	.30	1.000	.000	.000
8750	+Y		.30	.000	1.000	.000
8760	+Y		.30	.000	1.000	.000
8760	X	3.00	.30	1.000	.000	.000
8770	+Y		.30	.000	1.000	.000
8810	+Y		.30	.000	1.000	.000
8810	Z	3.00		.000	.000	1.000
8920	+Y		.30	.000	1.000	.000
8920	X	3.00		1.000	.000	.000
8920	Z	3.00		.000	.000	1.000
8950	+Y		.30	.000	1.000	.000
8960	+Y		.30	.000	1.000	.000
8960	X	3.00		1.000	.000	.000
8990	+Y		.30	.000	1.000	.000
9020	+Y		.30	.000	1.000	.000
9040	+Y			.000	1.000	.000
9040	X	3.00		1.000	.000	.000
9040	Z	3.00		.000	.000	1.000
9060	+Y		.30	.000	1.000	.000
9070	+Y		.30	.000	1.000	.000
9070	X	3.00		1.000	.000	.000
9100	+Y		.30	.000	1.000	.000
9130	+Y		.30	.000	1.000	.000
9140	+Y		.30	.000	1.000	.000
9140	X	3.00		1.000	.000	.000
9150	+Y			.000	1.000	.000
9150	X	3.00		1.000	.000	.000
9160	+Y		.30	.000	1.000	.000
9170	+Y		.30	.000	1.000	.000
9170	X			1.000	.000	.000
9170	Z	3.00		.000	.000	1.000

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INPUT LISTING

DISPLACEMENTS
10 20 Node 20 DX1= 4.000 mm. DY1= 2.400 mm.
DZ1= 1.500 mm.
1241 8300 Node 1241 DX1= 4.000 mm. DY1= 2.400 mm.
DZ1= 1.500 mm.
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HANGER CONTROL AND LOCATION DATA

No. of Hanger Design Load Cases = 1
Actual Cold Load Flag = 0.0
Short Range Spring Flag = 1
Allowed Load Variation (%) = 25.0000
Default Hanger Table = 5

140 160 Hanger Node = 160
Hanger Connecting Node = 121
Available Space = -1,000.0000 mm.
Allowed Load Variation = 25.0000
No. Hangers = 0.0 Short Range Flag = -1
User Operating Load = .00 N. Free Node = 0
Free Node = 0 Free Code = 0.0
Spring Rate = .00 N./cm.
Theoretical Cold Load = .00 N.

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FLANGES
1060 1080 Location= To Method= Peq
Class/Grade= ASME-2009-600-3.19
G/C= 192.151 mm. T/P table (1)= 37.8 C
-> 10,342.1 KPa (2)= 93.3 C
-> 10,342.1 KPa (3)= 148.9 C
-> 10,031.9 KPa (4)= 204.4 C
-> 9,721.6 KPa (5)= 260.0 C
-> 9,170.0 KPa (6)= 315.6 C
-> 8,342.7 KPa (7)= 343.3 C
-> 8,101.3 KPa (8)= 371.1 C
-> 7,825.5 KPa (9)= 398.9 C
-> 7,342.9 KPa (10)= 426.7 C
-> 6,998.2 KPa (11)= 454.4 C
-> 6,722.4 KPa (12)= 482.2 C
-> 6,205.3 KPa (13)= 510.0 C
-> 5,343.4 KPa (14)= 537.8 C
-> 4,998.7 KPa (15)= 565.6 C
-> 4,964.2 KPa (16)= 593.3 C
-> 4,447.1 KPa (17)= 621.1 C
-> 3,792.1 KPa (18)= 648.9 C
-> 2,826.9 KPa (19)= 676.7 C
-> 2,516.6 KPa (20)= 704.4 C
-> 1,896.1 KPa (21)= 732.2 C

INPUT LISTING

```
                    -> 1,413.4 KPa   (22)=  760.0 C
                    -> 1,034.2 KPa   (23)=  787.8 C
                    -> 792.9 KPa   (24)=  815.6 C   -> 586.1 KPa
 1080       1100         Location= From   Method= Peq
 1220       1240         Location= To   Method= Peq
                    Class/Grade= ASME-2009-600-3.19
                    G/C= 192.151 mm.   T/P table ( 1)=  37.8 C
                    -> 10,342.1 KPa   ( 2)=  93.3 C
                    -> 10,342.1 KPa   ( 3)=  148.9 C
                    -> 10,031.9 KPa   ( 4)=  204.4 C
                    -> 9,721.6 KPa   ( 5)=  260.0 C
                    -> 9,170.0 KPa   ( 6)=  315.6 C
                    -> 8,342.7 KPa   ( 7)=  343.3 C
                    -> 8,101.3 KPa   ( 8)=  371.1 C
                    -> 7,825.5 KPa   ( 9)=  398.9 C
                    -> 7,342.9 KPa   (10)=  426.7 C
                    -> 6,998.2 KPa   (11)=  454.4 C
                    -> 6,722.4 KPa   (12)=  482.2 C
                    -> 6,205.3 KPa   (13)=  510.0 C
                    -> 5,343.4 KPa   (14)=  537.8 C
                    -> 4,998.7 KPa   (15)=  565.6 C
                    -> 4,964.2 KPa   (16)=  593.3 C
                    -> 4,447.1 KPa   (17)=  621.1 C
                    -> 3,792.1 KPa   (18)=  648.9 C
                    -> 2,826.9 KPa   (19)=  676.7 C
                    -> 2,516.6 KPa   (20)=  704.4 C
                    -> 1,896.1 KPa   (21)=  732.2 C
                    -> 1,413.4 KPa   (22)=  760.0 C
                    -> 1,034.2 KPa   (23)=  787.8 C
                    -> 792.9 KPa   (24)=  815.6 C   -> 586.1 KPa
 1300       1320         Location= To   Method= Peq
 1340       1360         Location= From   Method= Peq
 1640       1660         Location= To   Method= Peq
 7120       7130         Location= To   Method= Peq
 7201       7210         Location= From   Method= Peq
 1821       1920         Location= From   Method= Peq
 4400       4410         Location= To   Method= Peq
 4420       4430         Location= From   Method= Peq
 4450       4460         Location= To   Method= Peq
 4470       4480         Location= From   Method= Peq
 4490       4500         Location= To   Method= Peq
 4505       6790         Location= From   Method= Peq
 4600       4610         Location= To   Method= Peq
 4620       4630         Location= From   Method= Peq
 4660       4670         Location= To   Method= Peq
 4680       4690         Location= From   Method= Peq
 4720       4730         Location= To   Method= Peq
 4980       4990         Location= To   Method= Peq
 5000       5010         Location= From   Method= Peq
 5040       5060         Location= To   Method= Peq
 5070       5080         Location= From   Method= Peq
 5100       5110         Location= To   Method= Peq
 8600       8610         Location= To   Method= Peq
 8610       8620         Location= From   Method= Peq
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INPUT LISTING

EQUIPMENT LIMITS
25 40 Nozzle Node = 25

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 7,000.35 N. FB= 7,000.35 N.
FC= 5,000.25 N. MA= 4,000.17 N.m. MB= 1,200.05 N.m. MC= 2,200.09 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute
760 780 Nozzle Node = 780

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 9,600.48 N. FB= 9,600.48 N.
FC= 7,200.36 N. MA= 5,760.24 N.m. MB= 3,840.16 N.m. MC= 4,990.21 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute
1220 1240 Nozzle Node = 1240

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 7,000.35 N. FB= 7,000.35 N.
FC= 5,000.25 N. MA= 4,000.17 N.m. MB= 1,200.05 N.m. MC= 2,200.09 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute
1680 1700 Nozzle Node = 1700

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 15,090.75 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute
7160 7170 Nozzle Node = 7170

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 15,090.75 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute
1780 1800 Nozzle Node = 1780

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 16,200.81 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute
7150 7180 Nozzle Node = 7180

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 16,200.81 N. FB= 15,090.75 N.
FC= 12,000.60 N. MA= 9,150.39 N.m. MB= 4,890.21 N.m. MC= 6,420.27 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute
4240 4260 Nozzle Node = 4260

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INPUT LISTING

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 11,200.56 N. FB= 11,200.56 N.
FC= 8,400.42 N. MA= 6,720.29 N.m. MB= 4,400.19 N.m. MC= 5,020.21 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute
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FORCES AND MOMENTS
5690 2420 Node 2420 FX1= 2,000.10 N.
FY1= 1,000.05 N. FZ1= .00 N.
5760 2720 Node 2720 FX2= 2,000.10 N.
FY2= 1,000.05 N. FZ2= .00 N.
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UNIFORM LOAD Changes
10 20 Vector1 in G-s
X1 Dir = .26 g's Y1 Dir = .00 g's
Z1 Dir = .00 g's
Vector2 in G-s
X2 Dir = .00 g's Y2 Dir = .12 g's
Z2 Dir = .00 g's
Vector3 in G-s
X3 Dir = .00 g's Y3 Dir = .00 g's
Z3 Dir = .26 g's
8390 8400 Vector1 in G-s
X1 Dir = .26 g's Y1 Dir = .00 g's
Z1 Dir = .00 g's
Vector2 in G-s
X2 Dir = .00 g's Y2 Dir = .12 g's
Z2 Dir = .00 g's
Vector3 in G-s
X3 Dir = .00 g's Y3 Dir = .00 g's
Z3 Dir = .26 g's
8600 8610 Vector1 in G-s
X1 Dir = .26 g's Y1 Dir = .00 g's
Z1 Dir = .00 g's
Vector2 in G-s
X2 Dir = .00 g's Y2 Dir = .12 g's
Z2 Dir = .00 g's
Vector3 in G-s
X3 Dir = .00 g's Y3 Dir = .00 g's
Z3 Dir = .26 g's
8700 6830 Vector1 in G-s
X1 Dir = .26 g's Y1 Dir = .00 g's
Z1 Dir = .00 g's
Vector2 in G-s
X2 Dir = .00 g's Y2 Dir = .12 g's
Z2 Dir = .00 g's
Vector3 in G-s
X3 Dir = .00 g's Y3 Dir = .00 g's
Z3 Dir = .26 g's

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INPUT LISTING
8920 8930 Vector1 in G-s
X1 Dir = .26 g's Y1 Dir = .00 g's
Z1 Dir = .00 g's
Vector2 in G-s
X2 Dir = .00 g's Y2 Dir = .12 g's
Z2 Dir = .00 g's
Vector3 in G-s
X3 Dir = .00 g's Y3 Dir = .00 g's
Z3 Dir = .26 g's
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INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	=	N./cm.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES = YES
MIN ALLOWED BEND ANGLE = 5.00000
MAX ALLOWED BEND ANGLE = 95.0000
BEND LENGTH ATTACHMENT PERCENT = 1.00000
MIN ANGLE TO ADJACENT BEND PT = 5.00000
LOOP CLOSURE TOLERANCE = 25.4000 mm.
THERMAL BOWING HORZ TOLERANCE = 0.100000E-03
AUTO NODE NUMBER INCREMENT= 10.0000
Z AXIS UP= NO
USE PRESSURE STIFFENING = DEFAULT
ALPHA TOLERANCE = 0.500000E-01
RESLD-FORCE = NO
HGR DEF RESWGT STIF = 0.175127E+13 N./cm.
DECOMP SNG TOL = 0.100000E+11
BEND AXIAL SHAPE = YES
FRICT STIF = 0.175127E+07 N./cm.

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INPUT LISTING
FRICT NORM FORCE VAR = 0.150000
FRICT ANGLE VAR = 15.0000
FRICT SLIDE MULT = 1.00000
ROD TOLERANCE = 1.00000
ROD INC = 2.00000
INCORE NUMERICAL CHECK = NO
OUTCORE NUMERICAL CHECK = NO
DEFAULT TRANS RESTRAINT STIFF= 0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF= 0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS = NO
MISSING MASS ZPA = EXTRACTED
MIN WALL MILL TOLERANCE = 12.5000
WRC-107 VERSION = MAR 79 1B1/2B1
WRC-107 INTERPOLATION = LAST VALUE
DEFAULT AMBIENT TEMPERATURE= 21.1111 C
BOURDON PRESSURE= NONE
COEFFICIENT OF FRICTION (MU) = 0.000000
INCLUDE SPRG STIF IN HGR OPE = NO
INCLUDE INSULATION IN HYDROTEST = NO
REDUCED INTERSECTION = B31.1(POST1980)
USE WRC329 NO
NO REDUCED SIF FOR RFT AND WLT NO
B31.1 REDUCED Z FIX = YES
CLASS 1 BRANCH FLEX NO
ALL STRESS CASES CORRODED = NO
ADD TORSION IN SL STRESS = DEFAULT
ADD F/A IN STRESS = DEFAULT
OCCASIONAL LOAD FACTOR = 0.000000
DEFAULT CODE = B31.3
B31.3 SUS CASE SIF FACTOR = 0.000000
ALLOW USERS BEND SIF = NO
USE SCHNEIDER NO
YIELD CRITERION STRESS = MAX 3D SHEAR
USE PD/4T NO
BASE HOOP STRESS ON ? = ID
EN13480 USE IN OUTPLANE SIFS= NO
LIBERAL EXPANSION ALLOWABLE= YES
B31.3 SEC 319.2.3C SAXIAL= Default
B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
PRESSURE VARIATION IN EXP CASE= DEFAULT
IMPLEMENT B313 APP-P NO
IMPLEMENT B313 CODE CASE 178 YES
IGNORE B31.1/B31.3 Wc FACTOR= YES
USE FRP SIF = YES
USE FRP FLEX = YES
BS 7159 Pressure Stiffening= Design Strain
FRP Property Data File= CAESAR.FRP
FRP Emod (axial) = 0.220632E+08 KPa
FRP Ratio Gmod/Emod (axial) = 0.250000
FRP Ea/Eh*Vh/a = 0.152730
FRP Laminate Type = THREE
FRP Alpha = 21.6000 C
FRP Density = 0.166079E-02 kg./cu.cm.
EXCLUDE f2 FROM UKOOA BENDING = NO

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INPUT LISTING

EXECUTION CONTROL PARAMETERS

Rigid/ExpJt Print Flag 1.000
Bourdon Option ..... .000
Loop Closure Flag 2.000
Thermal Bowing Delta Temp .. .000 C
Liberal Allowable Flag 1.000
Uniform Load Option 1.000

Ambient Temperature ..... 20.997 C
Plastic (FRP) Alpha 21.600
Plastic (FRP) GMOD/EMODa ... .250
Plastic (FRP) Laminate Type. 3.000
Eqn Optimizer ..... .000
Node Selection ..... .000
Eqn Ordering ..... .000
Collins ..... .000
Degree Determination ..... .000
User Eqn Control ..... .000
North Direction ..... -X

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COORDINATE REPORT

NODE	X (mm.)	Y (mm.)	Z (mm.)
10	.000	.000	.000
25	-101.600	.000	.000
40	-203.200	.000	.000
60	-932.200	.000	.000
80	-932.200	.000	1587.000
100	-932.200	-1404.000	1587.000
120	-932.200	-2557.000	1587.000
140	-932.200	-2786.000	1587.000
160	-932.200	-2986.000	1587.000
8260	-458.900	-2840.000	2251.525
8270	-458.900	-2840.000	2551.525
120	-932.200	-2557.000	1587.000
180	-932.200	-2786.000	1587.000
200	-1161.200	-2786.000	1587.000
220	-1262.800	-2786.000	1587.000
240	-1364.400	-2786.000	1587.000
260	-1864.400	-2786.000	1587.000
280	-2208.900	-2786.000	1587.000
300	-2708.900	-2786.000	1587.000
320	-2911.900	-2786.000	1587.000
340	-3013.500	-2786.000	1587.000
360	-3502.500	-2786.000	1587.000
380	-3604.100	-2786.000	1587.000
400	-4465.100	-2786.000	1587.000
420	-6022.100	-2786.000	1587.000
440	-6123.700	-2786.000	1587.000
460	-6225.300	-2786.000	1587.000

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INPUT LISTING

480	-7468.300	-2786.000	1587.000
490	-9503.301	-2786.000	1587.000
500	-11538.301	-2786.000	1587.000
6210	-11538.301	-2862.200	1587.000
490	-9503.301	-2786.000	1587.000
500	-11538.301	-2786.000	1587.000
580	-11538.301	1219.000	1587.000
590	-11538.301	1219.000	3135.000
600	-11538.301	1219.000	4337.000
610	-11923.301	1219.000	4337.000
620	-12268.301	1219.000	4337.000
590	-11538.301	1219.000	3135.000
5190	-11538.301	1617.000	3135.000
8160	-11767.301	1617.000	3364.000
8170	-11767.301	1617.000	3887.000
8180	-11767.301	1617.000	3964.000
8190	-11767.301	1617.000	4065.600
8200	-11767.301	1617.000	4275.600
8210	-11767.301	1617.000	4377.600
5200	-11767.301	1617.000	4667.600
5210	-11767.301	1617.000	4740.625
5220	-11767.301	1617.000	5041.625
5230	-11767.301	1617.000	5114.650
5240	-11767.301	1617.000	5191.650
5245	-12306.301	1617.000	5191.650
5240	-11767.301	1617.000	5191.650
6230	-11767.301	1599.039	5209.610
5245	-12306.301	1617.000	5191.650
5250	-12845.301	1617.000	5191.650
5260	-12918.326	1617.000	5191.650
5270	-12991.352	1617.000	5191.650
5275	-13141.352	1617.000	5191.650
6260	-13141.352	1591.600	5191.650
5275	-13141.352	1617.000	5191.650
5280	-13291.352	1617.000	5191.650
5290	-13364.377	1617.000	5191.650
5300	-13564.377	1617.000	5191.650
5310	-13631.052	1617.000	5191.650
5320	-13720.052	1617.000	5191.650
5330	-14007.052	1617.000	5191.650
5340	-14007.052	699.000	5191.650
6280	-13968.952	699.000	5191.650
5340	-14007.052	699.000	5191.650
5350	-14007.052	-1241.000	5191.650
5370	-17163.051	-1241.000	5191.650
5375	-21576.051	-1241.000	5191.650
5380	-22137.051	-1241.000	5191.650
5390	-22137.051	-2460.000	5191.650
6130	-22148.650	-3039.250	5718.050
610	-11923.301	1219.000	4337.000
640	-11923.301	1135.000	4337.000
660	-11923.301	835.000	4337.000
620	-12268.301	1219.000	4337.000
680	-12846.301	1219.000	4337.000
700	-12846.301	990.000	4337.000

INPUT LISTING

720	-12846.301	864.000	4337.000
760	-12846.301	759.225	4337.000
780	-12846.301	563.225	4337.000
780	-12846.301	563.225	4337.000
660	-11923.301	835.000	4337.000
780	-12846.301	563.225	4337.000
6240	-11767.301	1599.039	5509.611
780	-12846.301	563.225	4337.000
6270	-13141.351	1241.600	5191.650
780	-12846.301	563.225	4337.000
6290	-13668.950	699.000	5191.650
780	-12846.301	563.225	4337.000
840	-12846.301	-3006.775	4337.000
280	-2208.900	-2786.000	1587.000
4350	-2208.900	-2786.000	1465.000
4360	-2208.900	-2786.000	1391.975
4370	-2208.900	-2786.000	1090.975
4380	-2208.900	-2786.000	1008.425
4390	-2208.900	-2786.000	432.425
4395	-2208.900	-2529.000	432.425
4390	-2208.900	-2786.000	432.425
6300	-2208.900	-2811.400	432.425
4395	-2208.900	-2529.000	432.425
880	-2208.900	-2272.000	432.425
900	-2208.900	-2272.000	509.425
920	-2208.900	-2272.000	591.975
940	-2208.900	-2272.000	892.975
960	-2208.900	-2272.000	975.525
980	-2208.900	-2272.000	2197.525
1000	-2208.900	-2372.000	2197.525
1020	-2208.900	-2786.000	2197.525
1040	-2013.900	-2786.000	2197.525
1060	-1863.900	-2786.000	2197.525
1080	-1736.900	-2786.000	2197.525
1100	-1610.900	-2786.000	2197.525
1120	-458.900	-2786.000	2197.525
1160	-458.900	-2786.000	1736.025
1120	-458.900	-2786.000	2197.525
8260	-458.900	-2840.000	2251.525
1160	-458.900	-2786.000	1736.025
1180	-458.900	-2786.000	10.525
1200	-458.900	-1951.000	10.525
1220	-229.900	-1951.000	10.525
1240	-102.900	-1951.000	10.525
8300	24.100	-1951.000	10.525
1020	-2208.900	-2786.000	2197.525
8280	-2708.900	-2786.000	2197.525
1260	-3608.900	-2786.000	2197.525
1280	-4458.900	-2786.000	2197.525
1300	-5108.900	-2786.000	2197.525
1320	-5235.900	-2786.000	2197.525
1340	-5803.900	-2786.000	2197.525
1360	-5930.900	-2786.000	2197.525
1380	-7479.900	-2786.000	2197.525
1390	-9514.900	-2786.000	2197.525

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1400	-11549.900	-2786.000	2197.525
6400	-11549.900	-2862.200	2197.525
1390	-9514.900	-2786.000	2197.525
1400	-11549.900	-2786.000	2197.525
1480	-11549.900	-1402.000	2197.525
1485	-16309.900	-1402.000	2197.525
1490	-16309.900	-1402.000	3997.525
1500	-17185.900	-1402.000	3997.525
1520	-23078.900	-1402.000	3997.525
1540	-25994.900	-1402.000	3997.525
1560	-25994.900	-1402.000	5065.525
1580	-25994.900	-1402.000	6133.525
1600	-25994.900	1328.000	6133.525
7390	-25994.900	1328.000	5740.525
7020	-25994.900	1328.000	5347.525
7030	-25994.900	1328.000	5102.525
1600	-25994.900	1328.000	6133.525
7380	-25994.900	1328.000	6526.525
7040	-25994.900	1328.000	6919.525
7050	-25994.900	1328.000	7164.525
7020	-25994.900	1328.000	5347.525
7060	-25994.900	3491.000	5347.525
7065	-26983.900	3491.000	5347.525
7070	-27494.900	3491.000	5347.525
7080	-27494.900	3491.000	5878.525
1640	-27494.900	2989.500	5878.525
1660	-27494.900	2878.375	5878.525
7040	-25994.900	1328.000	6919.525
7090	-25994.900	3491.000	6919.525
7095	-26983.900	3491.000	6919.525
7100	-27494.900	3491.000	6919.525
7110	-27494.900	3491.000	6388.525
7120	-27494.900	2989.500	6388.525
7130	-27494.900	2878.375	6388.525
1660	-27494.900	2878.375	5878.525
1680	-27494.900	2767.250	5878.525
1700	-27494.900	2567.250	5878.525
7140	-27494.900	2327.250	5878.525
7130	-27494.900	2878.375	6388.525
7160	-27494.900	2767.250	6388.525
7170	-27494.900	2567.250	6388.525
7150	-27494.900	2327.250	6388.525
7140	-27494.900	2327.250	5878.525
1780	-27494.900	2087.250	5878.525
1800	-27494.900	1887.250	5878.525
1820	-27494.900	1776.125	5878.525
7150	-27494.900	2327.250	6388.525
7180	-27494.900	2087.250	6388.525
7190	-27494.900	1887.250	6388.525
7200	-27494.900	1776.125	6388.525
7210	-27494.900	1637.000	6388.525
7220	-27494.900	1484.000	6388.525
7225	-27494.900	1484.000	6654.025
7230	-27494.900	1484.000	6919.525
7240	-27494.900	1026.000	6919.525

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7250	-27494.900	1026.000	7164.525
7240	-27494.900	1026.000	6919.525
7360	-27494.900	1026.000	6425.525
7260	-27494.900	1026.000	6133.525
7370	-27494.900	1026.000	5740.525
7270	-27494.900	1026.000	5347.525
7280	-27494.900	1026.000	5102.525
1740	-27494.900	2327.250	6133.525
7150	-27494.900	2327.250	6388.525
1840	-27494.900	2327.250	6938.525
1860	-32594.900	2327.250	6938.525
1880	-32594.900	2327.250	5538.525
1900	-27494.900	2327.250	5538.525
7140	-27494.900	2327.250	5878.525
1740	-27494.900	2327.250	6133.525
1820	-27494.900	1776.125	5878.525
1920	-27494.900	1637.000	5878.525
1940	-27494.900	1484.000	5878.525
1960	-27494.900	1484.000	5347.525
7270	-27494.900	1026.000	5347.525
7260	-27494.900	1026.000	6133.525
7290	-27494.900	-323.000	6133.525
7400	-27494.900	-327.725	7096.513
7300	-27494.900	-338.000	9190.524
2000	-23295.900	-358.000	9190.524
6420	-23295.900	-434.200	9190.524
2000	-23295.900	-358.000	9190.524
4100	-22745.900	-360.750	9190.524
4400	-22745.900	-367.960	10638.506
4410	-22745.900	-368.592	10765.504
4420	-22745.900	-371.421	11333.497
4430	-22745.900	-372.053	11460.495
4440	-22745.900	-373.714	11793.991
6480	-22745.900	-449.914	11793.991
4440	-22745.900	-373.714	11793.991
4450	-22745.900	-375.374	12127.487
4460	-22745.900	-376.006	12254.485
4470	-22745.900	-378.835	12822.479
4480	-22745.900	-379.467	12949.477
4482	-22745.900	-382.537	13513.977
4485	-22745.900	-385.607	14078.477
6760	-22799.781	-439.489	14078.477
4482	-22745.900	-382.537	13513.977
4485	-22745.900	-385.607	14078.477
4490	-21703.900	-385.607	14078.477
4500	-21576.900	-385.607	14078.477
4505	-20978.900	-385.607	14078.477
6790	-20851.900	-385.607	14078.477
6780	-20527.900	-385.607	14078.477
6795	-20203.900	-385.607	14078.477
7000	-20150.018	-439.489	14078.477
6780	-20527.900	-385.607	14078.477
6795	-20203.900	-385.607	14078.477
6800	-20203.900	-434.607	15484.477
6810	-22271.900	-434.607	15484.477

INPUT LISTING

6820	-24271.900	-434.607	15484.477
6830	-24437.900	-600.607	15484.477
4100	-22745.900	-360.750	9190.524
4560	-22745.900	-360.750	8905.524
4570	-22602.900	-360.750	8905.524
8140	-22462.900	-387.750	8905.524
4560	-22745.900	-360.750	8905.524
4580	-22888.900	-360.750	8905.524
4590	-23260.900	-360.750	8905.524
4600	-23260.900	-360.750	8676.524
4610	-23260.900	-360.750	8549.524
4620	-23260.900	-360.750	7981.524
4630	-23260.900	-360.750	7854.524
4640	-23260.900	-360.750	7654.524
6510	-23260.900	-436.950	7654.524
4640	-23260.900	-360.750	7654.524
4650	-23260.900	-360.750	7122.024
4660	-23260.900	-387.750	6982.024
4670	-23260.900	-387.750	6870.899
4680	-23260.900	-387.750	6429.899
4690	-23260.900	-387.750	6318.774
4700	-23260.900	-360.750	6178.774
4710	-23260.900	-360.750	5878.774
6530	-23260.900	-436.950	5878.774
4710	-23260.900	-360.750	5878.774
4720	-23260.900	-360.750	5578.774
4730	-23260.900	-360.750	5451.774
4740	-23260.900	-360.750	4883.774
4750	-23260.900	-360.750	4782.174
8150	-23260.900	-360.750	4604.174
4140	-23260.900	-360.750	812.174
6560	-22831.900	-360.750	812.174
4760	-19955.900	-360.750	812.174
4770	-19955.900	-360.750	355.174
7330	-19955.900	-1018.750	355.174
4780	-17933.299	-1018.750	355.174
4160	-17033.299	-1018.750	355.174
6600	-17033.299	-1120.350	355.174
4160	-17033.299	-1018.750	355.174
4180	-13845.299	-1018.750	355.174
4200	-13730.999	-1018.750	355.174
4220	-13710.999	-1018.750	355.174
4240	-13606.224	-1018.750	355.174
4260	-13451.224	-1018.750	355.174
4280	-12991.224	-1018.750	355.174
4300	-12991.224	-2318.750	355.174
4310	-12991.224	-3318.750	355.174
4320	-12991.224	-3618.750	355.174
4780	-17933.299	-1018.750	355.174
6620	-18175.299	-1018.750	355.174
7320	-19477.900	-1018.750	355.174
6630	-19477.900	-1120.350	355.174
6620	-18175.299	-1018.750	355.174
4800	-18417.299	-1018.750	355.174
4810	-18531.600	-1018.750	355.174

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
Job:: BNK-GCS-CN-007-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

4820	-19073.600	-1018.750	355.174
4830	-19187.900	-1018.750	355.174
7320	-19477.900	-1018.750	355.174
7330	-19955.900	-1018.750	355.174
4840	-20243.900	-1018.750	355.174
4850	-20358.201	-1018.750	355.174
4860	-20964.201	-1018.750	355.174
4870	-21068.977	-1018.750	355.174
4880	-21268.977	-1018.750	355.174
6650	-21555.977	-1018.750	355.174
6660	-21555.977	-1120.350	355.174
6650	-21555.977	-1018.750	355.174
4890	-22042.977	-1018.750	355.174
4900	-22147.752	-1018.750	355.174
4910	-22634.252	-1018.750	355.174
4920	-22739.027	-1018.750	355.174
4930	-23281.027	-1018.750	355.174
6680	-23281.027	-1120.350	355.174
4930	-23281.027	-1018.750	355.174
4940	-23886.027	-1018.750	355.174
4950	-23886.027	-1018.750	1855.174
4960	-24757.527	-1018.750	1855.174
4970	-25094.527	-681.750	1855.174
8140	-22462.900	-387.750	8905.524
4980	-22079.900	-387.750	8905.524
4570	-22602.900	-360.750	8905.524
8140	-22462.900	-387.750	8905.524
4980	-22079.900	-387.750	8905.524
4990	-21968.775	-387.750	8905.524
5000	-21527.775	-387.750	8905.524
5010	-21416.650	-387.750	8905.524
5020	-21263.650	-387.750	8905.524
5025	-21263.650	-387.750	8407.175
5020	-21263.650	-387.750	8905.524
6700	-21228.295	-423.105	8905.524
5025	-21263.650	-387.750	8407.175
5030	-21263.650	-387.750	7908.825
5040	-21263.650	-400.750	7806.825
5060	-21263.650	-400.750	7714.750
5070	-21263.650	-400.750	7262.750
5080	-21263.650	-400.750	7170.674
5090	-21263.650	-388.250	7068.674
5095	-21263.650	-388.250	6820.174
6720	-21263.650	-439.050	6820.174
5095	-21263.650	-388.250	6820.174
5100	-21263.650	-388.250	6571.674
5110	-21263.650	-388.250	6460.549
5120	-21263.650	-388.250	6019.549
5130	-21263.650	-388.250	5940.174
5140	-21263.650	-388.250	5787.174
5145	-21263.650	-1012.250	5787.174
6740	-21263.650	-1012.250	5736.375
5145	-21263.650	-1012.250	5787.174
5150	-21263.650	-1436.250	5787.174
5160	-22148.650	-1436.250	5787.174

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
Job:: BNK-GCS-CN-007-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

5170	-22148.650	-2509.250	5787.174
3965	-22148.650	-3039.250	6316.050
4710	-23260.900	-360.750	5878.774
6530	-23260.900	-436.950	5878.774
1260	-3608.900	-2786.000	2197.525
2140	-3608.900	-1256.000	2197.525
2160	-3608.900	-1256.000	5869.525
2180	-7472.900	-1256.000	5869.525
2200	-12387.900	-1256.000	5869.525
2220	-17178.900	-1256.000	5869.525
2260	-17916.900	-1256.000	5869.525
2270	-17916.900	-1256.000	9515.525
7340	-17916.900	-1256.000	10774.525
2280	-17690.900	-1256.000	11000.525
7350	-17690.900	-1256.000	11099.525
2320	-17690.900	-598.000	11099.525
2330	-17690.900	-370.000	11099.525
2340	-17690.900	-157.000	11099.525
2360	-17690.900	-74.450	11099.525
5650	-17690.900	226.550	11099.525
5660	-17690.900	309.100	11099.525
2400	-17690.900	674.100	11099.525
5670	-17690.900	780.100	11099.525
5680	-17690.900	859.475	11099.525
5690	-17690.900	938.850	11099.525
2420	-17690.900	980.350	11099.525
2440	-17846.900	980.350	11099.525
2460	-17919.926	980.350	11099.525
2480	-18059.926	940.650	11099.525
2500	-18404.926	940.650	11099.525
2520	-18978.926	940.650	11099.525
2540	-18978.926	711.650	11099.525
5700	-18978.926	619.575	11099.525
2560	-18978.926	343.575	11099.525
2570	-18978.926	251.500	11099.525
5710	-18978.926	-778.500	11099.525
6440	-19055.125	-778.500	11099.525
5710	-18978.926	-778.500	11099.525
2580	-18978.926	-1604.500	11099.525
5840	-19302.926	-1604.500	11099.525
5800	-19802.926	-1604.500	11599.525
7350	-17690.900	-1256.000	11099.525
2300	-17690.900	-1256.000	11599.525
2620	-17690.900	-598.000	11599.525
2640	-17690.900	-157.000	11599.525
5720	-17690.900	-74.450	11599.525
2660	-17690.900	226.550	11599.525
5730	-17690.900	309.100	11599.525
2700	-17690.900	674.100	11599.525
5740	-17690.900	780.100	11599.525
5750	-17690.900	859.475	11599.525
5760	-17690.900	938.850	11599.525
2720	-17690.900	979.850	11599.525
2740	-17846.900	979.850	11599.525
2760	-17919.926	979.850	11599.525

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
Job:: BNK-GCS-CN-007-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

2780	-18059.926	940.150	11599.525
2800	-18404.926	940.150	11599.525
2820	-18978.926	940.150	11599.525
2840	-18978.926	711.150	11599.525
2846	-18978.926	619.075	11599.525
2852	-18978.926	343.075	11599.525
2860	-18978.926	251.000	11599.525
2870	-18978.926	-779.000	11599.525
6460	-19055.125	-779.000	11599.525
2870	-18978.926	-779.000	11599.525
2880	-18978.926	-1605.000	11599.525
2880	-18978.926	-1604.500	11599.525
5800	-19802.926	-1604.500	11599.525
5805	-21030.926	-1604.500	11599.525
5810	-22148.926	-1604.500	11599.525
5820	-22148.926	-2127.500	11599.525
6120	-22148.926	-3039.500	12509.525
4750	-23260.900	-360.750	4782.174
8150	-23260.900	-360.750	4604.174
6550	-23260.900	-436.950	4604.174
6210	-11538.301	-2862.200	1587.000
6220	-11538.301	-3162.200	1587.000
6230	-11767.301	1599.039	5209.610
6240	-11767.301	1599.039	5509.610
6260	-13141.352	1591.600	5191.650
6270	-13141.352	1241.600	5191.650
6280	-13968.952	699.000	5191.650
6290	-13668.952	699.000	5191.650
6300	-2208.900	-2811.400	432.425
6310	-2208.900	-3711.400	432.425
6400	-11549.900	-2862.200	2197.525
6410	-11549.900	-3162.200	2197.525
6420	-23295.900	-434.200	9190.524
6425	-23295.900	-664.200	9190.524
6430	-23295.900	-1044.200	9190.524
6440	-19055.125	-778.500	11099.525
6450	-19355.125	-778.500	11099.525
6460	-19055.125	-779.000	11599.525
6470	-19355.125	-779.000	11599.525
6480	-22745.900	-449.914	11793.991
6485	-22745.900	-679.914	11793.991
6490	-22745.900	-1059.914	11793.991
6510	-23260.900	-436.950	7654.524
6515	-23260.900	-666.950	7654.524
6520	-23260.900	-1046.950	7654.524
6530	-23260.900	-436.950	5878.774
6535	-23260.900	-666.950	5878.774
6540	-23260.900	-1046.950	5878.774
6550	-23260.900	-436.950	4604.174
6590	-23260.900	-1046.950	4604.174
6600	-17033.299	-1120.350	355.174
6610	-17033.299	-1620.350	355.174
6630	-19477.900	-1120.350	355.174
6640	-19477.900	-1620.350	355.174
6660	-21555.977	-1120.350	355.174

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
Job:: BNK-GCS-CN-007-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

6670	-21555.977	-1620.350	355.174
6680	-23281.027	-1120.350	355.174
6690	-23281.027	-1620.350	355.174
6700	-21228.295	-423.105	8905.524
6705	-21128.295	-423.105	8905.524
6710	-20728.295	-423.105	8905.524
6720	-21263.650	-439.050	6820.174
6730	-21263.650	-1139.050	6820.174
6740	-21263.650	-1012.250	5736.375
6750	-21263.650	-1012.250	5436.375
6760	-22799.781	-439.489	14078.477
6765	-22899.781	-439.489	14078.477
6770	-23349.781	-439.489	14078.477
7000	-20150.018	-439.489	14078.477
7005	-20050.018	-439.489	14078.477
7010	-19650.018	-439.489	14078.477
8390	-25094.527	-681.750	-26694.826
8400	-25094.527	-681.750	-20694.826
8410	-25094.527	-681.750	-14694.826
8420	-25094.527	-681.750	-8694.826
8430	-25094.527	-681.750	-7444.826
8440	-31094.527	-681.750	-7444.826
8450	-31094.527	-681.750	-5544.826
8460	-31094.527	-681.750	-3644.826
8470	-25094.527	-681.750	-3644.826
8480	-25094.527	-681.750	-2844.826
4970	-25094.527	-681.750	1855.174
8500	-25094.527	-681.750	3155.174
8510	-25094.527	-681.750	9155.174
8520	-25094.527	-681.750	15155.174
8530	-25094.527	-681.750	21155.174
8540	-25094.527	-681.750	27155.174
8550	-25094.527	-681.750	31855.174
8560	-25094.527	-681.750	33155.172
8570	-25094.527	-681.750	33655.172
8580	-25094.527	-681.750	33775.820
8590	-25094.527	-681.750	33896.469
8600	-24437.900	-600.607	-15593.273
8610	-24437.900	-600.607	-15450.398
8620	-24437.900	-600.607	-15307.523
8630	-24437.900	-600.607	-14938.523
8640	-24437.900	-600.607	-14514.523
8650	-24437.900	-600.607	-8938.523
8660	-24437.900	-600.607	-6938.523
8670	-24437.900	-600.607	-2938.523
8680	-24437.900	-600.607	3061.477
8690	-24437.900	-600.607	9061.477
8700	-24437.900	-600.607	15061.477
6830	-24437.900	-600.607	15484.477
8720	-24437.900	-600.607	21060.477
8730	-24437.900	-600.607	23060.477
8740	-24437.900	-600.607	27060.477
8750	-24437.900	-600.607	33060.477
8760	-24437.900	-600.607	39060.477
8770	-24437.900	-600.607	45060.477

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
Job:: BNK-GCS-CN-007-D03
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INPUT LISTING

8780	-24437.900	-600.607	46260.477
8790	-24103.900	-934.607	46260.477
8800	-23287.900	-934.607	46260.477
8810	-17440.900	-934.607	46260.477
8920	-22148.926	-3039.500	34743.523
8930	-22148.926	-3039.500	31743.525
8940	-22148.926	-3039.500	31343.525
8950	-22148.926	-3039.500	28343.525
8960	-22148.926	-3039.500	22343.525
8970	-22148.926	-3039.500	19593.525
8980	-28148.926	-3039.500	19593.525
8990	-28148.926	-3039.500	18593.525
9000	-28148.926	-3039.500	17593.525
9010	-22148.926	-3039.500	17593.525
9020	-22148.926	-3039.500	16343.525
6120	-22148.926	-3039.500	12509.525
9040	-22148.926	-3039.500	10343.525
9040	-22148.650	-3039.250	10344.051
3965	-22148.650	-3039.250	6316.050
6130	-22148.650	-3039.250	5718.050
9060	-22148.650	-3039.250	4344.050
9070	-22148.650	-3039.250	-1655.950
9080	-22148.650	-3039.250	-4605.950
9090	-28148.650	-3039.250	-4605.950
9100	-28148.650	-3039.250	-5605.950
9110	-28148.650	-3039.250	-6605.950
9120	-22148.650	-3039.250	-6605.950
9130	-22148.650	-3039.250	-7455.950
9140	-22148.650	-3039.250	-13455.949
9150	-22148.650	-3039.250	-19455.949
9160	-22148.650	-3039.250	-25455.949
9170	-22148.650	-3039.250	-31455.949

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T2+P2+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17-L4
25 (OCC) L25=L18-L4
26 (OCC) L26=L19-L4
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L6-L11
36 (EXP) L36=L4-L6
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L6-L9

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
Job:: BNK-GCS-CN-007-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP
CASE 4 (OPE) W+D1+T1+P1+H
CASE 6 (OPE) W+D1+T2+P1+H
CASE 9 (OPE) W+D1+T3+P1+H
CASE 11 (SUS) W+P1+H
CASE 12 (SUS) WNC
CASE 13 (OPE) W+D1+T2+P1+H+U1
CASE 14 (OPE) W+D1+T2+P1+H-U1
CASE 15 (OPE) W+D1+T2+P1+H+U2
CASE 16 (OPE) W+D1+T2+P1+H-U2
CASE 17 (OPE) W+D1+T2+P1+H+U3
CASE 18 (OPE) W+D1+T2+P1+H+F1
CASE 19 (OPE) W+D1+T2+P1+H+F2
CASE 20 (OCC) L20=L13-L4
CASE 21 (OCC) L21=L14-L4
CASE 22 (OCC) L22=L15-L4
CASE 23 (OCC) L23=L16-L4
CASE 24 (OCC) L24=L17-L4
CASE 25 (OCC) L25=L18-L4
CASE 26 (OCC) L26=L19-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
20		TYPE=Displ. Reaction;					
	3(HYD)	-45	-912	-80	0	0	0
	4(OPE)	35	-503	-304	0	0	0
	6(OPE)	-285	-979	20	0	0	0
	9(OPE)	-285	-981	22	0	0	0
	11(SUS)	-30	-733	-59	0	0	0
	12(SUS)	67	-915	23	0	0	0
	13(OPE)	92	-939	-27	0	0	0
	14(OPE)	-692	-1101	152	0	0	0
	15(OPE)	-296	-875	15	0	0	0
	16(OPE)	-271	-1082	19	0	0	0
	17(OPE)	-419	-1089	472	0	0	0
	18(OPE)	-284	-981	21	0	0	0
	19(OPE)	-285	-979	20	0	0	0
	20(OCC)	57	-437	277	0	0	0
	21(OCC)	-727	-598	456	0	0	0
	22(OCC)	-330	-372	319	0	0	0
	23(OCC)	-306	-579	323	0	0	0
	24(OCC)	-454	-586	776	0	0	0
	25(OCC)	-319	-478	325	0	0	0
	26(OCC)	-320	-476	324	0	0	0
	MAX	-727/L21	-1101/L14	776/L24			
25		TYPE=Rigid ANC;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	3(HYD)	-45	-702	-80	0	-0	11
	4(OPE)	35	-305	-304	-0	-0	10
	6(OPE)	-285	-781	20	-0	-0	10
	9(OPE)	-285	-783	22	0	-0	10
	11(SUS)	-30	-535	-59	0	0	10
	12(SUS)	67	-717	23	0	0	10
	13(OPE)	40	-742	-27	-0	-0	10
	14(OPE)	-641	-903	152	-0	0	10
	15(OPE)	-296	-701	15	-0	-0	9
	16(OPE)	-271	-860	19	-0	-0	11
	17(OPE)	-419	-891	420	0	3	10
	18(OPE)	-284	-783	21	0	-0	10
	19(OPE)	-285	-781	20	0	-0	10
	20(OCC)	5	-437	277	-0	0	0
	21(OCC)	-675	-598	456	-0	0	0
	22(OCC)	-330	-396	319	-0	-0	-1
	23(OCC)	-306	-555	323	-0	0	1
	24(OCC)	-454	-586	724	0	3	0
	25(OCC)	-319	-478	325	0	0	0
	26(OCC)	-320	-476	324	0	0	0
	MAX	-675/L21	-903/L14	724/L24	-0/L6	3/L24	11/L16
121		TYPE=Rigid +Y;					
	3(HYD)	0	-2320	67	0	0	0
	4(OPE)	0	-1629	163	0	0	0
	6(OPE)	0	-1619	162	0	0	0
	9(OPE)	0	-1619	162	0	0	0
	11(SUS)	0	-1617	43	0	0	0
	12(SUS)	-1	-39	-4	0	0	0
	13(OPE)	0	-1617	162	0	0	0
	14(OPE)	0	-1619	162	0	0	0
	15(OPE)	0	-1617	162	0	0	0
	16(OPE)	0	-1622	162	0	0	0
	17(OPE)	0	-1627	163	0	0	0
	18(OPE)	0	-1619	162	0	0	0
	19(OPE)	0	-1619	162	0	0	0
	20(OCC)	0	12	-1	0	0	0
	21(OCC)	-0	10	-1	0	0	0
	22(OCC)	0	12	-1	0	0	0
	23(OCC)	0	7	-1	0	0	0
	24(OCC)	-0	2	-0	0	0	0
	25(OCC)	0	10	-1	0	0	0
	26(OCC)	0	10	-1	0	0	0
	MAX	-1/L12	-2320/L3	163/L4			
160		TYPE=Rigid -X; Rigid X; Rigid Z;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
		Prog Design VSH;					
	3(HYD)	624	-2320	133	0	0	0
	4(OPE)	3002	-2104	923	0	0	0
	6(OPE)	2694	-2244	670	0	0	0
	9(OPE)	2684	-2237	672	0	0	0
	11(SUS)	457	-1688	86	0	0	0
	12(SUS)	-1	-39	-4	0	0	0
	13(OPE)	4481	-2634	673	0	0	0
	14(OPE)	641	-1633	341	0	0	0
	15(OPE)	2448	-2070	625	0	0	0
	16(OPE)	2895	-2356	622	0	0	0
	17(OPE)	2346	-1956	812	0	0	0
	18(OPE)	2690	-2240	672	0	0	0
	19(OPE)	2694	-2244	670	0	0	0
	20(OCC)	1479	-530	-250	0	0	0
	21(OCC)	-2360	471	-581	0	0	0
	22(OCC)	-553	34	-298	0	0	0
	23(OCC)	-107	-252	-301	0	0	0
	24(OCC)	-656	148	-111	0	0	0
	25(OCC)	-312	-136	-251	0	0	0
	26(OCC)	-308	-140	-252	0	0	0
	MAX	4481/L13	-2634/L13	923/L4			
300		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	-234	-2100	-458	0	0	0
	4(OPE)	-716	-2460	177	0	0	0
	6(OPE)	-377	-1318	119	0	0	0
	9(OPE)	-381	-1334	122	0	0	0
	11(SUS)	-177	-1793	-384	0	0	0
	12(SUS)	10	-4499	-397	0	0	0
	13(OPE)	-224	-854	124	0	0	0
	14(OPE)	-393	-1528	235	0	0	0
	15(OPE)	-291	-1007	82	0	0	0
	16(OPE)	-484	-1684	144	0	0	0
	17(OPE)	-154	-1568	444	0	0	0
	18(OPE)	-381	-1333	122	0	0	0
	19(OPE)	-377	-1318	119	0	0	0
	20(OCC)	492	1606	-53	0	0	0
	21(OCC)	323	932	58	0	0	0
	22(OCC)	426	1453	-95	0	0	0
	23(OCC)	232	775	-33	0	0	0
	24(OCC)	562	892	267	0	0	0
	25(OCC)	335	1126	-55	0	0	0
	26(OCC)	339	1142	-58	0	0	0
	MAX	-716/L4	-4499/L12	-458/L3			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
400		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	-144	-1468	71	0	0	0
	4(OPE)	-127	-423	-1	0	0	0
	6(OPE)	-320	-1070	22	0	0	0
	9(OPE)	-319	-1064	22	0	0	0
	11(SUS)	-113	-1102	59	0	0	0
	12(SUS)	0	268	80	0	0	0
	13(OPE)	-345	-1161	50	0	0	0
	14(OPE)	-320	-1067	7	0	0	0
	15(OPE)	-300	-1003	23	0	0	0
	16(OPE)	-336	-1120	16	0	0	0
	17(OPE)	-142	-856	214	0	0	0
	18(OPE)	-318	-1063	22	0	0	0
	19(OPE)	-320	-1070	22	0	0	0
	20(OCC)	-218	-739	52	0	0	0
	21(OCC)	-193	-644	8	0	0	0
	22(OCC)	-173	-581	24	0	0	0
	23(OCC)	-209	-697	17	0	0	0
	24(OCC)	-15	-433	215	0	0	0
	25(OCC)	-191	-640	23	0	0	0
	26(OCC)	-194	-648	23	0	0	0
	MAX	-345/L13	-1468/L3	215/L24			
480		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	-14	-2078	9	0	0	0
	4(OPE)	-633	-2131	-88	0	0	0
	6(OPE)	-488	-1629	-34	0	0	0
	9(OPE)	-486	-1624	-34	0	0	0
	11(SUS)	-25	-1329	4	0	0	0
	12(SUS)	49	-1416	44	0	0	0
	13(OPE)	-528	-1759	-17	0	0	0
	14(OPE)	-441	-1488	-70	0	0	0
	15(OPE)	-439	-1465	-29	0	0	0
	16(OPE)	-537	-1794	-41	0	0	0
	17(OPE)	-408	-1687	300	0	0	0
	18(OPE)	-488	-1630	-35	0	0	0
	19(OPE)	-488	-1629	-34	0	0	0
	20(OCC)	106	372	71	0	0	0
	21(OCC)	192	643	18	0	0	0
	22(OCC)	195	666	59	0	0	0
	23(OCC)	97	337	47	0	0	0
	24(OCC)	225	444	387	0	0	0
	25(OCC)	146	501	53	0	0	0
	26(OCC)	146	502	54	0	0	0
	MAX	-633/L4	-2131/L4	387/L24			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
660		TYPE=Rigid +Y;					
	3(HYD)	-209	-1414	191	0	0	0
	4(OPE)	-138	-1161	-320	0	0	0
	6(OPE)	-153	-1133	-304	0	0	0
	9(OPE)	-238	-966	-165	0	0	0
	11(SUS)	-159	-1022	133	0	0	0
	12(SUS)	-157	-1011	143	0	0	0
	13(OPE)	-318	-1361	-256	0	0	0
	14(OPE)	-71	-876	-253	0	0	0
	15(OPE)	-125	-1013	-277	0	0	0
	16(OPE)	-182	-1254	-329	0	0	0
	17(OPE)	-289	-1093	155	0	0	0
	18(OPE)	-153	-1133	-303	0	0	0
	19(OPE)	-153	-1133	-304	0	0	0
	20(OCC)	-180	-199	64	0	0	0
	21(OCC)	68	285	67	0	0	0
	22(OCC)	14	149	43	0	0	0
	23(OCC)	-44	-93	-10	0	0	0
	24(OCC)	-151	68	475	0	0	0
	25(OCC)	-15	28	16	0	0	0
	26(OCC)	-15	28	16	0	0	0
	MAX	-318/L13	-1414/L3	475/L24			
720		TYPE=Rigid ANC;					
	3(HYD)	192	-367	-117	-111	14	-47
	4(OPE)	100	224	228	215	620	-318
	6(OPE)	491	40	52	15	211	-220
	9(OPE)	-195	-279	369	77	48	-87
	11(SUS)	131	-332	-74	-82	10	-32
	12(SUS)	128	-332	-73	-79	9	-31
	13(OPE)	1394	284	-190	-44	83	-396
	14(OPE)	-287	-220	149	60	451	-76
	15(OPE)	473	85	21	24	237	-215
	16(OPE)	504	-4	73	6	193	-224
	17(OPE)	573	48	371	167	-96	-239
	18(OPE)	491	40	53	15	210	-220
	19(OPE)	491	40	52	15	211	-220
	20(OCC)	1294	60	-418	-259	-537	-78
	21(OCC)	-387	-444	-79	-155	-169	242
	22(OCC)	373	-139	-206	-191	-382	103
	23(OCC)	404	-228	-155	-209	-427	94
	24(OCC)	474	-176	143	-48	-716	79
	25(OCC)	392	-184	-175	-200	-409	98
	26(OCC)	392	-184	-175	-200	-409	98
	MAX	1394/L13	-444/L21	-418/L20	-259/L20	-716/L24	-396/L13

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
780		TYPE=Rigid ANC;					
	3(HYD)	-18	-3672	17	1325	-208	-683
	4(OPE)	-60	-2450	297	1351	1322	-496
	6(OPE)	338	-2548	214	1064	876	-504
	9(OPE)	-426	-3173	70	1594	81	-236
	11(SUS)	-28	-3119	10	1278	-153	-368
	12(SUS)	-30	-3105	21	1283	-163	-356
	13(OPE)	1156	-2559	229	1059	811	-1216
	14(OPE)	-429	-2507	186	1066	967	194
	15(OPE)	346	-2177	212	907	887	-458
	16(OPE)	329	-2919	216	1221	862	-547
	17(OPE)	322	-2497	1397	1491	459	-485
	18(OPE)	337	-2547	214	1063	875	-505
	19(OPE)	338	-2546	214	1063	876	-505
	20(OCC)	1216	-110	-68	-291	-511	-719
	21(OCC)	-369	-58	-111	-284	-355	690
	22(OCC)	406	273	-85	-444	-435	38
	23(OCC)	389	-469	-81	-129	-460	-50
	24(OCC)	382	-47	1100	140	-863	11
	25(OCC)	397	-97	-84	-287	-446	-8
	26(OCC)	398	-97	-83	-288	-446	-9
	MAX	1216/L20	-3672/L3	1397/L17	1594/L9	1322/L4	-1216/L13
840		TYPE=Rigid ANC;					
	3(HYD)	-18	-3672	17	1386	-208	-620
	4(OPE)	-60	-2450	297	2411	1322	-282
	6(OPE)	338	-2548	214	1826	876	-1710
	9(OPE)	-426	-3173	70	1843	81	1284
	11(SUS)	-28	-3119	10	1315	-153	-269
	12(SUS)	-30	-3105	21	1360	-163	-250
	13(OPE)	1156	-2559	229	1876	811	-5343
	14(OPE)	-429	-2507	186	1731	967	1726
	15(OPE)	346	-2177	212	1664	887	-1695
	16(OPE)	329	-2919	216	1991	862	-1723
	17(OPE)	322	-2497	1397	6477	459	-1635
	18(OPE)	337	-2547	214	1826	875	-1709
	19(OPE)	338	-2546	214	1825	876	-1712
	20(OCC)	1216	-110	-68	-535	-511	-5060
	21(OCC)	-369	-58	-111	-680	-355	2008
	22(OCC)	406	273	-85	-747	-435	-1412
	23(OCC)	389	-469	-81	-420	-460	-1441
	24(OCC)	382	-47	1100	4066	-863	-1353
	25(OCC)	397	-97	-84	-585	-446	-1427
	26(OCC)	398	-97	-83	-586	-446	-1430
	MAX	1216/L20	-3672/L3	1397/L17	6477/L17	1322/L4	-5343/L13

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1240		TYPE=Rigid ANC;					
	3(HYD)	-196	-1695	209	0	0	24
	4(OPE)	2184	-1386	-1563	-0	-0	24
	6(OPE)	1873	-1336	-1460	-0	-0	24
	9(OPE)	1873	-1335	-1459	-0	-0	24
	11(SUS)	-154	-1388	162	0	0	24
	12(SUS)	-153	-1375	160	0	0	24
	13(OPE)	2415	-1289	-1458	-0	-0	24
	14(OPE)	1368	-1365	-1345	-0	0	24
	15(OPE)	1864	-1165	-1473	0	0	21
	16(OPE)	1886	-1495	-1458	-0	-0	27
	17(OPE)	1597	-1308	-783	-0	6	24
	18(OPE)	1872	-1338	-1456	0	0	24
	19(OPE)	1872	-1336	-1459	0	-0	24
	20(OCC)	231	96	105	0	0	0
	21(OCC)	-816	20	218	-0	0	0
	22(OCC)	-321	221	90	0	0	-3
	23(OCC)	-298	-110	104	-0	0	3
	24(OCC)	-588	78	779	0	6	0
	25(OCC)	-313	48	106	0	0	0
	26(OCC)	-312	49	103	0	0	0
	MAX	2415/L13	-1695/L3	-1563/L4	-0/L9	6/L17	27/L16
1241		TYPE=Displ. Reaction;					
	3(HYD)	-196	-2080	209	0	0	0
	4(OPE)	2184	-1759	-1563	0	0	0
	6(OPE)	1873	-1710	-1460	0	0	0
	9(OPE)	1873	-1709	-1459	0	0	0
	11(SUS)	-154	-1762	162	0	0	0
	12(SUS)	-153	-1747	160	0	0	0
	13(OPE)	2512	-1663	-1458	0	0	0
	14(OPE)	1271	-1739	-1345	0	0	0
	15(OPE)	1864	-1493	-1473	0	0	0
	16(OPE)	1886	-1913	-1458	0	0	0
	17(OPE)	1597	-1681	-686	0	0	0
	18(OPE)	1872	-1711	-1456	0	0	0
	19(OPE)	1872	-1710	-1459	0	0	0
	20(OCC)	328	96	105	0	0	0
	21(OCC)	-913	20	218	0	0	0
	22(OCC)	-321	266	90	0	0	0
	23(OCC)	-298	-154	104	0	0	0
	24(OCC)	-588	78	877	0	0	0
	25(OCC)	-313	48	106	0	0	0
	26(OCC)	-312	49	103	0	0	0
	MAX	2512/L13	-2080/L3	-1563/L4			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1280		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	-143	-4106	199	0	0	0
	4(OPE)	-377	-1403	187	0	0	0
	6(OPE)	-509	-1967	298	0	0	0
	9(OPE)	-508	-1966	299	0	0	0
	11(SUS)	-112	-3905	146	0	0	0
	12(SUS)	-110	-3889	146	0	0	0
	13(OPE)	-383	-1582	280	0	0	0
	14(OPE)	-533	-2160	368	0	0	0
	15(OPE)	-378	-1485	236	0	0	0
	16(OPE)	-650	-2443	339	0	0	0
	17(OPE)	-264	-2079	565	0	0	0
	18(OPE)	-509	-1967	299	0	0	0
	19(OPE)	-510	-1968	298	0	0	0
	20(OCC)	-6	-178	93	0	0	0
	21(OCC)	-156	-757	182	0	0	0
	22(OCC)	-0	-81	49	0	0	0
	23(OCC)	-273	-1040	153	0	0	0
	24(OCC)	114	-676	379	0	0	0
	25(OCC)	-131	-564	112	0	0	0
	26(OCC)	-132	-565	111	0	0	0
	MAX	-650/L16	-4106/L3	565/L17			
1380		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	-321	-3056	-387	0	0	0
	4(OPE)	-2447	-8202	-255	0	0	0
	6(OPE)	-2060	-6976	-372	0	0	0
	9(OPE)	-2060	-6978	-371	0	0	0
	11(SUS)	-253	-2809	-299	0	0	0
	12(SUS)	-250	-2782	-298	0	0	0
	13(OPE)	-2233	-7559	-393	0	0	0
	14(OPE)	-2041	-6884	-315	0	0	0
	15(OPE)	-1971	-6670	-344	0	0	0
	16(OPE)	-2148	-7287	-409	0	0	0
	17(OPE)	-2015	-6785	285	0	0	0
	18(OPE)	-2059	-6975	-371	0	0	0
	19(OPE)	-2060	-6976	-372	0	0	0
	20(OCC)	214	644	-139	0	0	0
	21(OCC)	407	1319	-60	0	0	0
	22(OCC)	476	1532	-89	0	0	0
	23(OCC)	300	915	-154	0	0	0
	24(OCC)	432	1418	540	0	0	0
	25(OCC)	388	1227	-117	0	0	0
	26(OCC)	388	1226	-117	0	0	0
	MAX	-2447/L4	-8202/L4	540/L24			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1500		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-212	-3772	-323	0	0	0
	4(OPE)	177	-797	235	0	0	0
	6(OPE)	347	-1290	171	0	0	0
	9(OPE)	347	-1291	171	0	0	0
	11(SUS)	-171	-2971	-250	0	0	0
	12(SUS)	-171	-2955	-249	0	0	0
	13(OPE)	316	-1299	228	0	0	0
	14(OPE)	405	-1419	132	0	0	0
	15(OPE)	224	-925	163	0	0	0
	16(OPE)	464	-1661	182	0	0	0
	17(OPE)	188	-1420	1297	0	0	0
	18(OPE)	347	-1290	172	0	0	0
	19(OPE)	347	-1290	171	0	0	0
	20(OCC)	140	-502	-7	0	0	0
	21(OCC)	228	-623	-103	0	0	0
	22(OCC)	48	-128	-72	0	0	0
	23(OCC)	288	-864	-53	0	0	0
	24(OCC)	12	-624	1062	0	0	0
	25(OCC)	170	-493	-63	0	0	0
	26(OCC)	170	-494	-63	0	0	0
	MAX	464/L16	-3772/L3	1297/L17			
1520		TYPE=Rigid +Y;					
	3(HYD)	-183	-3411	263	0	0	0
	4(OPE)	-785	-2618	-6	0	0	0
	6(OPE)	-782	-2620	83	0	0	0
	9(OPE)	-781	-2618	80	0	0	0
	11(SUS)	-148	-2683	205	0	0	0
	12(SUS)	-148	-2668	205	0	0	0
	13(OPE)	-650	-2384	-299	0	0	0
	14(OPE)	-595	-2281	-338	0	0	0
	15(OPE)	-694	-2325	63	0	0	0
	16(OPE)	-865	-2913	128	0	0	0
	17(OPE)	-486	-2738	662	0	0	0
	18(OPE)	-782	-2621	84	0	0	0
	19(OPE)	-782	-2620	83	0	0	0
	20(OCC)	136	234	-293	0	0	0
	21(OCC)	191	337	-333	0	0	0
	22(OCC)	91	293	69	0	0	0
	23(OCC)	-79	-295	134	0	0	0
	24(OCC)	300	-120	668	0	0	0
	25(OCC)	4	-3	90	0	0	0
	26(OCC)	4	-2	89	0	0	0
	MAX	-865/L16	-3411/L3	668/L24			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1560		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	274	-2688	-193	0	0	0
	4(OPE)	-14391	-7601	6203	0	0	0
	6(OPE)	-11318	-7121	5199	0	0	0
	9(OPE)	-11326	-7118	5198	0	0	0
	11(SUS)	227	-2112	-151	0	0	0
	12(SUS)	226	-2100	-150	0	0	0
	13(OPE)	-10114	-6552	2529	0	0	0
	14(OPE)	-13846	-6983	4491	0	0	0
	15(OPE)	-11281	-6601	5026	0	0	0
	16(OPE)	-11301	-7644	5360	0	0	0
	17(OPE)	-10410	-7463	5253	0	0	0
	18(OPE)	-11315	-7122	5200	0	0	0
	19(OPE)	-11318	-7121	5199	0	0	0
	20(OCC)	4276	1050	-3673	0	0	0
	21(OCC)	545	619	-1712	0	0	0
	22(OCC)	3109	1001	-1177	0	0	0
	23(OCC)	3090	-43	-843	0	0	0
	24(OCC)	3981	138	-949	0	0	0
	25(OCC)	3075	479	-1003	0	0	0
	26(OCC)	3072	481	-1003	0	0	0
	MAX	-14391/L4	-7644/L16	6203/L4			
1660		TYPE=Rigid ANC;					
	3(HYD)	0	0	0	0	-0	0
	4(OPE)	0	0	0	0	-0	-0
	6(OPE)	0	0	0	0	-0	0
	9(OPE)	0	0	0	-0	0	-0
	11(SUS)	0	0	-0	0	-0	-0
	12(SUS)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	-0	0
	14(OPE)	0	0	0	-0	-0	-0
	15(OPE)	0	0	0	-0	0	-0
	16(OPE)	0	0	0	0	0	-0
	17(OPE)	0	0	0	0	0	-0
	18(OPE)	0	0	0	0	-0	-0
	19(OPE)	0	0	0	-0	0	-0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	-0	-0	0
	22(OCC)	0	0	0	-0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	-0	0	0
	MAX		0/L15	-0/L11	-0/L14	-0/L14	-0/L4

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1700		TYPE=Rigid ANC;					
	3(HYD)	33	-1016	-33	-159	16	-94
	4(OPE)	-1147	535	705	417	501	1824
	6(OPE)	-932	238	656	290	338	1440
	9(OPE)	-932	237	655	290	339	1439
	11(SUS)	32	-937	-29	-138	12	-89
	12(SUS)	32	-934	-29	-137	12	-88
	13(OPE)	-339	151	408	369	267	996
	14(OPE)	-1496	310	501	423	649	1810
	15(OPE)	-933	389	630	325	354	1478
	16(OPE)	-925	84	685	254	313	1395
	17(OPE)	-885	179	1378	435	-122	1399
	18(OPE)	-932	238	657	289	337	1440
	19(OPE)	-932	238	656	290	338	1440
	20(OCC)	809	-384	-296	-48	-233	-828
	21(OCC)	-348	-225	-204	6	148	-14
	22(OCC)	214	-146	-75	-92	-146	-346
	23(OCC)	223	-451	-20	-163	-188	-429
	24(OCC)	263	-356	673	18	-622	-425
	25(OCC)	215	-297	-48	-128	-163	-384
	26(OCC)	215	-297	-48	-127	-163	-384
	MAX	-1496/L14	-1016/L3	1378/L17	435/L17	649/L14	1824/L4
1780		TYPE=Rigid ANC;					
	3(HYD)	-54	-627	-198	102	4	-94
	4(OPE)	1277	15750	6745	856	-498	959
	6(OPE)	355	7159	4653	-538	-140	264
	9(OPE)	358	7152	4641	-534	-141	266
	11(SUS)	-59	-629	-168	76	6	-96
	12(SUS)	-58	-624	-164	75	6	-96
	13(OPE)	98	7189	4706	-562	4	-76
	14(OPE)	279	7166	4695	-567	-194	221
	15(OPE)	362	7236	4675	-548	-140	275
	16(OPE)	349	7072	4603	-512	-139	254
	17(OPE)	182	6979	4274	-282	-104	31
	18(OPE)	355	7159	4653	-538	-140	264
	19(OPE)	355	7159	4653	-538	-140	264
	20(OCC)	-1179	-8561	-2039	-1418	501	-1035
	21(OCC)	-998	-8584	-2050	-1423	304	-739
	22(OCC)	-915	-8514	-2069	-1404	357	-684
	23(OCC)	-928	-8678	-2142	-1368	358	-706
	24(OCC)	-1095	-8771	-2470	-1138	394	-928
	25(OCC)	-922	-8591	-2092	-1394	358	-695
	26(OCC)	-922	-8591	-2092	-1394	358	-696
	MAX	1277/L4	15750/L4	6745/L4	-1423/L21	501/L20	-1035/L20

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1820		TYPE=Rigid ANC;					
	3(HYD)	54	341	198	-40	-4	77
	4(OPE)	-1277	-16033	-6745	-2954	498	-562
	6(OPE)	-355	-7441	-4653	-909	140	-153
	9(OPE)	-358	-7434	-4641	-910	141	-155
	11(SUS)	59	346	168	-24	-6	78
	12(SUS)	58	342	164	-24	-6	78
	13(OPE)	-24	-7472	-4706	-902	-4	99
	14(OPE)	-352	-7448	-4695	-894	194	-126
	15(OPE)	-362	-7485	-4675	-906	140	-163
	16(OPE)	-349	-7389	-4603	-920	139	-145
	17(OPE)	-182	-7262	-4201	-1040	104	26
	18(OPE)	-355	-7441	-4653	-909	140	-153
	19(OPE)	-355	-7441	-4653	-909	140	-153
	20(OCC)	1252	8561	2039	2052	-501	661
	21(OCC)	924	8584	2050	2061	-304	436
	22(OCC)	915	8548	2069	2048	-357	400
	23(OCC)	928	8644	2142	2035	-358	417
	24(OCC)	1095	8771	2544	1915	-394	588
	25(OCC)	922	8591	2092	2045	-358	409
	26(OCC)	922	8591	2092	2045	-358	409
	MAX	-1277/L4	-16033/L4	-6745/L4	-2954/L4	-501/L20	661/L20
1840		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	3(HYD)	-61	-9573	-18	0	0	0
	4(OPE)	165	-1577	50	0	0	0
	6(OPE)	447	-5189	134	0	0	0
	9(OPE)	449	-5188	135	0	0	0
	11(SUS)	-56	-9148	-17	0	0	0
	12(SUS)	-56	-9113	-17	0	0	0
	13(OPE)	5819	-6015	1746	0	0	0
	14(OPE)	-3349	-5541	1005	0	0	0
	15(OPE)	474	-4075	142	0	0	0
	16(OPE)	386	-6372	116	0	0	0
	17(OPE)	1206	-6519	5292	0	0	0
	18(OPE)	446	-5187	134	0	0	0
	19(OPE)	447	-5189	134	0	0	0
	20(OCC)	5654	-4438	1696	0	0	0
	21(OCC)	-3514	-3964	955	0	0	0
	22(OCC)	308	-2498	92	0	0	0
	23(OCC)	221	-4794	66	0	0	0
	24(OCC)	1040	-4942	5243	0	0	0
	25(OCC)	280	-3609	84	0	0	0
	26(OCC)	281	-3611	84	0	0	0
	MAX	5819/L13	-9573/L3	5292/L17			

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1860		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	0	-8042	-1	0	0	0
	4(OPE)	-766	-7934	208	0	0	0
	6(OPE)	-761	-7882	206	0	0	0
	9(OPE)	-761	-7882	206	0	0	0
	11(SUS)	0	-7675	-1	0	0	0
	12(SUS)	0	-7649	-1	0	0	0
	13(OPE)	-744	-7711	202	0	0	0
	14(OPE)	-756	-7834	207	0	0	0
	15(OPE)	-672	-6964	183	0	0	0
	16(OPE)	-849	-8801	233	0	0	0
	17(OPE)	-1471	-7867	3461	0	0	0
	18(OPE)	-761	-7883	206	0	0	0
	19(OPE)	-761	-7882	206	0	0	0
	20(OCC)	21	223	-6	0	0	0
	21(OCC)	10	100	-1	0	0	0
	22(OCC)	94	970	-25	0	0	0
	23(OCC)	-83	-868	25	0	0	0
	24(OCC)	-705	67	3253	0	0	0
	25(OCC)	5	51	-2	0	0	0
	26(OCC)	5	51	-2	0	0	0
	MAX	-1471/L17	-8801/L16	3461/L17			
1880		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	-0	-8036	-1	0	0	0
	4(OPE)	-824	-8235	-2	0	0	0
	6(OPE)	-806	-8056	-3	0	0	0
	9(OPE)	-806	-8056	-3	0	0	0
	11(SUS)	-0	-7668	-1	0	0	0
	12(SUS)	-0	-7643	-1	0	0	0
	13(OPE)	-786	-7858	-2	0	0	0
	14(OPE)	-805	-8049	-0	0	0	0
	15(OPE)	-714	-7140	-2	0	0	0
	16(OPE)	-897	-8973	-0	0	0	0
	17(OPE)	-685	-8026	419	0	0	0
	18(OPE)	-806	-8056	-3	0	0	0
	19(OPE)	-806	-8056	-3	0	0	0
	20(OCC)	38	377	-0	0	0	0
	21(OCC)	19	186	2	0	0	0
	22(OCC)	110	1095	0	0	0	0
	23(OCC)	-74	-738	2	0	0	0
	24(OCC)	139	210	421	0	0	0
	25(OCC)	18	179	-0	0	0	0
	26(OCC)	18	179	-0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-897/L16	-8973/L16	421/L24			
1900		TYPE=Rigid Y; Rigid X; Rigid Z w/gap;					
	3(HYD)	-44	-10197	-76	0	0	0
	4(OPE)	1727	13720	-906	0	0	0
	6(OPE)	1055	1818	402	0	0	0
	9(OPE)	1057	1826	383	0	0	0
	11(SUS)	-45	-9780	-45	0	0	0
	12(SUS)	-44	-9746	-44	0	0	0
	13(OPE)	5094	1557	-1319	0	0	0
	14(OPE)	-4701	1902	-577	0	0	0
	15(OPE)	855	3028	348	0	0	0
	16(OPE)	1290	617	449	0	0	0
	17(OPE)	616	2284	413	0	0	0
	18(OPE)	1056	1818	407	0	0	0
	19(OPE)	1055	1818	402	0	0	0
	20(OCC)	3367	-12164	-413	0	0	0
	21(OCC)	-6428	-11818	329	0	0	0
	22(OCC)	-873	-10692	1254	0	0	0
	23(OCC)	-437	-13103	1355	0	0	0
	24(OCC)	-1111	-11436	1320	0	0	0
	25(OCC)	-671	-11902	1313	0	0	0
	26(OCC)	-672	-11902	1308	0	0	0
	MAX	-6428/L21	13720/L4	1355/L23			
2180		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-10	-939	56	0	0	0
	4(OPE)	250	-796	149	0	0	0
	6(OPE)	229	-808	112	0	0	0
	9(OPE)	226	-806	99	0	0	0
	11(SUS)	-9	-837	51	0	0	0
	12(SUS)	-9	-832	51	0	0	0
	13(OPE)	263	-808	129	0	0	0
	14(OPE)	-224	-810	95	0	0	0
	15(OPE)	201	-708	108	0	0	0
	16(OPE)	257	-908	122	0	0	0
	17(OPE)	260	-831	295	0	0	0
	18(OPE)	229	-809	114	0	0	0
	19(OPE)	227	-809	114	0	0	0
	20(OCC)	13	-12	-19	0	0	0
	21(OCC)	-474	-14	-53	0	0	0
	22(OCC)	-49	88	-40	0	0	0
	23(OCC)	7	-112	-27	0	0	0
	24(OCC)	10	-35	146	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	-21	-13	-35	0	0	0
	26(OCC)	-24	-12	-35	0	0	0
	MAX	-474/L21	-939/L3	295/L17			
2200		TYPE=Rigid +Y;					
	3(HYD)	-2	-448	-26	0	0	0
	4(OPE)	-117	-414	-42	0	0	0
	6(OPE)	-113	-406	-44	0	0	0
	9(OPE)	78	-412	36	0	0	0
	11(SUS)	-2	-398	-25	0	0	0
	12(SUS)	-2	-396	-25	0	0	0
	13(OPE)	115	-392	-25	0	0	0
	14(OPE)	-121	-415	-29	0	0	0
	15(OPE)	-97	-357	-46	0	0	0
	16(OPE)	-129	-455	-46	0	0	0
	17(OPE)	-96	-395	69	0	0	0
	18(OPE)	-111	-403	-47	0	0	0
	19(OPE)	-111	-403	-49	0	0	0
	20(OCC)	232	22	17	0	0	0
	21(OCC)	-4	-1	12	0	0	0
	22(OCC)	20	57	-4	0	0	0
	23(OCC)	-12	-41	-4	0	0	0
	24(OCC)	21	19	111	0	0	0
	25(OCC)	6	12	-5	0	0	0
	26(OCC)	6	11	-7	0	0	0
	MAX	232/L20	-455/L16	111/L24			
2220		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-1	-552	13	0	0	0
	4(OPE)	-229	-507	-325	0	0	0
	6(OPE)	-179	-522	-170	0	0	0
	9(OPE)	-338	-472	-747	0	0	0
	11(SUS)	-1	-492	20	0	0	0
	12(SUS)	-1	-489	20	0	0	0
	13(OPE)	76	-549	-273	0	0	0
	14(OPE)	-199	-508	-190	0	0	0
	15(OPE)	-156	-467	-136	0	0	0
	16(OPE)	-197	-578	-188	0	0	0
	17(OPE)	-154	-521	28	0	0	0
	18(OPE)	-184	-533	-180	0	0	0
	19(OPE)	-162	-528	-105	0	0	0
	20(OCC)	305	-42	52	0	0	0
	21(OCC)	29	-1	135	0	0	0
	22(OCC)	73	41	189	0	0	0
	23(OCC)	32	-71	137	0	0	0
	24(OCC)	75	-13	353	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	44	-26	145	0	0	0
	26(OCC)	67	-21	220	0	0	0
	MAX	-338/L9	-578/L16	-747/L9			
2270		TYPE=Rigid +Y;					
	3(HYD)	0	-500	0	0	0	0
	4(OPE)	0	-439	0	0	0	0
	6(OPE)	0	-344	0	0	0	0
	9(OPE)	0	-564	0	0	0	0
	11(SUS)	0	-447	0	0	0	0
	12(SUS)	0	-444	0	0	0	0
	13(OPE)	0	-252	0	0	0	0
	14(OPE)	0	-390	0	0	0	0
	15(OPE)	0	-277	0	0	0	0
	16(OPE)	0	-413	0	0	0	0
	17(OPE)	0	-396	0	0	0	0
	18(OPE)	0	-269	0	0	0	0
	19(OPE)	0	-354	0	0	0	0
	20(OCC)	0	187	0	0	0	0
	21(OCC)	0	49	0	0	0	0
	22(OCC)	0	163	0	0	0	0
	23(OCC)	0	26	0	0	0	0
	24(OCC)	0	43	0	0	0	0
	25(OCC)	0	171	0	0	0	0
	26(OCC)	0	85	0	0	0	0
	MAX		-564/L9				
2320		TYPE=Rigid +Y;					
	3(HYD)	0	-12	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	0	-3326	0	0	0	0
	11(SUS)	0	-107	0	0	0	0
	12(SUS)	0	-106	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	26(OCC)	0	0	0	0	0	0
	MAX		-3326/L9				
2500		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	3(HYD)	95	-2832	-9	0	0	0
	4(OPE)	2526	745	138	0	0	0
	6(OPE)	2495	746	64	0	0	0
	9(OPE)	-624	159	98	0	0	0
	11(SUS)	89	-2275	-2	0	0	0
	12(SUS)	88	-2274	-2	0	0	0
	13(OPE)	3646	1094	-12	0	0	0
	14(OPE)	1597	473	76	0	0	0
	15(OPE)	2305	689	52	0	0	0
	16(OPE)	2597	777	56	0	0	0
	17(OPE)	2666	717	686	0	0	0
	18(OPE)	4227	1265	95	0	0	0
	19(OPE)	2264	679	10	0	0	0
	20(OCC)	1120	349	-151	0	0	0
	21(OCC)	-929	-272	-62	0	0	0
	22(OCC)	-221	-55	-86	0	0	0
	23(OCC)	72	32	-82	0	0	0
	24(OCC)	140	-28	547	0	0	0
	25(OCC)	1701	520	-44	0	0	0
	26(OCC)	-262	-66	-129	0	0	0
	MAX	4227/L18	-2832/L3	686/L17			
2620		TYPE=Rigid +Y;					
	3(HYD)	-12	-56	-12	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	69	-2638	788	0	0	0
	11(SUS)	-21	-149	-23	0	0	0
	12(SUS)	-21	-148	-23	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	69/L9	-2638/L9	788/L9			
2800		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	3(HYD)	0	-3156	0	0	0	0
	4(OPE)	2051	0	28	0	0	0
	6(OPE)	2113	0	0	0	0	0
	9(OPE)	-907	0	0	0	0	0
	11(SUS)	0	-2597	0	0	0	0
	12(SUS)	0	-2596	0	0	0	0
	13(OPE)	3042	0	0	0	0	0
	14(OPE)	1350	0	0	0	0	0
	15(OPE)	2009	0	0	0	0	0
	16(OPE)	2239	0	0	0	0	0
	17(OPE)	1797	0	1014	0	0	0
	18(OPE)	1995	0	0	0	0	0
	19(OPE)	3697	0	0	0	0	0
	20(OCC)	991	0	-28	0	0	0
	21(OCC)	-701	0	-28	0	0	0
	22(OCC)	-42	0	-28	0	0	0
	23(OCC)	188	0	-28	0	0	0
	24(OCC)	-254	0	986	0	0	0
	25(OCC)	-56	0	-28	0	0	0
	26(OCC)	1647	0	-28	0	0	0
	MAX	3697/L19	-3156/L3	1014/L17			
4220		TYPE=Rigid ANC;					
	3(HYD)	0	0	0	-0	-0	-0
	4(OPE)	0	0	0	0	-0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	-0
	11(SUS)	0	0	0	-0	0	-0
	12(SUS)	0	0	0	-0	-0	-0
	13(OPE)	0	0	0	-0	0	-0
	14(OPE)	0	0	0	0	0	-0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	-0
	17(OPE)	0	0	0	-0	-0	0
	18(OPE)	0	0	0	0	0	-0
	19(OPE)	0	0	0	0	0	-0
	20(OCC)	0	0	0	-0	0	-0
	21(OCC)	0	0	0	-0	0	-0
	22(OCC)	0	0	0	-0	0	0
	23(OCC)	0	0	0	-0	0	-0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	24(OCC)	0	0	0	-0	-0	0
	25(OCC)	0	0	0	-0	0	-0
	26(OCC)	0	0	0	-0	0	-0
	MAX	0/L16			-0/L24	0/L20	-0/L9
4260		TYPE=Rigid ANC;					
	3(HYD)	179	-2043	-4	137	6	1206
	4(OPE)	9576	-3615	746	-643	802	5819
	6(OPE)	4184	-2207	-310	-47	-1303	2408
	9(OPE)	4153	-2208	-294	-26	-1244	2409
	11(SUS)	168	-1477	-2	108	10	808
	12(SUS)	168	-1474	-2	108	10	805
	13(OPE)	9733	-2214	-543	12	-1962	2428
	14(OPE)	-2605	-2200	27	-67	-271	2385
	15(OPE)	3802	-2030	-312	-44	-1315	2310
	16(OPE)	4439	-2385	-310	-34	-1302	2506
	17(OPE)	4810	-2207	1533	238	3113	2409
	18(OPE)	4181	-2207	-311	-47	-1306	2408
	19(OPE)	4184	-2207	-310	-47	-1303	2408
	20(OCC)	157	1401	-1288	654	-2764	-3390
	21(OCC)	-12181	1415	-718	576	-1073	-3434
	22(OCC)	-5774	1585	-1057	599	-2117	-3508
	23(OCC)	-5137	1230	-1055	609	-2104	-3313
	24(OCC)	-4766	1408	787	881	2311	-3410
	25(OCC)	-5395	1408	-1057	595	-2108	-3411
	26(OCC)	-5392	1408	-1056	596	-2106	-3411
	MAX	-12181/L21	-3615/L4	1533/L17	881/L24	3113/L17	5819/L4
4320		TYPE=Rigid ANC;					
	3(HYD)	179	-2043	-4	125	4	1681
	4(OPE)	9576	-3615	746	1296	1145	-17416
	6(OPE)	4184	-2207	-310	-854	-1446	-7456
	9(OPE)	4153	-2208	-294	-790	-1379	-7374
	11(SUS)	168	-1477	-2	104	9	1050
	12(SUS)	168	-1474	-2	104	9	1046
	13(OPE)	9733	-2214	-543	-1399	-2211	-21859
	14(OPE)	-2605	-2200	27	4	-259	10170
	15(OPE)	3802	-2030	-312	-854	-1458	-6642
	16(OPE)	4439	-2385	-310	-839	-1444	-7938
	17(OPE)	4810	-2207	1533	4224	3818	-9082
	18(OPE)	4181	-2207	-311	-856	-1449	-7446
	19(OPE)	4184	-2207	-310	-854	-1446	-7456
	20(OCC)	157	1401	-1288	-2695	-3357	-4442
	21(OCC)	-12181	1415	-718	-1292	-1404	27587
	22(OCC)	-5774	1585	-1057	-2150	-2604	10775
	23(OCC)	-5137	1230	-1055	-2135	-2589	9479
	24(OCC)	-4766	1408	787	2928	2673	8335

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	-5395	1408	-1057	-2152	-2594	9970
	26(OCC)	-5392	1408	-1056	-2150	-2592	9961
	MAX	-12181/L21	-3615/L4	1533/L17	4224/L17	3818/L17	27587/L21
5370		TYPE=Rigid +Y; Rigid Z w/gap;					
	3(HYD)	-84	-818	28	0	0	0
	4(OPE)	349	-1044	-198	0	0	0
	6(OPE)	372	-1118	-211	0	0	0
	9(OPE)	-126	-450	47	0	0	0
	11(SUS)	-34	-754	23	0	0	0
	12(SUS)	-34	-754	23	0	0	0
	13(OPE)	402	-1169	-237	0	0	0
	14(OPE)	341	-1076	-173	0	0	0
	15(OPE)	345	-1016	-212	0	0	0
	16(OPE)	398	-1217	-207	0	0	0
	17(OPE)	338	-1128	-23	0	0	0
	18(OPE)	373	-1121	-210	0	0	0
	19(OPE)	374	-1123	-211	0	0	0
	20(OCC)	54	-125	-40	0	0	0
	21(OCC)	-7	-32	25	0	0	0
	22(OCC)	-4	28	-14	0	0	0
	23(OCC)	49	-173	-9	0	0	0
	24(OCC)	-11	-84	175	0	0	0
	25(OCC)	24	-76	-12	0	0	0
	26(OCC)	25	-79	-14	0	0	0
	MAX	402/L13	-1217/L16	-237/L13			
5375		TYPE=Rigid +Y;					
	3(HYD)	0	-1376	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	0	-2480	0	0	0	0
	11(SUS)	0	-1109	0	0	0	0
	12(SUS)	0	-1109	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX		-2480/L9				
5805		TYPE=Rigid +Y;					
	3(HYD)	-398	-2003	137	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	475	-3343	-883	0	0	0
	11(SUS)	-247	-1407	79	0	0	0
	12(SUS)	-247	-1406	79	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	475/L9	-3343/L9	-883/L9			
6220		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-224	-3331	-42	0	0	0
	4(OPE)	-569	-1909	-63	0	0	0
	6(OPE)	-623	-2081	-46	0	0	0
	9(OPE)	-596	-1991	-38	0	0	0
	11(SUS)	-131	-2092	-29	0	0	0
	12(SUS)	-117	-2067	-47	0	0	0
	13(OPE)	-593	-1987	-62	0	0	0
	14(OPE)	-654	-2183	-41	0	0	0
	15(OPE)	-547	-1829	-41	0	0	0
	16(OPE)	-698	-2333	-50	0	0	0
	17(OPE)	-603	-2089	171	0	0	0
	18(OPE)	-622	-2081	-46	0	0	0
	19(OPE)	-623	-2081	-46	0	0	0
	20(OCC)	-24	-79	2	0	0	0
	21(OCC)	-85	-275	22	0	0	0
	22(OCC)	22	80	23	0	0	0
	23(OCC)	-129	-425	14	0	0	0
	24(OCC)	-34	-180	235	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	-53	-172	18	0	0	0
	26(OCC)	-53	-172	18	0	0	0
	MAX	-698/L16	-3331/L3	235/L24			
6240		TYPE=Rigid +Y;					
	3(HYD)	0	-178	0	0	0	0
	4(OPE)	0	-84	0	0	0	0
	6(OPE)	0	-66	0	0	0	0
	9(OPE)	0	-98	0	0	0	0
	11(SUS)	0	-177	0	0	0	0
	12(SUS)	0	-177	0	0	0	0
	13(OPE)	0	-120	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	-26	0	0	0	0
	16(OPE)	0	-105	0	0	0	0
	17(OPE)	0	-65	0	0	0	0
	18(OPE)	0	-66	0	0	0	0
	19(OPE)	0	-66	0	0	0	0
	20(OCC)	0	-36	0	0	0	0
	21(OCC)	0	84	0	0	0	0
	22(OCC)	0	59	0	0	0	0
	23(OCC)	0	-21	0	0	0	0
	24(OCC)	0	20	0	0	0	0
	25(OCC)	0	19	0	0	0	0
	26(OCC)	0	19	0	0	0	0
	MAX		-178/L3				
6270		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	0	-592	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	0	-1092	0	0	0	0
	11(SUS)	0	-581	0	0	0	0
	12(SUS)	0	-581	0	0	0	0
	13(OPE)	0	0	80	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	80	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX		-1092/L9	80/L13			
6290		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	0	-835	-57	0	0	0
	4(OPE)	0	-1180	439	0	0	0
	6(OPE)	0	-1141	466	0	0	0
	9(OPE)	0	-491	-140	0	0	0
	11(SUS)	0	-758	-49	0	0	0
	12(SUS)	0	-758	-49	0	0	0
	13(OPE)	0	-1114	582	0	0	0
	14(OPE)	0	-1164	315	0	0	0
	15(OPE)	0	-1005	473	0	0	0
	16(OPE)	0	-1279	459	0	0	0
	17(OPE)	0	-1139	826	0	0	0
	18(OPE)	0	-1141	466	0	0	0
	19(OPE)	0	-1140	466	0	0	0
	20(OCC)	0	66	144	0	0	0
	21(OCC)	0	17	-123	0	0	0
	22(OCC)	0	175	34	0	0	0
	23(OCC)	0	-99	20	0	0	0
	24(OCC)	0	41	387	0	0	0
	25(OCC)	0	40	27	0	0	0
	26(OCC)	0	40	27	0	0	0
	MAX		-1279/L16	826/L17			
6310		TYPE=Rigid +Y;					
	3(HYD)	-6	-902	7	0	0	0
	4(OPE)	-86	-590	-155	0	0	0
	6(OPE)	-54	-630	-181	0	0	0
	9(OPE)	-54	-630	-181	0	0	0
	11(SUS)	-5	-909	2	0	0	0
	12(SUS)	-39	-912	-18	0	0	0
	13(OPE)	-41	-552	-161	0	0	0
	14(OPE)	-93	-896	-252	0	0	0
	15(OPE)	-45	-457	-130	0	0	0
	16(OPE)	-64	-765	-220	0	0	0
	17(OPE)	-117	-570	-124	0	0	0
	18(OPE)	-54	-629	-181	0	0	0
	19(OPE)	-54	-629	-181	0	0	0
	20(OCC)	45	37	-6	0	0	0
	21(OCC)	-7	-306	-97	0	0	0
	22(OCC)	41	132	25	0	0	0
	23(OCC)	22	-175	-66	0	0	0
	24(OCC)	-32	20	31	0	0	0
	25(OCC)	31	-40	-26	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	26(OCC)	31	-40	-26	0	0	0
	MAX	-117/L17	-912/L12	-252/L14			
6410		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	1154	-4126	447	0	0	0
	4(OPE)	-1266	-1388	-2924	0	0	0
	6(OPE)	-1173	-1824	-2255	0	0	0
	9(OPE)	-1173	-1823	-2255	0	0	0
	11(SUS)	917	-3267	346	0	0	0
	12(SUS)	909	-3240	344	0	0	0
	13(OPE)	-1084	-1502	-2251	0	0	0
	14(OPE)	-1187	-1833	-2293	0	0	0
	15(OPE)	-1060	-1415	-2249	0	0	0
	16(OPE)	-1277	-2227	-2237	0	0	0
	17(OPE)	-884	-1828	-1287	0	0	0
	18(OPE)	-1173	-1825	-2254	0	0	0
	19(OPE)	-1173	-1824	-2255	0	0	0
	20(OCC)	181	-113	673	0	0	0
	21(OCC)	79	-445	631	0	0	0
	22(OCC)	206	-27	675	0	0	0
	23(OCC)	-12	-838	687	0	0	0
	24(OCC)	382	-439	1637	0	0	0
	25(OCC)	93	-436	669	0	0	0
	26(OCC)	93	-436	669	0	0	0
	MAX	-1277/L16	-4126/L3	-2924/L4			
6430		TYPE=Rigid +Y;					
	3(HYD)	-15	-5943	-146	0	0	0
	4(OPE)	63	-2820	844	0	0	0
	6(OPE)	547	-3575	479	0	0	0
	9(OPE)	276	-3675	1068	0	0	0
	11(SUS)	-64	-4825	-87	0	0	0
	12(SUS)	-64	-4783	-86	0	0	0
	13(OPE)	1113	-3789	232	0	0	0
	14(OPE)	-1378	-4597	-42	0	0	0
	15(OPE)	530	-3076	377	0	0	0
	16(OPE)	533	-4131	315	0	0	0
	17(OPE)	28	-4483	1345	0	0	0
	18(OPE)	545	-3577	446	0	0	0
	19(OPE)	548	-3570	478	0	0	0
	20(OCC)	1050	-969	-612	0	0	0
	21(OCC)	-1441	-1777	-886	0	0	0
	22(OCC)	467	-257	-466	0	0	0
	23(OCC)	470	-1312	-528	0	0	0
	24(OCC)	-35	-1663	501	0	0	0
	25(OCC)	482	-757	-397	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	26(OCC)	485	-750	-365	0	0	0
	MAX	-1441/L21	-5943/L3	1345/L17			
6450		TYPE=Rigid +Y;					
	3(HYD)	0	-1445	0	0	0	0
	4(OPE)	0	-4548	0	0	0	0
	6(OPE)	0	-4607	0	0	0	0
	9(OPE)	0	-586	0	0	0	0
	11(SUS)	0	-1186	0	0	0	0
	12(SUS)	0	-1185	0	0	0	0
	13(OPE)	0	-4507	0	0	0	0
	14(OPE)	0	-4475	0	0	0	0
	15(OPE)	0	-3751	0	0	0	0
	16(OPE)	0	-5005	0	0	0	0
	17(OPE)	0	-4825	0	0	0	0
	18(OPE)	0	-4256	0	0	0	0
	19(OPE)	0	-3741	0	0	0	0
	20(OCC)	0	41	0	0	0	0
	21(OCC)	0	74	0	0	0	0
	22(OCC)	0	798	0	0	0	0
	23(OCC)	0	-456	0	0	0	0
	24(OCC)	0	-276	0	0	0	0
	25(OCC)	0	293	0	0	0	0
	26(OCC)	0	807	0	0	0	0
	MAX		-5005/L16				
6470		TYPE=Rigid +Y;					
	3(HYD)	0	-1217	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	-93	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	11(SUS)	0	-975	0	0	0	0
	12(SUS)	0	-975	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	-12	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	-610	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	-12	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	-610	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX		-1217/L3				
6490		TYPE=Rigid +Y;					
	3(HYD)	-194	-5340	220	0	0	0
	4(OPE)	127	-5560	1663	0	0	0
	6(OPE)	234	-5419	1609	0	0	0
	9(OPE)	42	-5342	1602	0	0	0
	11(SUS)	-181	-4945	201	0	0	0
	12(SUS)	-180	-4921	198	0	0	0
	13(OPE)	1396	-5427	837	0	0	0
	14(OPE)	-1144	-5026	982	0	0	0
	15(OPE)	233	-4814	1425	0	0	0
	16(OPE)	221	-5956	1773	0	0	0
	17(OPE)	20	-5449	1635	0	0	0
	18(OPE)	236	-5409	1606	0	0	0
	19(OPE)	235	-5416	1608	0	0	0
	20(OCC)	1269	133	-826	0	0	0
	21(OCC)	-1271	534	-681	0	0	0
	22(OCC)	106	746	-238	0	0	0
	23(OCC)	94	-396	110	0	0	0
	24(OCC)	-107	111	-28	0	0	0
	25(OCC)	109	150	-57	0	0	0
	26(OCC)	108	143	-55	0	0	0
	MAX	1396/L13	-5956/L16	1773/L16			
6520		TYPE=Rigid +Y;					
	3(HYD)	18	-3482	-257	0	0	0
	4(OPE)	-16	-4107	1232	0	0	0
	6(OPE)	-213	-3505	-1030	0	0	0
	9(OPE)	12	-3391	-1017	0	0	0
	11(SUS)	33	-3216	-278	0	0	0
	12(SUS)	32	-3198	-278	0	0	0
	13(OPE)	914	-3085	-146	0	0	0
	14(OPE)	-947	-3435	-405	0	0	0
	15(OPE)	-203	-3082	-902	0	0	0
	16(OPE)	-259	-3953	-1157	0	0	0
	17(OPE)	53	-3124	936	0	0	0
	18(OPE)	-215	-3512	-1031	0	0	0
	19(OPE)	-214	-3508	-1030	0	0	0
	20(OCC)	930	1022	-1378	0	0	0
	21(OCC)	-931	672	-1637	0	0	0
	22(OCC)	-186	1025	-2134	0	0	0
	23(OCC)	-242	154	-2389	0	0	0
	24(OCC)	70	983	-296	0	0	0
	25(OCC)	-199	595	-2263	0	0	0
	26(OCC)	-197	599	-2262	0	0	0
	MAX	-947/L14	-4107/L4	-2389/L23			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
6540		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	23	-1766	46	0	0	0
	4(OPE)	-220	-1351	340	0	0	0
	6(OPE)	-96	-1143	-329	0	0	0
	9(OPE)	-94	-1213	-352	0	0	0
	11(SUS)	19	-1662	54	0	0	0
	12(SUS)	19	-1649	53	0	0	0
	13(OPE)	196	-1006	-229	0	0	0
	14(OPE)	-281	-1163	-207	0	0	0
	15(OPE)	-96	-1045	-299	0	0	0
	16(OPE)	-105	-1239	-357	0	0	0
	17(OPE)	-37	-1741	521	0	0	0
	18(OPE)	-96	-1138	-328	0	0	0
	19(OPE)	-96	-1143	-329	0	0	0
	20(OCC)	416	345	-570	0	0	0
	21(OCC)	-61	188	-547	0	0	0
	22(OCC)	124	306	-639	0	0	0
	23(OCC)	115	112	-697	0	0	0
	24(OCC)	183	-390	181	0	0	0
	25(OCC)	124	213	-668	0	0	0
	26(OCC)	124	208	-669	0	0	0
	MAX	416/L20	-1766/L3	-697/L23			
6560		TYPE=Rigid +Y; Rigid Z w/gap;					
	3(HYD)	-306	-1956	448	0	0	0
	4(OPE)	-412	-1472	-9670	0	0	0
	6(OPE)	-247	-1487	-372	0	0	0
	9(OPE)	-268	-1467	-349	0	0	0
	11(SUS)	-218	-1394	335	0	0	0
	12(SUS)	-217	-1391	331	0	0	0
	13(OPE)	-217	-1268	-312	0	0	0
	14(OPE)	-283	-1657	-527	0	0	0
	15(OPE)	-215	-1307	-443	0	0	0
	16(OPE)	-273	-1661	-656	0	0	0
	17(OPE)	-421	-1409	-36	0	0	0
	18(OPE)	-246	-1487	-372	0	0	0
	19(OPE)	-247	-1488	-372	0	0	0
	20(OCC)	195	204	9358	0	0	0
	21(OCC)	129	-185	9144	0	0	0
	22(OCC)	197	165	9228	0	0	0
	23(OCC)	139	-188	9014	0	0	0
	24(OCC)	-9	64	9634	0	0	0
	25(OCC)	166	-15	9298	0	0	0
	26(OCC)	165	-15	9299	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-421/L17	-1956/L3	-9670/L4			
6590		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-29	-4021	172	0	0	0
	4(OPE)	-1432	-2995	-230	0	0	0
	6(OPE)	-417	-3916	-1099	0	0	0
	9(OPE)	-424	-3851	-1075	0	0	0
	11(SUS)	-34	-3321	111	0	0	0
	12(SUS)	-34	-3315	110	0	0	0
	13(OPE)	173	-3916	-1162	0	0	0
	14(OPE)	-820	-3778	-783	0	0	0
	15(OPE)	-385	-3414	-949	0	0	0
	16(OPE)	-465	-4376	-1228	0	0	0
	17(OPE)	-636	-2970	624	0	0	0
	18(OPE)	-417	-3915	-1098	0	0	0
	19(OPE)	-417	-3917	-1099	0	0	0
	20(OCC)	1605	-921	-932	0	0	0
	21(OCC)	612	-783	-553	0	0	0
	22(OCC)	1046	-419	-719	0	0	0
	23(OCC)	966	-1381	-997	0	0	0
	24(OCC)	795	25	854	0	0	0
	25(OCC)	1014	-920	-868	0	0	0
	26(OCC)	1015	-922	-868	0	0	0
	MAX	1605/L20	-4376/L16	-1228/L16			
6610		TYPE=Rigid +Y;					
	3(HYD)	0	-3980	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	-1799	0	0	0	0
	9(OPE)	0	-1796	0	0	0	0
	11(SUS)	0	-3042	0	0	0	0
	12(SUS)	0	-3037	0	0	0	0
	13(OPE)	0	-1783	0	0	0	0
	14(OPE)	0	-1809	0	0	0	0
	15(OPE)	0	-1432	0	0	0	0
	16(OPE)	0	-2163	0	0	0	0
	17(OPE)	0	-1812	0	0	0	0
	18(OPE)	0	-1799	0	0	0	0
	19(OPE)	0	-1799	0	0	0	0
	20(OCC)	0	-1783	0	0	0	0
	21(OCC)	0	-1809	0	0	0	0
	22(OCC)	0	-1432	0	0	0	0
	23(OCC)	0	-2163	0	0	0	0
	24(OCC)	0	-1812	0	0	0	0
	25(OCC)	0	-1799	0	0	0	0
	26(OCC)	0	-1799	0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX		-3980/L3				
6640		TYPE=Rigid Y;					
	3(HYD)	0	-6240	0	0	0	0
	4(OPE)	0	-6202	0	0	0	0
	6(OPE)	0	-5937	0	0	0	0
	9(OPE)	0	-5929	0	0	0	0
	11(SUS)	0	-5217	0	0	0	0
	12(SUS)	0	-5211	0	0	0	0
	13(OPE)	0	-6287	0	0	0	0
	14(OPE)	0	-5566	0	0	0	0
	15(OPE)	0	-5309	0	0	0	0
	16(OPE)	0	-6566	0	0	0	0
	17(OPE)	0	-5968	0	0	0	0
	18(OPE)	0	-5937	0	0	0	0
	19(OPE)	0	-5937	0	0	0	0
	20(OCC)	0	-85	0	0	0	0
	21(OCC)	0	636	0	0	0	0
	22(OCC)	0	892	0	0	0	0
	23(OCC)	0	-364	0	0	0	0
	24(OCC)	0	234	0	0	0	0
	25(OCC)	0	264	0	0	0	0
	26(OCC)	0	265	0	0	0	0
	MAX		-6566/L16				
6670		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	23	-2981	-200	0	0	0
	4(OPE)	-248	-909	-4833	0	0	0
	6(OPE)	-325	-1546	-331	0	0	0
	9(OPE)	-337	-1579	-333	0	0	0
	11(SUS)	74	-2433	-131	0	0	0
	12(SUS)	74	-2430	-130	0	0	0
	13(OPE)	-284	-1483	-342	0	0	0
	14(OPE)	-439	-1730	-276	0	0	0
	15(OPE)	-278	-1332	-287	0	0	0
	16(OPE)	-375	-1783	-382	0	0	0
	17(OPE)	-431	-1580	198	0	0	0
	18(OPE)	-325	-1547	-331	0	0	0
	19(OPE)	-325	-1546	-331	0	0	0
	20(OCC)	-36	-574	4491	0	0	0
	21(OCC)	-192	-822	4557	0	0	0
	22(OCC)	-30	-424	4546	0	0	0
	23(OCC)	-127	-874	4451	0	0	0
	24(OCC)	-183	-671	5031	0	0	0
	25(OCC)	-77	-638	4502	0	0	0
	26(OCC)	-78	-637	4502	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-439/L14	-2981/L3	5031/L24			
6690		TYPE=Rigid +Y;					
	3(HYD)	332	-4039	-141	0	0	0
	4(OPE)	-1492	-6297	-1158	0	0	0
	6(OPE)	-908	-4157	-855	0	0	0
	9(OPE)	-912	-4142	-844	0	0	0
	11(SUS)	130	-3064	-164	0	0	0
	12(SUS)	129	-3059	-165	0	0	0
	13(OPE)	-902	-4187	-874	0	0	0
	14(OPE)	-941	-3917	-704	0	0	0
	15(OPE)	-801	-3691	-764	0	0	0
	16(OPE)	-1003	-4591	-944	0	0	0
	17(OPE)	-1144	-3871	198	0	0	0
	18(OPE)	-908	-4156	-855	0	0	0
	19(OPE)	-908	-4157	-855	0	0	0
	20(OCC)	590	2110	284	0	0	0
	21(OCC)	551	2379	454	0	0	0
	22(OCC)	691	2605	394	0	0	0
	23(OCC)	489	1705	214	0	0	0
	24(OCC)	348	2426	1356	0	0	0
	25(OCC)	585	2140	303	0	0	0
	26(OCC)	584	2140	304	0	0	0
	MAX	-1492/L4	-6297/L4	1356/L24			
6710		TYPE=Rigid +Y;					
	3(HYD)	0	-841	0	0	0	0
	4(OPE)	0	-1970	0	0	0	0
	6(OPE)	0	-1514	0	0	0	0
	9(OPE)	0	-714	0	0	0	0
	11(SUS)	0	-845	0	0	0	0
	12(SUS)	0	-844	0	0	0	0
	13(OPE)	0	-2093	0	0	0	0
	14(OPE)	0	-798	0	0	0	0
	15(OPE)	0	-1316	0	0	0	0
	16(OPE)	0	-1710	0	0	0	0
	17(OPE)	0	-1615	0	0	0	0
	18(OPE)	0	-1522	0	0	0	0
	19(OPE)	0	-1524	0	0	0	0
	20(OCC)	0	-123	0	0	0	0
	21(OCC)	0	1172	0	0	0	0
	22(OCC)	0	654	0	0	0	0
	23(OCC)	0	260	0	0	0	0
	24(OCC)	0	355	0	0	0	0
	25(OCC)	0	448	0	0	0	0
	26(OCC)	0	446	0	0	0	0
	MAX		-2093/L13				

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
6730		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-63	-2047	-1	0	0	0
	4(OPE)	1082	0	0	0	0	0
	6(OPE)	515	0	0	0	0	0
	9(OPE)	264	-2307	-640	0	0	0
	11(SUS)	9	-1868	-26	0	0	0
	12(SUS)	9	-1867	-26	0	0	0
	13(OPE)	2126	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	509	0	0	0	0	0
	16(OPE)	541	0	0	0	0	0
	17(OPE)	793	0	0	0	0	0
	18(OPE)	513	0	0	0	0	0
	19(OPE)	520	0	0	0	0	0
	20(OCC)	1044	0	0	0	0	0
	21(OCC)	-1082	0	0	0	0	0
	22(OCC)	-574	0	0	0	0	0
	23(OCC)	-542	0	0	0	0	0
	24(OCC)	-290	0	0	0	0	0
	25(OCC)	-570	0	0	0	0	0
	26(OCC)	-562	0	0	0	0	0
	MAX	2126/L13	-2307/L9	-640/L9			
6750		TYPE=Rigid +Y;					
	3(HYD)	0	-834	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	0	-1026	0	0	0	0
	11(SUS)	0	-647	0	0	0	0
	12(SUS)	0	-647	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX		-1026/L9				

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
6770		TYPE=Rigid +Y;					
	3(HYD)	-495	-2113	-295	0	0	0
	4(OPE)	53	-1505	448	0	0	0
	6(OPE)	49	-1537	458	0	0	0
	9(OPE)	28	-1611	483	0	0	0
	11(SUS)	-404	-1532	-220	0	0	0
	12(SUS)	-396	-1499	-213	0	0	0
	13(OPE)	298	-1277	241	0	0	0
	14(OPE)	-282	-1748	442	0	0	0
	15(OPE)	45	-1333	397	0	0	0
	16(OPE)	40	-1760	526	0	0	0
	17(OPE)	9	-1557	467	0	0	0
	18(OPE)	49	-1539	459	0	0	0
	19(OPE)	49	-1537	459	0	0	0
	20(OCC)	245	228	-207	0	0	0
	21(OCC)	-335	-244	-6	0	0	0
	22(OCC)	-9	172	-51	0	0	0
	23(OCC)	-13	-255	78	0	0	0
	24(OCC)	-45	-53	19	0	0	0
	25(OCC)	-4	-34	11	0	0	0
	26(OCC)	-4	-33	10	0	0	0
	MAX	-495/L3	-2113/L3	526/L16			
7010		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	858	-2873	-81	0	0	0
	4(OPE)	662	-2295	2482	0	0	0
	6(OPE)	617	-2189	224	0	0	0
	9(OPE)	593	-2171	270	0	0	0
	11(SUS)	633	-2112	-39	0	0	0
	12(SUS)	619	-2066	-36	0	0	0
	13(OPE)	662	-2313	209	0	0	0
	14(OPE)	-367	-2043	491	0	0	0
	15(OPE)	543	-1931	203	0	0	0
	16(OPE)	696	-2449	237	0	0	0
	17(OPE)	348	-2175	877	0	0	0
	18(OPE)	618	-2190	223	0	0	0
	19(OPE)	617	-2189	224	0	0	0
	20(OCC)	-1	-18	-2273	0	0	0
	21(OCC)	-1029	252	-1991	0	0	0
	22(OCC)	-120	364	-2278	0	0	0
	23(OCC)	33	-154	-2245	0	0	0
	24(OCC)	-315	120	-1605	0	0	0
	25(OCC)	-45	105	-2258	0	0	0
	26(OCC)	-45	106	-2257	0	0	0
	MAX	-1029/L21	-2873/L3	2482/L4			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
7130		TYPE=Rigid ANC;					
	3(HYD)	32	-728	33	147	-16	-82
	4(OPE)	908	623	619	-612	525	1073
	6(OPE)	697	509	596	-563	332	955
	9(OPE)	698	505	595	-560	333	951
	11(SUS)	31	-653	29	128	-12	-78
	12(SUS)	31	-651	28	127	-12	-78
	13(OPE)	1139	-116	454	-115	489	235
	14(OPE)	449	36	409	-237	426	670
	15(OPE)	686	593	559	-569	354	966
	16(OPE)	699	430	635	-559	302	947
	17(OPE)	556	1028	1213	-815	-132	1418
	18(OPE)	697	510	597	-564	332	956
	19(OPE)	697	509	596	-563	332	955
	20(OCC)	231	-739	-164	497	-36	-838
	21(OCC)	-460	-587	-209	375	-99	-403
	22(OCC)	-222	-31	-60	43	-171	-107
	23(OCC)	-209	-193	16	53	-223	-126
	24(OCC)	-352	405	595	-203	-657	345
	25(OCC)	-212	-113	-22	48	-193	-117
	26(OCC)	-211	-115	-23	50	-193	-118
	MAX	1139/L13	1028/L17	1213/L17	-815/L17	-657/L24	1418/L17
7170		TYPE=Rigid ANC;					
	3(HYD)	32	-1015	33	158	-16	-92
	4(OPE)	908	341	619	-420	525	790
	6(OPE)	697	226	596	-377	332	738
	9(OPE)	698	222	595	-375	333	734
	11(SUS)	31	-936	29	137	-12	-88
	12(SUS)	31	-933	28	136	-12	-87
	13(OPE)	1213	-398	454	26	489	-135
	14(OPE)	375	-246	409	-110	426	546
	15(OPE)	686	344	559	-395	354	753
	16(OPE)	699	114	635	-361	302	729
	17(OPE)	556	746	1287	-422	-132	1245
	18(OPE)	697	228	597	-378	332	740
	19(OPE)	697	226	596	-377	332	738
	20(OCC)	305	-739	-164	446	-36	-925
	21(OCC)	-533	-587	-209	310	-99	-244
	22(OCC)	-222	3	-60	25	-171	-38
	23(OCC)	-209	-227	16	58	-223	-61
	24(OCC)	-352	405	668	-2	-657	455
	25(OCC)	-212	-113	-22	41	-193	-51
	26(OCC)	-211	-115	-23	43	-193	-53
	MAX	1213/L13	-1015/L3	1287/L17	446/L20	-657/L24	1245/L17

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
7180		TYPE=Rigid ANC;					
	3(HYD)	116	813	-102	-38	24	227
	4(OPE)	632	-10247	8728	-4852	597	117
	6(OPE)	184	-3967	5181	-3224	170	44
	9(OPE)	184	-3986	5187	-3223	171	42
	11(SUS)	105	871	-105	-41	19	217
	12(SUS)	105	863	-102	-40	19	216
	13(OPE)	-316	-3930	5152	-3213	-93	65
	14(OPE)	795	-4147	5160	-3153	372	509
	15(OPE)	172	-4071	5193	-3219	168	18
	16(OPE)	195	-3808	5184	-3257	172	68
	17(OPE)	343	-2867	5234	-3692	171	454
	18(OPE)	184	-3967	5181	-3224	170	44
	19(OPE)	184	-3967	5181	-3224	170	44
	20(OCC)	-948	6317	-3577	1639	-690	-52
	21(OCC)	163	6100	-3568	1699	-225	392
	22(OCC)	-460	6176	-3536	1633	-429	-99
	23(OCC)	-437	6439	-3545	1595	-425	-49
	24(OCC)	-289	7380	-3495	1160	-426	337
	25(OCC)	-447	6280	-3548	1628	-427	-73
	26(OCC)	-447	6280	-3548	1628	-426	-73
	MAX	-948/L20	-10247/L4	8728/L4	-4852/L4	-690/L20	509/L14
7200		TYPE=Rigid ANC;					
	3(HYD)	116	526	-102	-69	24	191
	4(OPE)	632	-10529	8728	-2136	597	-79
	6(OPE)	184	-4250	5181	-1612	170	-13
	9(OPE)	184	-4269	5187	-1609	171	-15
	11(SUS)	105	588	-105	-73	19	184
	12(SUS)	105	582	-102	-72	19	183
	13(OPE)	-243	-4212	5152	-1610	-93	156
	14(OPE)	722	-4429	5160	-1548	372	269
	15(OPE)	172	-4319	5193	-1603	168	-35
	16(OPE)	195	-4124	5184	-1645	172	7
	17(OPE)	343	-3150	5307	-2056	171	347
	18(OPE)	184	-4249	5181	-1612	170	-14
	19(OPE)	184	-4250	5181	-1612	170	-13
	20(OCC)	-875	6317	-3577	526	-690	235
	21(OCC)	90	6100	-3568	589	-225	349
	22(OCC)	-460	6210	-3536	533	-429	44
	23(OCC)	-437	6405	-3545	492	-425	87
	24(OCC)	-289	7380	-3421	80	-426	427
	25(OCC)	-447	6280	-3548	524	-427	66
	26(OCC)	-447	6280	-3548	524	-426	66
	MAX	-875/L20	-10529/L4	8728/L4	-2136/L4	-690/L20	427/L24

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
7370		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	-19524	0	0	0	0
	6(OPE)	0	-10105	0	0	0	0
	9(OPE)	0	-10019	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(SUS)	0	0	0	0	0	0
	13(OPE)	0	-10437	0	0	0	0
	14(OPE)	0	-10077	0	0	0	0
	15(OPE)	0	-10119	0	0	0	0
	16(OPE)	0	-10024	0	0	0	0
	17(OPE)	0	-8277	0	0	0	0
	18(OPE)	0	-10107	0	0	0	0
	19(OPE)	0	-10105	0	0	0	0
	20(OCC)	0	9087	0	0	0	0
	21(OCC)	0	9447	0	0	0	0
	22(OCC)	0	9405	0	0	0	0
	23(OCC)	0	9500	0	0	0	0
	24(OCC)	0	11247	0	0	0	0
	25(OCC)	0	9417	0	0	0	0
	26(OCC)	0	9420	0	0	0	0
	MAX		-19524/L4				
7380		TYPE=Rigid +Y;					
	3(HYD)	-51	-1375	42	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	11(SUS)	-47	-1130	33	0	0	0
	12(SUS)	-47	-1124	33	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-51/L3	-1375/L3	42/L3			

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7390		TYPE=Rigid +Y;					
	3(HYD)	-137	-1567	46	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	11(SUS)	-119	-1279	36	0	0	0
	12(SUS)	-118	-1272	36	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-137/L3	-1567/L3	46/L3			
7400		TYPE=Rigid +Y; Rigid X w/gap;					
	3(HYD)	257	-3660	121	0	0	0
	4(OPE)	-2695	-11031	1920	0	0	0
	6(OPE)	-882	-5114	281	0	0	0
	9(OPE)	-886	-5241	227	0	0	0
	11(SUS)	257	-2437	88	0	0	0
	12(SUS)	256	-2409	86	0	0	0
	13(OPE)	760	-4641	599	0	0	0
	14(OPE)	-1638	-5467	91	0	0	0
	15(OPE)	-916	-4808	264	0	0	0
	16(OPE)	-859	-5426	341	0	0	0
	17(OPE)	-334	-5638	1658	0	0	0
	18(OPE)	-884	-5112	281	0	0	0
	19(OPE)	-883	-5115	282	0	0	0
	20(OCC)	3456	6391	-1321	0	0	0
	21(OCC)	1058	5564	-1829	0	0	0
	22(OCC)	1779	6224	-1656	0	0	0
	23(OCC)	1836	5605	-1579	0	0	0
	24(OCC)	2362	5393	-262	0	0	0
	25(OCC)	1812	5919	-1639	0	0	0
	26(OCC)	1813	5916	-1639	0	0	0
	MAX	3456/L20	-11031/L4	1920/L4			

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8270		TYPE=Rigid +Y; Rigid X w/gap;					
	3(HYD)	-103	-1112	42	0	0	0
	4(OPE)	16362	-270	19	0	0	0
	6(OPE)	12762	-401	25	0	0	0
	9(OPE)	12768	-402	25	0	0	0
	11(SUS)	-86	-964	43	0	0	0
	12(SUS)	-86	-955	42	0	0	0
	13(OPE)	16638	-397	25	0	0	0
	14(OPE)	10386	-442	28	0	0	0
	15(OPE)	12449	-298	19	0	0	0
	16(OPE)	13023	-518	33	0	0	0
	17(OPE)	12304	-565	37	0	0	0
	18(OPE)	12770	-400	25	0	0	0
	19(OPE)	12761	-401	25	0	0	0
	20(OCC)	276	-127	6	0	0	0
	21(OCC)	-5977	-172	9	0	0	0
	22(OCC)	-3913	-28	-0	0	0	0
	23(OCC)	-3339	-249	14	0	0	0
	24(OCC)	-4058	-295	18	0	0	0
	25(OCC)	-3592	-130	6	0	0	0
	26(OCC)	-3601	-131	6	0	0	0
	MAX	16638/L13	-1112/L3	43/L11			
8280		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	-47	-2214	-18	0	0	0
	4(OPE)	376	-3464	969	0	0	0
	6(OPE)	620	-3201	734	0	0	0
	9(OPE)	620	-3202	734	0	0	0
	11(SUS)	-35	-1909	23	0	0	0
	12(SUS)	-34	-1891	15	0	0	0
	13(OPE)	689	-3463	777	0	0	0
	14(OPE)	530	-2954	711	0	0	0
	15(OPE)	571	-2985	690	0	0	0
	16(OPE)	675	-3430	776	0	0	0
	17(OPE)	454	-3061	2077	0	0	0
	18(OPE)	619	-3201	734	0	0	0
	19(OPE)	619	-3200	733	0	0	0
	20(OCC)	313	1	-191	0	0	0
	21(OCC)	154	510	-258	0	0	0
	22(OCC)	195	479	-279	0	0	0
	23(OCC)	299	34	-192	0	0	0
	24(OCC)	78	403	1108	0	0	0
	25(OCC)	243	263	-235	0	0	0
	26(OCC)	243	264	-236	0	0	0
	MAX	689/L13	-3464/L4	2077/L17			

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8390		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	3(HYD)	-0	-2573	0	0	0	0
	4(OPE)	214	-1402	-3609	0	0	0
	6(OPE)	-4	-1402	-421	0	0	0
	9(OPE)	-4	-1402	-421	0	0	0
	11(SUS)	-0	-1402	0	0	0	0
	12(SUS)	-0	-1395	0	0	0	0
	13(OPE)	820	-1402	-287	0	0	0
	14(OPE)	-805	-1402	-284	0	0	0
	15(OPE)	-4	-1234	-370	0	0	0
	16(OPE)	-4	-1570	-471	0	0	0
	17(OPE)	-2	-1402	760	0	0	0
	18(OPE)	-4	-1402	-421	0	0	0
	19(OPE)	-4	-1402	-421	0	0	0
	20(OCC)	605	-0	3322	0	0	0
	21(OCC)	-1020	0	3326	0	0	0
	22(OCC)	-218	168	3239	0	0	0
	23(OCC)	-219	-168	3138	0	0	0
	24(OCC)	-216	-0	4370	0	0	0
	25(OCC)	-219	-0	3189	0	0	0
	26(OCC)	-219	-0	3189	0	0	0
	MAX	-1020/L21	-2573/L3	4370/L24			
8400		TYPE=Rigid +Y;					
	3(HYD)	0	-7433	0	0	0	0
	4(OPE)	0	-4049	0	0	0	0
	6(OPE)	0	-4048	0	0	0	0
	9(OPE)	0	-4048	0	0	0	0
	11(SUS)	0	-4048	0	0	0	0
	12(SUS)	0	-4028	0	0	0	0
	13(OPE)	0	-4046	0	0	0	0
	14(OPE)	0	-4050	0	0	0	0
	15(OPE)	0	-3562	0	0	0	0
	16(OPE)	0	-4533	0	0	0	0
	17(OPE)	0	-4046	0	0	0	0
	18(OPE)	0	-4048	0	0	0	0
	19(OPE)	0	-4048	0	0	0	0
	20(OCC)	0	2	0	0	0	0
	21(OCC)	0	-1	0	0	0	0
	22(OCC)	0	487	0	0	0	0
	23(OCC)	0	-485	0	0	0	0
	24(OCC)	0	3	0	0	0	0
	25(OCC)	0	1	0	0	0	0
	26(OCC)	0	1	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX		-7433/L3				
8410		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	1	-6186	0	0	0	0
	4(OPE)	425	-3370	918	0	0	0
	6(OPE)	11	-3374	-1012	0	0	0
	9(OPE)	11	-3375	-1012	0	0	0
	11(SUS)	0	-3371	0	0	0	0
	12(SUS)	0	-3354	0	0	0	0
	13(OPE)	1610	-3379	-192	0	0	0
	14(OPE)	-1604	-3366	-173	0	0	0
	15(OPE)	23	-2970	-891	0	0	0
	16(OPE)	-1	-3779	-1134	0	0	0
	17(OPE)	156	-3380	1002	0	0	0
	18(OPE)	11	-3374	-1012	0	0	0
	19(OPE)	11	-3374	-1012	0	0	0
	20(OCC)	1186	-9	-1110	0	0	0
	21(OCC)	-2028	4	-1091	0	0	0
	22(OCC)	-402	400	-1808	0	0	0
	23(OCC)	-426	-409	-2051	0	0	0
	24(OCC)	-268	-10	84	0	0	0
	25(OCC)	-414	-4	-1930	0	0	0
	26(OCC)	-414	-4	-1930	0	0	0
	MAX	-2028/L21	-6186/L3	-2051/L23			
8420		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-6	-7837	0	0	0	0
	4(OPE)	121	-4270	1275	0	0	0
	6(OPE)	515	-4267	1172	0	0	0
	9(OPE)	519	-4267	1170	0	0	0
	11(SUS)	-1	-4268	0	0	0	0
	12(SUS)	-1	-4247	0	0	0	0
	13(OPE)	1204	-4264	432	0	0	0
	14(OPE)	-1240	-4271	323	0	0	0
	15(OPE)	412	-3755	1048	0	0	0
	16(OPE)	615	-4779	1295	0	0	0
	17(OPE)	176	-4263	1267	0	0	0
	18(OPE)	514	-4267	1172	0	0	0
	19(OPE)	515	-4267	1172	0	0	0
	20(OCC)	1083	6	-844	0	0	0
	21(OCC)	-1361	-1	-952	0	0	0
	22(OCC)	291	516	-227	0	0	0
	23(OCC)	494	-508	20	0	0	0
	24(OCC)	55	8	-9	0	0	0
	25(OCC)	393	4	-103	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	26(OCC)	393	4	-103	0	0	0
	MAX	-1361/L21	-7837/L3	1295/L16			
8450		TYPE=Rigid +Y;					
	3(HYD)	11	-10160	-1	0	0	0
	4(OPE)	-1549	-5537	-601	0	0	0
	6(OPE)	-1606	-5519	-401	0	0	0
	9(OPE)	-1607	-5518	-398	0	0	0
	11(SUS)	2	-5529	-0	0	0	0
	12(SUS)	2	-5502	-0	0	0	0
	13(OPE)	586	-5502	-499	0	0	0
	14(OPE)	-1650	-5546	-213	0	0	0
	15(OPE)	-1401	-4856	-399	0	0	0
	16(OPE)	-1810	-6182	-401	0	0	0
	17(OPE)	-694	-5495	1496	0	0	0
	18(OPE)	-1606	-5519	-401	0	0	0
	19(OPE)	-1606	-5519	-401	0	0	0
	20(OCC)	2135	35	102	0	0	0
	21(OCC)	-101	-9	388	0	0	0
	22(OCC)	148	681	202	0	0	0
	23(OCC)	-262	-645	199	0	0	0
	24(OCC)	855	42	2096	0	0	0
	25(OCC)	-58	18	200	0	0	0
	26(OCC)	-58	18	200	0	0	0
	MAX	2135/L20	-10160/L3	2096/L24			
8480		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-20	-7299	76	0	0	0
	4(OPE)	-2315	-3931	-1136	0	0	0
	6(OPE)	-22	-3976	-1192	0	0	0
	9(OPE)	-22	-3977	-1193	0	0	0
	11(SUS)	-1	-3997	67	0	0	0
	12(SUS)	-1	-3978	67	0	0	0
	13(OPE)	518	-3980	-1076	0	0	0
	14(OPE)	-870	-3971	-814	0	0	0
	15(OPE)	-66	-3495	-1046	0	0	0
	16(OPE)	29	-4457	-1337	0	0	0
	17(OPE)	-754	-4019	-941	0	0	0
	18(OPE)	-22	-3975	-1192	0	0	0
	19(OPE)	-22	-3976	-1192	0	0	0
	20(OCC)	2833	-49	60	0	0	0
	21(OCC)	1446	-40	321	0	0	0
	22(OCC)	2250	436	89	0	0	0
	23(OCC)	2344	-526	-201	0	0	0
	24(OCC)	1562	-88	194	0	0	0
	25(OCC)	2294	-45	-57	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	26(OCC)	2294	-45	-57	0	0	0
	MAX	2833/L20	-7299/L3	-1337/L16			
8500		TYPE=Rigid +Y;					
	3(HYD)	-216	-8019	91	0	0	0
	4(OPE)	-700	-2711	-414	0	0	0
	6(OPE)	-992	-4071	-712	0	0	0
	9(OPE)	-1002	-4078	-701	0	0	0
	11(SUS)	-148	-4526	81	0	0	0
	12(SUS)	-147	-4505	81	0	0	0
	13(OPE)	-921	-3994	-766	0	0	0
	14(OPE)	-1165	-4313	-563	0	0	0
	15(OPE)	-867	-3559	-624	0	0	0
	16(OPE)	-1115	-4595	-811	0	0	0
	17(OPE)	-1178	-4271	504	0	0	0
	18(OPE)	-992	-4071	-712	0	0	0
	19(OPE)	-992	-4071	-712	0	0	0
	20(OCC)	-221	-1283	-352	0	0	0
	21(OCC)	-465	-1602	-149	0	0	0
	22(OCC)	-167	-848	-210	0	0	0
	23(OCC)	-415	-1884	-397	0	0	0
	24(OCC)	-478	-1560	918	0	0	0
	25(OCC)	-292	-1360	-298	0	0	0
	26(OCC)	-292	-1360	-298	0	0	0
	MAX	-1178/L17	-8019/L3	918/L24			
8510		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	17	-6342	41	0	0	0
	4(OPE)	-2565	-3577	-981	0	0	0
	6(OPE)	-663	-3484	-808	0	0	0
	9(OPE)	-682	-3484	-792	0	0	0
	11(SUS)	8	-3440	37	0	0	0
	12(SUS)	8	-3423	37	0	0	0
	13(OPE)	853	-3498	612	0	0	0
	14(OPE)	-1034	-3454	-74	0	0	0
	15(OPE)	-650	-3070	-652	0	0	0
	16(OPE)	-661	-3898	-965	0	0	0
	17(OPE)	-352	-3467	979	0	0	0
	18(OPE)	-661	-3484	-810	0	0	0
	19(OPE)	-663	-3484	-808	0	0	0
	20(OCC)	3418	78	1593	0	0	0
	21(OCC)	1532	123	907	0	0	0
	22(OCC)	1915	507	329	0	0	0
	23(OCC)	1904	-321	16	0	0	0
	24(OCC)	2213	109	1960	0	0	0
	25(OCC)	1904	92	171	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	26(OCC)	1903	92	173	0	0	0
	MAX	3418/L20	-6342/L3	1960/L24			
8520		TYPE=Rigid LIM w/gap; Rigid +Y;					
	3(HYD)	-4	-6628	19	0	0	0
	4(OPE)	300	-3575	7437	0	0	0
	6(OPE)	176	-3599	1065	0	0	0
	9(OPE)	181	-3599	1065	0	0	0
	11(SUS)	-2	-3611	17	0	0	0
	12(SUS)	-2	-3593	17	0	0	0
	13(OPE)	860	-3596	651	0	0	0
	14(OPE)	-1032	-3607	325	0	0	0
	15(OPE)	159	-3166	936	0	0	0
	16(OPE)	182	-4032	1196	0	0	0
	17(OPE)	15	-3604	5517	0	0	0
	18(OPE)	175	-3599	1065	0	0	0
	19(OPE)	176	-3599	1065	0	0	0
	20(OCC)	561	-21	-6787	0	0	0
	21(OCC)	-1332	-32	-7112	0	0	0
	22(OCC)	-140	408	-6501	0	0	0
	23(OCC)	-117	-457	-6241	0	0	0
	24(OCC)	-284	-29	-1920	0	0	0
	25(OCC)	-124	-24	-6372	0	0	0
	26(OCC)	-124	-24	-6372	0	0	0
	MAX	-1332/L21	-6628/L3	7437/L4			
8530		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	1	-6341	8	0	0	0
	4(OPE)	138	-3476	1034	0	0	0
	6(OPE)	9	-3470	1041	0	0	0
	9(OPE)	9	-3470	1041	0	0	0
	11(SUS)	1	-3467	8	0	0	0
	12(SUS)	1	-3449	8	0	0	0
	13(OPE)	947	-3471	661	0	0	0
	14(OPE)	-922	-3468	577	0	0	0
	15(OPE)	11	-3054	916	0	0	0
	16(OPE)	6	-3886	1166	0	0	0
	17(OPE)	29	-3468	1040	0	0	0
	18(OPE)	9	-3470	1041	0	0	0
	19(OPE)	9	-3470	1041	0	0	0
	20(OCC)	809	5	-373	0	0	0
	21(OCC)	-1060	9	-457	0	0	0
	22(OCC)	-127	423	-118	0	0	0
	23(OCC)	-132	-410	132	0	0	0
	24(OCC)	-109	8	6	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	-129	6	7	0	0	0
	26(OCC)	-129	6	7	0	0	0
	MAX	-1060/L21	-6341/L3	1166/L16			
8540		TYPE=Rigid +Y;					
	3(HYD)	-0	-7215	4	0	0	0
	4(OPE)	40	-3877	1162	0	0	0
	6(OPE)	-6	-3879	1164	0	0	0
	9(OPE)	-6	-3879	1164	0	0	0
	11(SUS)	-0	-3880	4	0	0	0
	12(SUS)	-0	-3860	4	0	0	0
	13(OPE)	829	-3879	816	0	0	0
	14(OPE)	-831	-3879	814	0	0	0
	15(OPE)	-5	-3413	1024	0	0	0
	16(OPE)	-6	-4344	1303	0	0	0
	17(OPE)	9	-3879	1164	0	0	0
	18(OPE)	-6	-3879	1164	0	0	0
	19(OPE)	-6	-3879	1164	0	0	0
	20(OCC)	789	-1	-346	0	0	0
	21(OCC)	-872	-2	-348	0	0	0
	22(OCC)	-45	464	-138	0	0	0
	23(OCC)	-47	-467	141	0	0	0
	24(OCC)	-31	-2	1	0	0	0
	25(OCC)	-46	-2	1	0	0	0
	26(OCC)	-46	-2	1	0	0	0
	MAX	-872/L21	-7215/L3	1303/L16			
8560		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-4212	2	0	0	0
	4(OPE)	-7	-2643	793	0	0	0
	6(OPE)	-2	-2643	793	0	0	0
	9(OPE)	-2	-2643	793	0	0	0
	11(SUS)	0	-2643	2	0	0	0
	12(SUS)	0	-2633	2	0	0	0
	13(OPE)	783	-2643	667	0	0	0
	14(OPE)	-759	-2643	646	0	0	0
	15(OPE)	-2	-2326	698	0	0	0
	16(OPE)	-1	-2960	888	0	0	0
	17(OPE)	-2	-2643	793	0	0	0
	18(OPE)	-2	-2643	793	0	0	0
	19(OPE)	-2	-2643	793	0	0	0
	20(OCC)	790	0	-126	0	0	0
	21(OCC)	-752	0	-147	0	0	0
	22(OCC)	5	317	-95	0	0	0
	23(OCC)	6	-317	95	0	0	0
	24(OCC)	5	0	-0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	6	0	-0	0	0	0
	26(OCC)	6	0	-0	0	0	0
	MAX	790/L20	-4212/L3	888/L16			
8630		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-2503	0	0	0	0
	4(OPE)	-4	-2091	-627	0	0	0
	6(OPE)	-1	-2091	-627	0	0	0
	9(OPE)	-1	-2091	-627	0	0	0
	11(SUS)	-0	-2091	0	0	0	0
	12(SUS)	-0	-2058	0	0	0	0
	13(OPE)	715	-2091	-495	0	0	0
	14(OPE)	-685	-2091	-497	0	0	0
	15(OPE)	-1	-1840	-552	0	0	0
	16(OPE)	-1	-2342	-703	0	0	0
	17(OPE)	0	-2091	-627	0	0	0
	18(OPE)	-1	-2091	-627	0	0	0
	19(OPE)	-1	-2091	-627	0	0	0
	20(OCC)	719	-0	132	0	0	0
	21(OCC)	-681	-0	130	0	0	0
	22(OCC)	3	251	75	0	0	0
	23(OCC)	3	-251	-75	0	0	0
	24(OCC)	4	-0	-0	0	0	0
	25(OCC)	3	-0	-0	0	0	0
	26(OCC)	3	-0	-0	0	0	0
	MAX	719/L20	-2503/L3	-703/L16			
8650		TYPE=Rigid +Y;					
	3(HYD)	0	-3013	0	0	0	0
	4(OPE)	0	-2089	0	0	0	0
	6(OPE)	0	-2088	0	0	0	0
	9(OPE)	0	-2089	0	0	0	0
	11(SUS)	0	-2088	0	0	0	0
	12(SUS)	0	-2015	0	0	0	0
	13(OPE)	0	-2088	0	0	0	0
	14(OPE)	0	-2089	0	0	0	0
	15(OPE)	0	-1838	0	0	0	0
	16(OPE)	0	-2339	0	0	0	0
	17(OPE)	0	-2089	0	0	0	0
	18(OPE)	0	-2088	0	0	0	0
	19(OPE)	0	-2088	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	251	0	0	0	0
	23(OCC)	0	-250	0	0	0	0
	24(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX		-3013/L3				
8670		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	1	-2733	0	0	0	0
	4(OPE)	-3	-1941	-582	0	0	0
	6(OPE)	-0	-1942	-583	0	0	0
	9(OPE)	-0	-1942	-583	0	0	0
	11(SUS)	0	-1942	0	0	0	0
	12(SUS)	0	-1879	0	0	0	0
	13(OPE)	1137	-1942	-864	0	0	0
	14(OPE)	-1134	-1942	-864	0	0	0
	15(OPE)	0	-1709	-513	0	0	0
	16(OPE)	-0	-2175	-652	0	0	0
	17(OPE)	-1	-1942	-583	0	0	0
	18(OPE)	-0	-1942	-583	0	0	0
	19(OPE)	-0	-1942	-583	0	0	0
	20(OCC)	1140	-2	-281	0	0	0
	21(OCC)	-1132	-1	-282	0	0	0
	22(OCC)	3	232	70	0	0	0
	23(OCC)	3	-234	-70	0	0	0
	24(OCC)	2	-1	-0	0	0	0
	25(OCC)	3	-1	-0	0	0	0
	26(OCC)	3	-1	-0	0	0	0
	MAX	1140/L20	-2733/L3	-864/L14			
8680		TYPE=Rigid +Y;					
	3(HYD)	-3	-2836	1	0	0	0
	4(OPE)	17	-2004	-601	0	0	0
	6(OPE)	9	-1999	-600	0	0	0
	9(OPE)	9	-2000	-600	0	0	0
	11(SUS)	-2	-1998	0	0	0	0
	12(SUS)	-2	-1931	0	0	0	0
	13(OPE)	193	-1998	-568	0	0	0
	14(OPE)	-198	-2000	-566	0	0	0
	15(OPE)	9	-1760	-528	0	0	0
	16(OPE)	9	-2239	-672	0	0	0
	17(OPE)	-5	-2000	-600	0	0	0
	18(OPE)	9	-1999	-600	0	0	0
	19(OPE)	9	-1999	-600	0	0	0
	20(OCC)	176	6	33	0	0	0
	21(OCC)	-215	4	35	0	0	0
	22(OCC)	-8	244	73	0	0	0
	23(OCC)	-8	-235	-71	0	0	0
	24(OCC)	-22	4	1	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	-8	5	1	0	0	0
	26(OCC)	-8	5	1	0	0	0
	MAX	-215/L21	-2836/L3	-672/L16			
8690		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	11	-2704	2	0	0	0
	4(OPE)	151	-1898	-573	0	0	0
	6(OPE)	30	-1915	-574	0	0	0
	9(OPE)	34	-1915	-573	0	0	0
	11(SUS)	7	-1920	1	0	0	0
	12(SUS)	7	-1857	1	0	0	0
	13(OPE)	657	-1920	-586	0	0	0
	14(OPE)	-459	-1914	-534	0	0	0
	15(OPE)	28	-1685	-505	0	0	0
	16(OPE)	29	-2146	-643	0	0	0
	17(OPE)	42	-1914	-573	0	0	0
	18(OPE)	30	-1915	-574	0	0	0
	19(OPE)	30	-1915	-574	0	0	0
	20(OCC)	505	-21	-12	0	0	0
	21(OCC)	-611	-16	39	0	0	0
	22(OCC)	-123	213	69	0	0	0
	23(OCC)	-122	-248	-70	0	0	0
	24(OCC)	-110	-15	1	0	0	0
	25(OCC)	-121	-17	-1	0	0	0
	26(OCC)	-121	-17	-1	0	0	0
	MAX	657/L13	-2704/L3	-643/L16			
8700		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	3(HYD)	-293	-3874	7	0	0	0
	4(OPE)	1018	-2614	-98	0	0	0
	6(OPE)	-139	-2676	-791	0	0	0
	9(OPE)	-134	-2675	-791	0	0	0
	11(SUS)	-186	-2672	5	0	0	0
	12(SUS)	-179	-2583	4	0	0	0
	13(OPE)	996	-2658	-245	0	0	0
	14(OPE)	-730	-2662	-325	0	0	0
	15(OPE)	-124	-2356	-696	0	0	0
	16(OPE)	-176	-2998	-882	0	0	0
	17(OPE)	6	-2664	5394	0	0	0
	18(OPE)	-140	-2676	-790	0	0	0
	19(OPE)	-139	-2676	-791	0	0	0
	20(OCC)	-22	-44	-147	0	0	0
	21(OCC)	-1747	-48	-227	0	0	0
	22(OCC)	-1142	258	-598	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	23(OCC)	-1194	-384	-784	0	0	0
	24(OCC)	-1012	-51	5492	0	0	0
	25(OCC)	-1158	-62	-693	0	0	0
	26(OCC)	-1157	-62	-693	0	0	0
	MAX	-1747/L21	-3874/L3	5492/L24			
8720		TYPE=Rigid +Y;					
	3(HYD)	-11	-2926	3	0	0	0
	4(OPE)	-28	-2089	626	0	0	0
	6(OPE)	-151	-2061	599	0	0	0
	9(OPE)	-153	-2062	599	0	0	0
	11(SUS)	-7	-2053	2	0	0	0
	12(SUS)	-7	-1984	2	0	0	0
	13(OPE)	445	-2054	426	0	0	0
	14(OPE)	-495	-2062	372	0	0	0
	15(OPE)	-151	-1814	523	0	0	0
	16(OPE)	-166	-2307	672	0	0	0
	17(OPE)	-22	-2063	619	0	0	0
	18(OPE)	-151	-2061	599	0	0	0
	19(OPE)	-151	-2061	599	0	0	0
	20(OCC)	473	35	-200	0	0	0
	21(OCC)	-467	27	-255	0	0	0
	22(OCC)	-123	275	-103	0	0	0
	23(OCC)	-138	-218	46	0	0	0
	24(OCC)	6	26	-8	0	0	0
	25(OCC)	-124	29	-27	0	0	0
	26(OCC)	-124	29	-27	0	0	0
	MAX	-495/L14	-2926/L3	672/L16			
8740		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-3	-2746	1	0	0	0
	4(OPE)	-26	-1932	579	0	0	0
	6(OPE)	34	-1941	581	0	0	0
	9(OPE)	30	-1941	582	0	0	0
	11(SUS)	-2	-1944	1	0	0	0
	12(SUS)	-2	-1880	1	0	0	0
	13(OPE)	601	-1943	632	0	0	0
	14(OPE)	-670	-1941	647	0	0	0
	15(OPE)	27	-1708	512	0	0	0
	16(OPE)	40	-2175	651	0	0	0
	17(OPE)	-2	-1942	583	0	0	0
	18(OPE)	34	-1941	581	0	0	0
	19(OPE)	34	-1941	581	0	0	0
	20(OCC)	628	-11	53	0	0	0
	21(OCC)	-643	-9	68	0	0	0
	22(OCC)	53	224	-67	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	23(OCC)	66	-243	72	0	0	0
	24(OCC)	24	-10	4	0	0	0
	25(OCC)	60	-9	2	0	0	0
	26(OCC)	60	-9	2	0	0	0
	MAX	-670/L14	-2746/L3	651/L16			
8750		TYPE=Rigid +Y;					
	3(HYD)	23	-2872	2	0	0	0
	4(OPE)	-28	-2039	611	0	0	0
	6(OPE)	-15	-2030	609	0	0	0
	9(OPE)	-15	-2030	609	0	0	0
	11(SUS)	16	-2028	2	0	0	0
	12(SUS)	16	-1961	1	0	0	0
	13(OPE)	184	-2028	580	0	0	0
	14(OPE)	-204	-2031	574	0	0	0
	15(OPE)	-18	-1787	536	0	0	0
	16(OPE)	-12	-2273	682	0	0	0
	17(OPE)	-24	-2023	606	0	0	0
	18(OPE)	-15	-2030	609	0	0	0
	19(OPE)	-15	-2030	609	0	0	0
	20(OCC)	211	11	-31	0	0	0
	21(OCC)	-176	8	-37	0	0	0
	22(OCC)	10	252	-75	0	0	0
	23(OCC)	16	-234	71	0	0	0
	24(OCC)	3	16	-5	0	0	0
	25(OCC)	13	9	-2	0	0	0
	26(OCC)	13	9	-2	0	0	0
	MAX	211/L20	-2872/L3	682/L16			
8760		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-90	-2545	6	0	0	0
	4(OPE)	-389	-1766	638	0	0	0
	6(OPE)	-87	-1793	531	0	0	0
	9(OPE)	-86	-1793	531	0	0	0
	11(SUS)	-64	-1798	4	0	0	0
	12(SUS)	-61	-1738	4	0	0	0
	13(OPE)	923	-1797	769	0	0	0
	14(OPE)	-1058	-1790	806	0	0	0
	15(OPE)	-79	-1577	466	0	0	0
	16(OPE)	-94	-2009	595	0	0	0
	17(OPE)	-64	-1819	542	0	0	0
	18(OPE)	-87	-1793	531	0	0	0
	19(OPE)	-87	-1793	531	0	0	0
	20(OCC)	1313	-31	131	0	0	0
	21(OCC)	-669	-24	168	0	0	0
	22(OCC)	310	189	-172	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	23(OCC)	295	-243	-43	0	0	0
	24(OCC)	325	-53	-96	0	0	0
	25(OCC)	302	-27	-108	0	0	0
	26(OCC)	302	-27	-108	0	0	0
	MAX	1313/L20	-2545/L3	806/L14			
8770		TYPE=Rigid +Y;					
	3(HYD)	519	-3831	20	0	0	0
	4(OPE)	42	-2700	809	0	0	0
	6(OPE)	-170	-2684	787	0	0	0
	9(OPE)	-165	-2684	788	0	0	0
	11(SUS)	367	-2707	14	0	0	0
	12(SUS)	355	-2617	13	0	0	0
	13(OPE)	514	-2704	627	0	0	0
	14(OPE)	-379	-2686	711	0	0	0
	15(OPE)	-138	-2363	695	0	0	0
	16(OPE)	-199	-3006	879	0	0	0
	17(OPE)	-89	-2668	796	0	0	0
	18(OPE)	-170	-2684	787	0	0	0
	19(OPE)	-170	-2684	787	0	0	0
	20(OCC)	472	-3	-182	0	0	0
	21(OCC)	-421	15	-98	0	0	0
	22(OCC)	-180	337	-114	0	0	0
	23(OCC)	-241	-305	70	0	0	0
	24(OCC)	-131	32	-14	0	0	0
	25(OCC)	-212	16	-22	0	0	0
	26(OCC)	-212	16	-22	0	0	0
	MAX	519/L3	-3831/L3	879/L16			
8810		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-479	-1601	-31	0	0	0
	4(OPE)	346	-1161	435	0	0	0
	6(OPE)	318	-1156	139	0	0	0
	9(OPE)	317	-1156	141	0	0	0
	11(SUS)	-338	-1130	-22	0	0	0
	12(SUS)	-327	-1093	-21	0	0	0
	13(OPE)	340	-1134	-2	0	0	0
	14(OPE)	-310	-1157	174	0	0	0
	15(OPE)	275	-1017	133	0	0	0
	16(OPE)	360	-1295	146	0	0	0
	17(OPE)	186	-1152	425	0	0	0
	18(OPE)	318	-1156	139	0	0	0
	19(OPE)	318	-1156	139	0	0	0
	20(OCC)	-6	28	-437	0	0	0
	21(OCC)	-656	4	-261	0	0	0
	22(OCC)	-71	144	-302	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	23(OCC)	14	-134	-289	0	0	0
	24(OCC)	-160	10	-10	0	0	0
	25(OCC)	-28	5	-296	0	0	0
	26(OCC)	-28	5	-296	0	0	0
	MAX	-656/L21	-1601/L3	-437/L20			
8920		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	3(HYD)	3	-3052	-2	0	0	0
	4(OPE)	593	-1665	6729	0	0	0
	6(OPE)	577	-1665	6711	0	0	0
	9(OPE)	42	-1657	-3289	0	0	0
	11(SUS)	2	-1657	-1	0	0	0
	12(SUS)	2	-1655	-1	0	0	0
	13(OPE)	1234	-1664	6822	0	0	0
	14(OPE)	48	-1669	6362	0	0	0
	15(OPE)	610	-1466	6352	0	0	0
	16(OPE)	550	-1864	7065	0	0	0
	17(OPE)	616	-1665	9866	0	0	0
	18(OPE)	563	-1664	6733	0	0	0
	19(OPE)	571	-1663	6719	0	0	0
	20(OCC)	640	1	93	0	0	0
	21(OCC)	-546	-4	-367	0	0	0
	22(OCC)	16	200	-377	0	0	0
	23(OCC)	-43	-199	336	0	0	0
	24(OCC)	23	0	3137	0	0	0
	25(OCC)	-30	1	4	0	0	0
	26(OCC)	-23	2	-10	0	0	0
	MAX	1234/L13	-3052/L3	9866/L17			
8950		TYPE=Rigid +Y;					
	3(HYD)	-21	-5926	-4	0	0	0
	4(OPE)	279	-3160	-906	0	0	0
	6(OPE)	274	-3161	-908	0	0	0
	9(OPE)	-273	-3217	926	0	0	0
	11(SUS)	-12	-3216	-2	0	0	0
	12(SUS)	-12	-3212	-2	0	0	0
	13(OPE)	446	-3167	-839	0	0	0
	14(OPE)	215	-3136	-916	0	0	0
	15(OPE)	252	-2779	-795	0	0	0
	16(OPE)	296	-3543	-1021	0	0	0
	17(OPE)	318	-3160	-893	0	0	0
	18(OPE)	267	-3167	-912	0	0	0
	19(OPE)	272	-3171	-912	0	0	0
	20(OCC)	168	-8	67	0	0	0
	21(OCC)	-63	24	-10	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	22(OCC)	-27	381	111	0	0	0
	23(OCC)	18	-384	-115	0	0	0
	24(OCC)	40	-0	13	0	0	0
	25(OCC)	-11	-8	-6	0	0	0
	26(OCC)	-6	-12	-6	0	0	0
	MAX	446/L13	-5926/L3	-1021/L16			
8960		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	58	-10385	-7	0	0	0
	4(OPE)	-603	-5671	-1696	0	0	0
	6(OPE)	-496	-5669	-1695	0	0	0
	9(OPE)	-272	-5636	1669	0	0	0
	11(SUS)	33	-5636	-4	0	0	0
	12(SUS)	33	-5629	-4	0	0	0
	13(OPE)	2429	-5659	-1692	0	0	0
	14(OPE)	-4043	-5693	-1702	0	0	0
	15(OPE)	-681	-4990	-1492	0	0	0
	16(OPE)	-346	-6348	-1898	0	0	0
	17(OPE)	-85	-5671	-1699	0	0	0
	18(OPE)	-322	-5663	-1694	0	0	0
	19(OPE)	-449	-5661	-1693	0	0	0
	20(OCC)	3032	11	3	0	0	0
	21(OCC)	-3440	-22	-6	0	0	0
	22(OCC)	-78	681	204	0	0	0
	23(OCC)	257	-677	-202	0	0	0
	24(OCC)	518	-0	-3	0	0	0
	25(OCC)	280	7	2	0	0	0
	26(OCC)	154	10	3	0	0	0
	MAX	-4043/L14	-10385/L3	-1898/L16			
8990		TYPE=Rigid +Y;					
	3(HYD)	-334	-8210	30	0	0	0
	4(OPE)	-1403	-4690	-106	0	0	0
	6(OPE)	-1400	-4682	-111	0	0	0
	9(OPE)	1319	-4454	-212	0	0	0
	11(SUS)	-190	-4456	17	0	0	0
	12(SUS)	-190	-4450	17	0	0	0
	13(OPE)	-1384	-4646	-164	0	0	0
	14(OPE)	-1440	-4801	19	0	0	0
	15(OPE)	-1236	-4132	-89	0	0	0
	16(OPE)	-1565	-5233	-131	0	0	0
	17(OPE)	-1399	-4689	143	0	0	0
	18(OPE)	-1391	-4653	-119	0	0	0
	19(OPE)	-1386	-4637	-119	0	0	0
	20(OCC)	19	44	-58	0	0	0
	21(OCC)	-37	-111	125	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	22(OCC)	167	558	17	0	0	0
	23(OCC)	-162	-544	-25	0	0	0
	24(OCC)	4	1	249	0	0	0
	25(OCC)	12	37	-13	0	0	0
	26(OCC)	17	53	-13	0	0	0
	MAX	-1565/L16	-8210/L3	249/L24			
9020		TYPE=Rigid +Y;					
	3(HYD)	519	-8260	-94	0	0	0
	4(OPE)	-707	-4676	1212	0	0	0
	6(OPE)	-704	-4704	1223	0	0	0
	9(OPE)	-24	-4540	-1362	0	0	0
	11(SUS)	295	-4500	-54	0	0	0
	12(SUS)	295	-4494	-54	0	0	0
	13(OPE)	-357	-4846	1409	0	0	0
	14(OPE)	-798	-4537	1103	0	0	0
	15(OPE)	-634	-4144	1069	0	0	0
	16(OPE)	-771	-5237	1369	0	0	0
	17(OPE)	-769	-4676	1173	0	0	0
	18(OPE)	-693	-4721	1235	0	0	0
	19(OPE)	-695	-4707	1229	0	0	0
	20(OCC)	350	-170	198	0	0	0
	21(OCC)	-91	139	-109	0	0	0
	22(OCC)	73	532	-142	0	0	0
	23(OCC)	-64	-561	157	0	0	0
	24(OCC)	-62	-0	-38	0	0	0
	25(OCC)	14	-45	23	0	0	0
	26(OCC)	12	-31	18	0	0	0
	MAX	-798/L14	-8260/L3	1409/L13			
9040		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	3(HYD)	0	-7548	0	0	0	0
	4(OPE)	-2948	-10274	5745	0	0	0
	6(OPE)	-2971	-10053	5115	0	0	0
	9(OPE)	0	-2682	0	0	0	0
	11(SUS)	0	-4255	0	0	0	0
	12(SUS)	0	-4250	0	0	0	0
	13(OPE)	0	-10561	5004	0	0	0
	14(OPE)	-6146	-10068	4893	0	0	0
	15(OPE)	-2662	-9289	4587	0	0	0
	16(OPE)	-3205	-10775	5452	0	0	0
	17(OPE)	-3177	-10062	11598	0	0	0
	18(OPE)	-2565	-9988	5209	0	0	0
	19(OPE)	-2339	-9908	5116	0	0	0
	20(OCC)	2948	-287	-741	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	-3198	206	-852	0	0	0
	22(OCC)	286	984	-1158	0	0	0
	23(OCC)	-257	-501	-293	0	0	0
	24(OCC)	-229	211	5852	0	0	0
	25(OCC)	383	286	-536	0	0	0
	26(OCC)	609	366	-629	0	0	0
	MAX	-6146/L14	-10775/L16	11598/L17			
9060		TYPE=Rigid +Y;					
	3(HYD)	403	-4319	-71	0	0	0
	4(OPE)	254	-3907	-1144	0	0	0
	6(OPE)	269	-4317	-1267	0	0	0
	9(OPE)	255	-960	134	0	0	0
	11(SUS)	214	-2451	-42	0	0	0
	12(SUS)	213	-2448	-42	0	0	0
	13(OPE)	453	-4202	-1176	0	0	0
	14(OPE)	340	-4571	-1328	0	0	0
	15(OPE)	253	-3766	-1101	0	0	0
	16(OPE)	290	-4900	-1441	0	0	0
	17(OPE)	324	-3964	-1144	0	0	0
	18(OPE)	260	-4318	-1269	0	0	0
	19(OPE)	258	-4327	-1272	0	0	0
	20(OCC)	199	-295	-32	0	0	0
	21(OCC)	85	-663	-184	0	0	0
	22(OCC)	-2	141	43	0	0	0
	23(OCC)	36	-992	-297	0	0	0
	24(OCC)	69	-57	-0	0	0	0
	25(OCC)	6	-411	-125	0	0	0
	26(OCC)	4	-420	-128	0	0	0
	MAX	453/L13	-4900/L16	-1441/L16			
9070		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-148	-10946	-45	0	0	0
	4(OPE)	-1663	-5586	-1670	0	0	0
	6(OPE)	-1664	-5591	-1671	0	0	0
	9(OPE)	-359	-6011	1767	0	0	0
	11(SUS)	-81	-5928	-26	0	0	0
	12(SUS)	-81	-5921	-26	0	0	0
	13(OPE)	518	-5638	-1686	0	0	0
	14(OPE)	-5671	-5427	-1623	0	0	0
	15(OPE)	-1740	-4903	-1466	0	0	0
	16(OPE)	-1530	-6273	-1875	0	0	0
	17(OPE)	-1290	-5575	-1667	0	0	0
	18(OPE)	-1685	-5606	-1676	0	0	0
	19(OPE)	-1704	-5612	-1678	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	20(OCC)	2182	-52	-15	0	0	0
	21(OCC)	-4007	159	48	0	0	0
	22(OCC)	-76	683	204	0	0	0
	23(OCC)	134	-687	-205	0	0	0
	24(OCC)	373	11	3	0	0	0
	25(OCC)	-22	-20	-6	0	0	0
	26(OCC)	-40	-26	-8	0	0	0
	MAX	-5671/L14	-10946/L3	-1875/L16			
9100		TYPE=Rigid +Y;					
	3(HYD)	81	-8399	4	0	0	0
	4(OPE)	-1318	-4701	502	0	0	0
	6(OPE)	-1316	-4691	497	0	0	0
	9(OPE)	1363	-4570	-151	0	0	0
	11(SUS)	44	-4559	2	0	0	0
	12(SUS)	44	-4553	2	0	0	0
	13(OPE)	-1258	-4669	616	0	0	0
	14(OPE)	-1288	-4789	636	0	0	0
	15(OPE)	-1158	-4141	450	0	0	0
	16(OPE)	-1477	-5243	541	0	0	0
	17(OPE)	-1235	-4699	680	0	0	0
	18(OPE)	-1313	-4680	496	0	0	0
	19(OPE)	-1311	-4674	496	0	0	0
	20(OCC)	60	31	114	0	0	0
	21(OCC)	30	-88	134	0	0	0
	22(OCC)	160	560	-52	0	0	0
	23(OCC)	-159	-542	40	0	0	0
	24(OCC)	83	2	178	0	0	0
	25(OCC)	5	21	-5	0	0	0
	26(OCC)	6	27	-6	0	0	0
	MAX	-1477/L16	-8399/L3	680/L17			
9130		TYPE=Rigid +Y;					
	3(HYD)	-33	-7333	1	0	0	0
	4(OPE)	-205	-4010	1185	0	0	0
	6(OPE)	-202	-4009	1185	0	0	0
	9(OPE)	-246	-3979	-1168	0	0	0
	11(SUS)	-18	-3980	0	0	0	0
	12(SUS)	-18	-3975	0	0	0	0
	13(OPE)	-90	-4004	1198	0	0	0
	14(OPE)	-310	-4027	1168	0	0	0
	15(OPE)	-185	-3530	1043	0	0	0
	16(OPE)	-218	-4488	1329	0	0	0
	17(OPE)	-270	-4010	1172	0	0	0
	18(OPE)	-202	-4007	1185	0	0	0
	19(OPE)	-202	-4006	1185	0	0	0
	20(OCC)	115	6	12	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	-105	-17	-18	0	0	0
	22(OCC)	20	480	-143	0	0	0
	23(OCC)	-13	-478	143	0	0	0
	24(OCC)	-65	-0	-13	0	0	0
	25(OCC)	3	3	-0	0	0	0
	26(OCC)	3	4	-1	0	0	0
	MAX	-310/L14	-7333/L3	1329/L16			
9140		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	4	-6857	0	0	0	0
	4(OPE)	700	-3686	1104	0	0	0
	6(OPE)	745	-3689	1105	0	0	0
	9(OPE)	-372	-3717	-1051	0	0	0
	11(SUS)	2	-3722	0	0	0	0
	12(SUS)	2	-3717	0	0	0	0
	13(OPE)	3499	-3694	1107	0	0	0
	14(OPE)	-1097	-3663	1097	0	0	0
	15(OPE)	554	-3243	971	0	0	0
	16(OPE)	926	-4135	1239	0	0	0
	17(OPE)	23	-3687	1106	0	0	0
	18(OPE)	759	-3692	1106	0	0	0
	19(OPE)	757	-3693	1106	0	0	0
	20(OCC)	2799	-8	2	0	0	0
	21(OCC)	-1797	23	-7	0	0	0
	22(OCC)	-146	443	-133	0	0	0
	23(OCC)	225	-448	134	0	0	0
	24(OCC)	-677	-1	2	0	0	0
	25(OCC)	59	-6	2	0	0	0
	26(OCC)	57	-7	2	0	0	0
	MAX	3499/L13	-6857/L3	1239/L16			
9150		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6234	0	0	0	0
	4(OPE)	914	-3392	0	0	0	0
	6(OPE)	882	-3392	0	0	0	0
	9(OPE)	0	-3384	0	0	0	0
	11(SUS)	0	-3383	0	0	0	0
	12(SUS)	0	-3379	0	0	0	0
	13(OPE)	1626	-3390	0	0	0	0
	14(OPE)	-51	-3398	0	0	0	0
	15(OPE)	972	-2986	0	0	0	0
	16(OPE)	798	-3798	0	0	0	0
	17(OPE)	914	-3392	0	0	0	0
	18(OPE)	875	-3391	0	0	0	0
	19(OPE)	876	-3390	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	20(OCC)	712	2	0	0	0	0
	21(OCC)	-965	-6	0	0	0	0
	22(OCC)	58	407	0	0	0	0
	23(OCC)	-115	-405	0	0	0	0
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	-39	2	0	0	0	0
	26(OCC)	-38	2	0	0	0	0
	MAX	1626/L13	-6234/L3				
9160		TYPE=Rigid +Y;					
	3(HYD)	-1	-7421	0	0	0	0
	4(OPE)	82	-4025	1205	0	0	0
	6(OPE)	84	-4025	1205	0	0	0
	9(OPE)	-156	-4027	-1198	0	0	0
	11(SUS)	-0	-4027	0	0	0	0
	12(SUS)	-0	-4022	0	0	0	0
	13(OPE)	225	-4026	1187	0	0	0
	14(OPE)	-274	-4024	1175	0	0	0
	15(OPE)	72	-3542	1060	0	0	0
	16(OPE)	96	-4508	1349	0	0	0
	17(OPE)	106	-4025	1203	0	0	0
	18(OPE)	84	-4025	1205	0	0	0
	19(OPE)	84	-4026	1205	0	0	0
	20(OCC)	143	-1	-18	0	0	0
	21(OCC)	-356	1	-29	0	0	0
	22(OCC)	-10	483	-145	0	0	0
	23(OCC)	14	-483	144	0	0	0
	24(OCC)	24	-0	-2	0	0	0
	25(OCC)	2	-0	-0	0	0	0
	26(OCC)	2	-0	0	0	0	0
	MAX	-356/L21	-7421/L3	1349/L16			
9170		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	3(HYD)	0	-2575	0	0	0	0
	4(OPE)	-58	-1398	-10258	0	0	0
	6(OPE)	-57	-1398	-10350	0	0	0
	9(OPE)	88	-1398	4539	0	0	0
	11(SUS)	0	-1398	0	0	0	0
	12(SUS)	0	-1396	0	0	0	0
	13(OPE)	707	-1398	-10895	0	0	0
	14(OPE)	-792	-1398	-10084	0	0	0
	15(OPE)	-58	-1230	-9871	0	0	0
	16(OPE)	-55	-1566	-10788	0	0	0
	17(OPE)	-21	-1398	-5278	0	0	0
	18(OPE)	-57	-1398	-10348	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OPE)	-57	-1398	-10356	0	0	0
	20(OCC)	765	0	-636	0	0	0
	21(OCC)	-734	-0	174	0	0	0
	22(OCC)	0	168	388	0	0	0
	23(OCC)	3	-168	-529	0	0	0
	24(OCC)	37	0	4980	0	0	0
	25(OCC)	2	0	-90	0	0	0
	26(OCC)	2	0	-97	0	0	0
	MAX	-792/L14	-2575/L3	-10895/L13			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T2+P2+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17-L4
25 (OCC) L25=L18-L4
26 (OCC) L26=L19-L4
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L6-L11
36 (EXP) L36=L4-L6
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L6-L9

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP
CASE 11 (SUS) W+P1+H
CASE 12 (SUS) WNC
CASE 27 (OCC) L27=L20+L11
CASE 28 (OCC) L28=L21+L11
CASE 29 (OCC) L29=L22+L11
CASE 30 (OCC) L30=L23+L11
CASE 31 (OCC) L31=L24+L11
CASE 32 (OCC) L32=L25+L11
CASE 33 (OCC) L33=L26+L11
CASE 34 (EXP) L34=L4-L11
CASE 35 (EXP) L35=L6-L11
CASE 36 (EXP) L36=L4-L6
CASE 37 (EXP) L37=L9-L11
CASE 38 (EXP) L38=L4-L9
CASE 39 (EXP) L39=L6-L9

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 3 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 3 (HYD) WW+HP			
Ratio (%):	53.0	@Node	7000
Code Stress:	91393.9	Allowable Stress:	172368.9
Axial Stress:	48545.3	@Node	8780
Bending Stress:	121300.7	@Node	7000
Torsion Stress:	6576.4	@Node	2140
Hoop Stress:	100724.6	@Node	7250
Max Stress Intensity:	121719.1	@Node	7000

CODE STRESS CHECK PASSED : LOADCASE 11 (SUS) W+P1+H

Highest Stresses: (KPa) LOADCASE 11 (SUS) W+P1+H			
Ratio (%):	58.5	@Node	7000
Code Stress:	67327.0	Allowable Stress:	115142.4
Axial Stress:	32379.4	@Node	8780
Bending Stress:	89357.7	@Node	7000
Torsion Stress:	7672.6	@Node	2140
Hoop Stress:	67149.7	@Node	7250
Max Stress Intensity:	89666.4	@Node	7000

CODE STRESS CHECK PASSED : LOADCASE 12 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 12 (SUS) WNC			
Ratio (%):	57.2	@Node	7000
Code Stress:	65821.8	Allowable Stress:	115142.4
Axial Stress:	2403.0	@Node	6490
Bending Stress:	87359.2	@Node	7000
Torsion Stress:	7629.3	@Node	2140

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Hoop Stress:                  0.0       @Node     20
Max Stress Intensity:       87661.6     @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L20+L11

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L20+L11
Ratio (%):                    91.9       @Node   7000
Code Stress:                140785.6     Allowable Stress:     153139.4
Axial Stress:                90767.6     @Node   8140
Bending Stress:             187292.0     @Node   7000
Torsion Stress:              17017.1     @Node   5188
Hoop Stress:                 67149.7     @Node   7250
Max Stress Intensity:       187608.6     @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 28 (OCC) L28=L21+L11

Highest Stresses: (   KPa    ) LOADCASE 28 (OCC) L28=L21+L11
Ratio (%):                    99.2       @Node   8260
Code Stress:                181917.9     Allowable Stress:     183400.5
Axial Stress:                90717.0     @Node   8140
Bending Stress:             242494.3     @Node   8260
Torsion Stress:              14479.1     @Node   5188
Hoop Stress:                 67149.7     @Node   7250
Max Stress Intensity:       242541.5     @Node   8260

 CODE STRESS CHECK PASSED      : LOADCASE 29 (OCC) L29=L22+L11

Highest Stresses: (   KPa    ) LOADCASE 29 (OCC) L29=L22+L11
Ratio (%):                    92.6       @Node   7000
Code Stress:                141756.1     Allowable Stress:     153139.4
Axial Stress:                90785.2     @Node   8140
Bending Stress:             188534.9     @Node   7000
Torsion Stress:              10351.9     @Node   5140
Hoop Stress:                 67149.7     @Node   7250
Max Stress Intensity:       188889.8     @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 30 (OCC) L30=L23+L11

Highest Stresses: (   KPa    ) LOADCASE 30 (OCC) L30=L23+L11
Ratio (%):                    91.7       @Node   7000
Code Stress:                140476.4     Allowable Stress:     153139.4
Axial Stress:                90798.3     @Node   8140
Bending Stress:             186889.2     @Node   7000
Torsion Stress:              10823.4     @Node   5140
Hoop Stress:                 67149.7     @Node   7250
Max Stress Intensity:       187198.7     @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 31 (OCC) L31=L24+L11

Highest Stresses: (   KPa    ) LOADCASE 31 (OCC) L31=L24+L11
Ratio (%):                    78.4       @Node   7000
Code Stress:                120022.3     Allowable Stress:     153139.4
Axial Stress:                90741.9     @Node   8140
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Bending Stress:            175701.5       @Node   8260
Torsion Stress:              9077.6       @Node   2139
Hoop Stress:                67149.7       @Node   7250
Max Stress Intensity:      175744.6       @Node   8260

 CODE STRESS CHECK PASSED      : LOADCASE 32 (OCC) L32=L25+L11

Highest Stresses: (   KPa    ) LOADCASE 32 (OCC) L32=L25+L11
Ratio (%):                     92.0       @Node   7000
Code Stress:               140868.8       Allowable Stress:     153139.4
Axial Stress:               90792.6       @Node   8140
Bending Stress:            187366.7       @Node   7000
Torsion Stress:             10494.9       @Node   5140
Hoop Stress:                67149.7       @Node   7250
Max Stress Intensity:      187710.5       @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 33 (OCC) L33=L26+L11

Highest Stresses: (   KPa    ) LOADCASE 33 (OCC) L33=L26+L11
Ratio (%):                     92.0       @Node   7000
Code Stress:               140842.4       Allowable Stress:     153139.4
Axial Stress:               90792.3       @Node   8140
Bending Stress:            187331.0       @Node   7000
Torsion Stress:             10523.8       @Node   5140
Hoop Stress:                67149.7       @Node   7250
Max Stress Intensity:      187675.2       @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 34 (EXP) L34=L4-L11

Highest Stresses: (   KPa    ) LOADCASE 34 (EXP) L34=L4-L11
Ratio (%):                     98.2       @Node   8260
Code Stress:               313677.1       Allowable Stress:     319268.2
Axial Stress:               85805.4       @Node   8140
Bending Stress:            313639.4       @Node   8260
Torsion Stress:             18642.6       @Node   5188
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      577384.3       @Node   8260

 CODE STRESS CHECK PASSED      : LOADCASE 35 (EXP) L35=L6-L11

Highest Stresses: (   KPa    ) LOADCASE 35 (EXP) L35=L6-L11
Ratio (%):                     76.7       @Node   8260
Code Stress:               245026.6       Allowable Stress:     319268.2
Axial Stress:               19917.3       @Node   8140
Bending Stress:            245000.4       @Node   8260
Torsion Stress:             20741.0       @Node   5188
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      451023.7       @Node   8260

 CODE STRESS CHECK PASSED      : LOADCASE 36 (EXP) L36=L4-L6

Highest Stresses: (   KPa    ) LOADCASE 36 (EXP) L36=L4-L6
Ratio (%):                     45.1       @Node   6510
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Code Stress:	124143.6	Allowable Stress:	275286.8
Axial Stress:	65888.1	@Node	8140
Bending Stress:	122809.9	@Node	6510
Torsion Stress:	5330.0	@Node	8780
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	126363.4	@Node	8260

CODE STRESS CHECK PASSED : LOADCASE 37 (EXP) L37=L9-L11

Highest Stresses: (KPa) LOADCASE 37 (EXP) L37=L9-L11

Ratio (%):	76.8	@Node	8260
Code Stress:	245142.3	Allowable Stress:	319268.2
Axial Stress:	19964.4	@Node	8140
Bending Stress:	245116.4	@Node	8260
Torsion Stress:	10270.3	@Node	7100
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	451237.0	@Node	8260

CODE STRESS CHECK PASSED : LOADCASE 38 (EXP) L38=L4-L9

Highest Stresses: (KPa) LOADCASE 38 (EXP) L38=L4-L9

Ratio (%):	46.7	@Node	9109
Code Stress:	146029.6	Allowable Stress:	312789.5
Axial Stress:	65841.0	@Node	8140
Bending Stress:	146825.9	@Node	9108
Torsion Stress:	24235.2	@Node	5188
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	392348.4	@Node	9108

CODE STRESS CHECK PASSED : LOADCASE 39 (EXP) L39=L6-L9

Highest Stresses: (KPa) LOADCASE 39 (EXP) L39=L6-L9

Ratio (%):	46.3	@Node	9109
Code Stress:	144910.0	Allowable Stress:	313130.8
Axial Stress:	3378.0	@Node	5670
Bending Stress:	145692.5	@Node	9108
Torsion Stress:	26333.7	@Node	5188
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	389326.1	@Node	9108

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
HANGER REPORT ((TABLE DATA FROM DESIGN RUNS)) 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T2+P2+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17-L4
25 (OCC) L25=L18-L4
26 (OCC) L26=L19-L4
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L6-L11
36 (EXP) L36=L4-L6
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L6-L9

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
Job:: BNK-GCS-CN-007-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

HANGER REPORT
(TABLE DATA FROM DESIGN RUNS)

NODE	NUM RQD	FIG. NO.	SIZE	VERTICAL MOVEMENT (mm.)	HOT LOAD (N.)	THEORETICAL INSTALLED LOAD (N.)	ACTUAL INSTALLED LOAD (N.)	SPRING RATE (N./cm.)	HORIZONTAL MOVEMENT (mm.)
160	1		2921	-0.366	1629.	1617.	0.	333.	0.000
	LISEGA					LOAD VARIATION =	1%		

** VARIABLE SUPPORT SPRING DESIGNED ..... SHORT RANGE
MINIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 831.818
MAXIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 2499.901
RECOMMENDED INSTALLATION CLEARANCE ..... (mm.) 196.850

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T2+P2+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17-L4
25 (OCC) L25=L18-L4
26 (OCC) L26=L19-L4
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L6-L11
36 (EXP) L36=L4-L6
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L6-L9

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
Job:: BNK-GCS-CN-007-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 4 (OPE) W+D1+T1+P1+H
CASE 6 (OPE) W+D1+T2+P1+H
CASE 9 (OPE) W+D1+T3+P1+H
CASE 11 (SUS) W+P1+H
CASE 12 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
25		Absolute Method								
	Limits	7000	7000	5000		4000	1200	2200		
	4(OPE)	-35	-305	304	0.061	0	-0	-10	0.005	
	6(OPE)	285	-781	-20	0.112	0	-0	-10	0.005	
	9(OPE)	285	-783	-22	0.112	0	-0	-10	0.005	
	11(SUS)	30	-535	59	0.076	-0	0	-10	0.005	
	12(SUS)	-67	-717	-23	0.102	0	0	-10	0.005	
780		Absolute Method								
	Limits	9600	9600	7200		5760	3840	4990		
	4(OPE)	2450	297	60	0.255	-1322	-496	-1351	0.271	
	6(OPE)	2548	214	-338	0.265	-876	-504	-1064	0.213	
	9(OPE)	3173	70	426	0.331	-81	-236	-1594	0.319	
	11(SUS)	3119	10	28	0.325	153	-368	-1278	0.256	
	12(SUS)	3105	21	30	0.323	163	-356	-1283	0.257	
1240		Absolute Method								
	Limits	7000	7000	5000		4000	1200	2200		
	4(OPE)	2184	-1386	-1563	0.313	-0	-0	24	0.011	
	6(OPE)	1873	-1336	-1460	0.292	-0	-0	24	0.011	
	9(OPE)	1873	-1335	-1459	0.292	-0	-0	24	0.011	

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
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NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
	11(SUS)	-154	-1388	162	0.198	0	0	24	0.011	
	12(SUS)	-153	-1375	160	0.196	0	0	24	0.011	
1700		Absolute Method								
	Limits	15091	15091	12001		9150	4890	6420		
	4(OPE)	-535	705	1147	0.096	-501	1824	-417	0.373	
	6(OPE)	-238	656	932	0.078	-338	1440	-290	0.294	
	9(OPE)	-237	655	932	0.078	-339	1439	-290	0.294	
	11(SUS)	937	-29	-32	0.062	-12	-89	138	0.021	
	12(SUS)	934	-29	-32	0.062	-12	-88	137	0.021	
7170		Absolute Method								
	Limits	15091	15091	12001		9150	4890	6420		
	4(OPE)	-341	619	-908	0.076	-525	790	420	0.162	
	6(OPE)	-226	596	-697	0.058	-332	738	377	0.151	
	9(OPE)	-222	595	-698	0.058	-333	734	375	0.150	
	11(SUS)	936	29	-31	0.062	12	-88	-137	0.021	
	12(SUS)	933	28	-31	0.062	12	-87	-136	0.021	
1780		Absolute Method								
	Limits	16201	15091	12001		9150	4890	6420		
	4(OPE)	-15750	6745	-1277	0.972	498	959	-856	0.196	
	6(OPE)	-7159	4653	-355	0.442	140	264	538	0.084	
	9(OPE)	-7152	4641	-358	0.441	141	266	534	0.083	
	11(SUS)	629	-168	59	0.039	-6	-96	-76	0.020	
	12(SUS)	624	-164	58	0.039	-6	-96	-75	0.020	

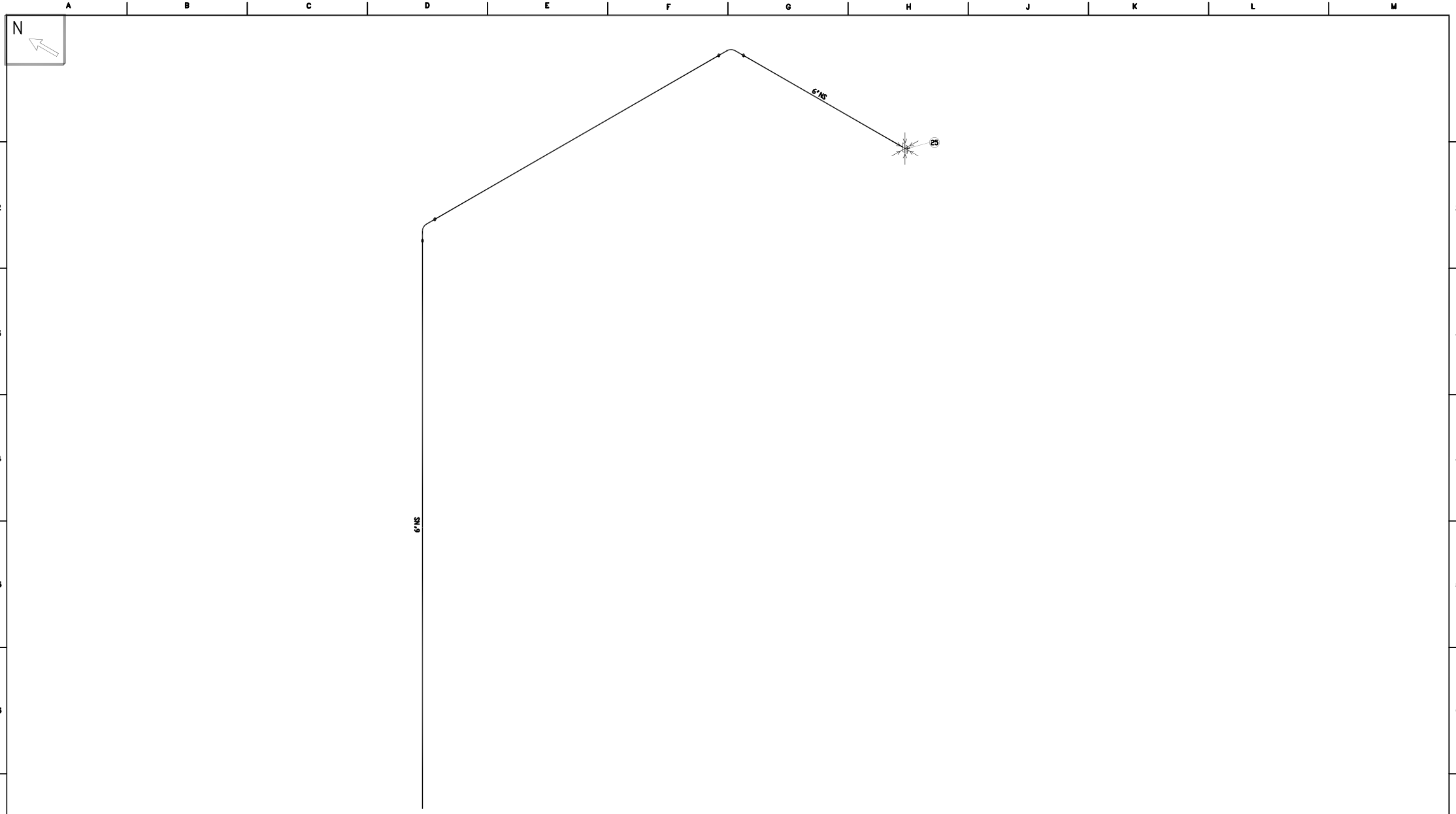
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 22, 2024 Time: 14:50
Job:: BNK-GCS-CN-007-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
7180		Absolute Method								
	Limits	16201	15091	12001		9150	4890	6420		
	4(OPE)	10247	8728	-632	0.633	-597	117	4852	0.756	
	6(OPE)	3967	5181	-184	0.343	-170	44	3224	0.502	
	9(OPE)	3986	5187	-184	0.344	-171	42	3223	0.502	
	11(SUS)	-871	-105	-105	0.054	-19	217	41	0.044	
	12(SUS)	-863	-102	-105	0.053	-19	216	40	0.044	
4260		Absolute Method								
	Limits	11201	11201	8400		6720	4400	5020		
	4(OPE)	9576	-3615	746	0.855	-643	802	5819	1.159	*
	6(OPE)	4184	-2207	-310	0.374	-47	-1303	2408	0.480	
	9(OPE)	4153	-2208	-294	0.371	-26	-1244	2409	0.480	
	11(SUS)	168	-1477	-2	0.132	108	10	808	0.161	
	12(SUS)	168	-1474	-2	0.132	108	10	805	0.160	

BNK-GCS-CN-008

1. GAS-111-0051C-FN05-6"-IS
2. GAS-111-0044C-CN05-6"-ET
3. GAS-111-0047C-FN05-2"-PT
4. GAS-111-0048C-FN05-2"-PT
5. FL-112-0020C-AN07-6"-PT
6. FL-112-0022C-AN07-6"-PT
7. GAS-111-0058C-FS00-6"-IS
8. GAS-111-0055C-FS00-6"-IS
9. GAS-111-0057C-FS00-4"-IS
10. FL-112-0024C-AN07-4"-PT
11. GAS-111-0045C-FS00-6"-NP
12. GAS-111-0046C-CN07-6"-PT
13. GAS-111-0026C-AN07-8"-PT
14. GAS-111-0049C-CN07-8"-PT
15. GAS-111-0160C-CN05-2"-PT
16. FL-112-0119C-AN07-3"-PT



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INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 9

REV.	CHANGE	DATE
		26 MAY 2024

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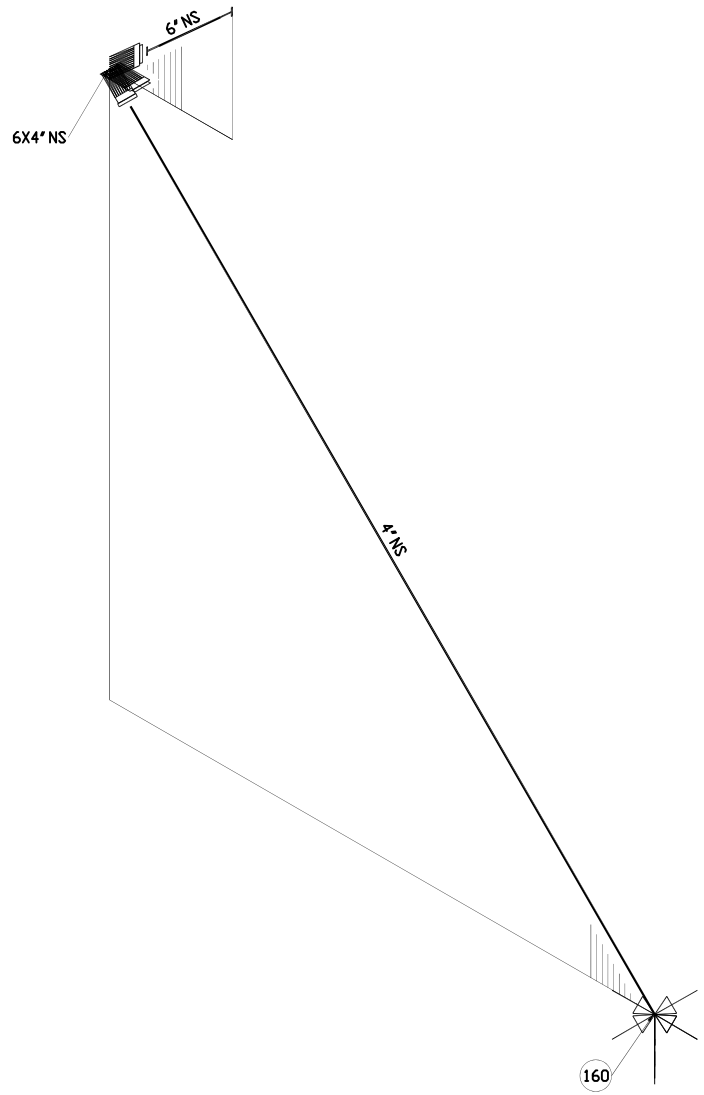

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INSULATION SPEC.		PROJECT NO.	
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MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

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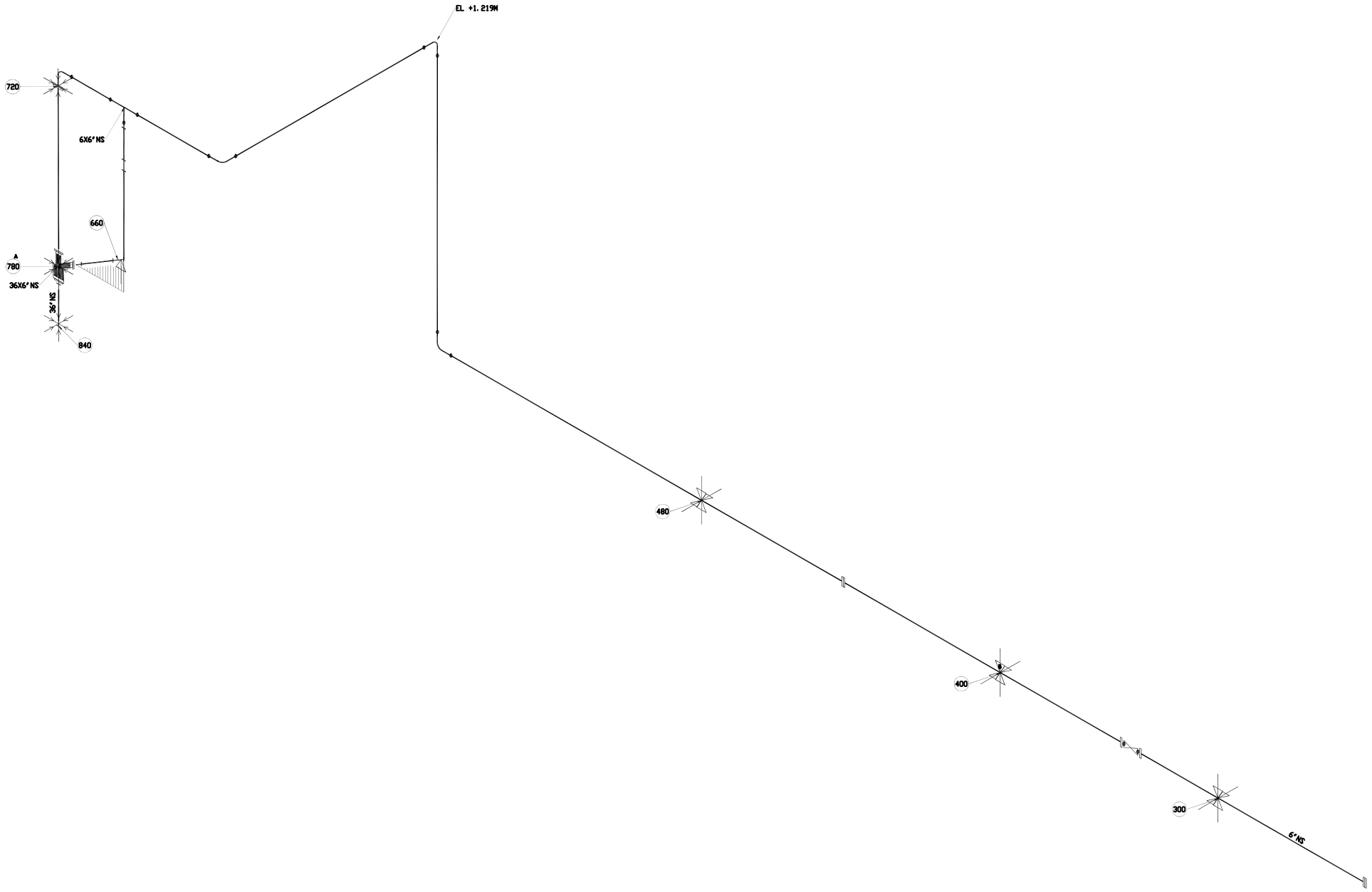

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PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
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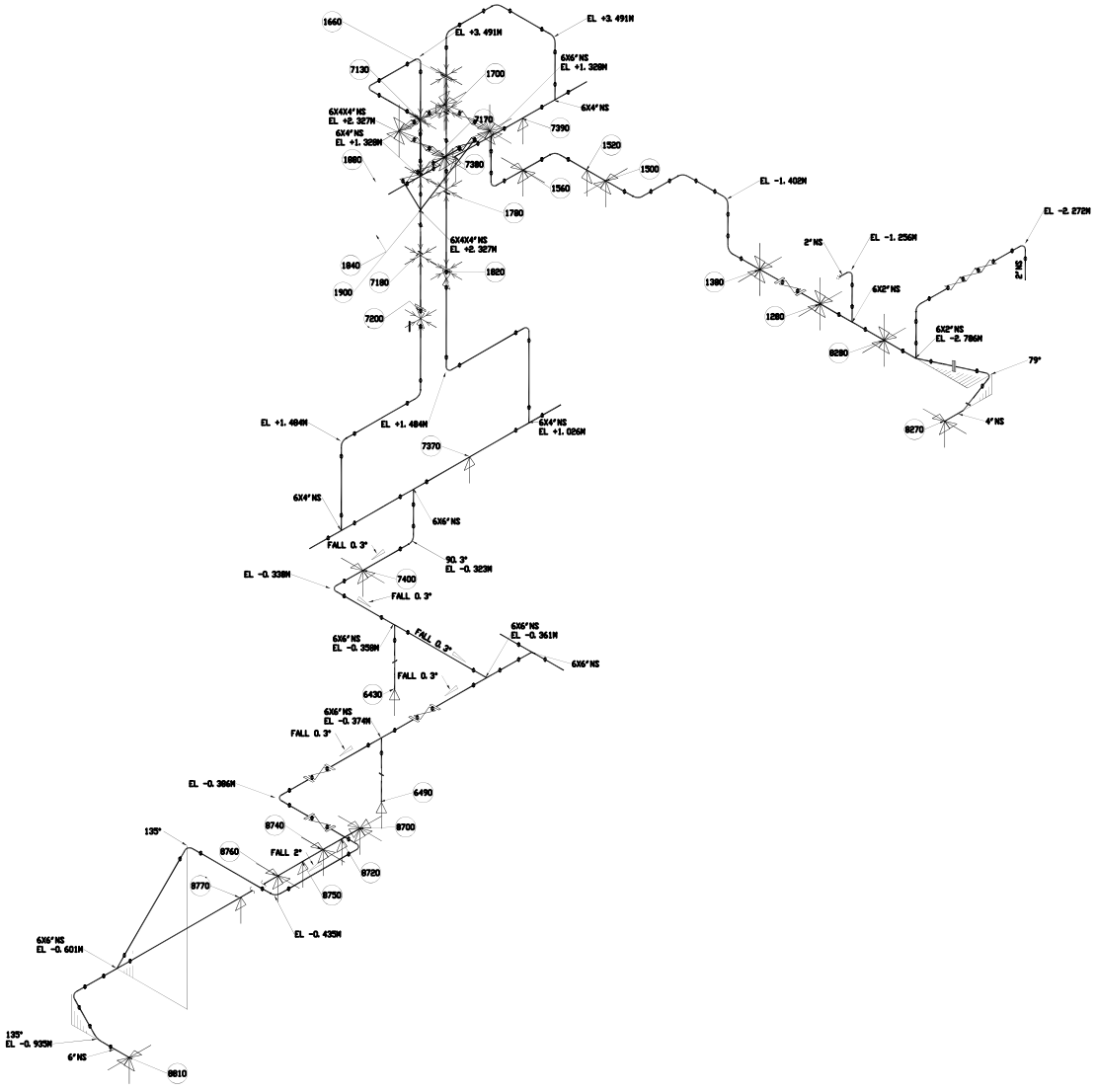

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INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

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PIPELINE REFERENCE

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REV.	CHANGE	DATE
		26 MAY 2024

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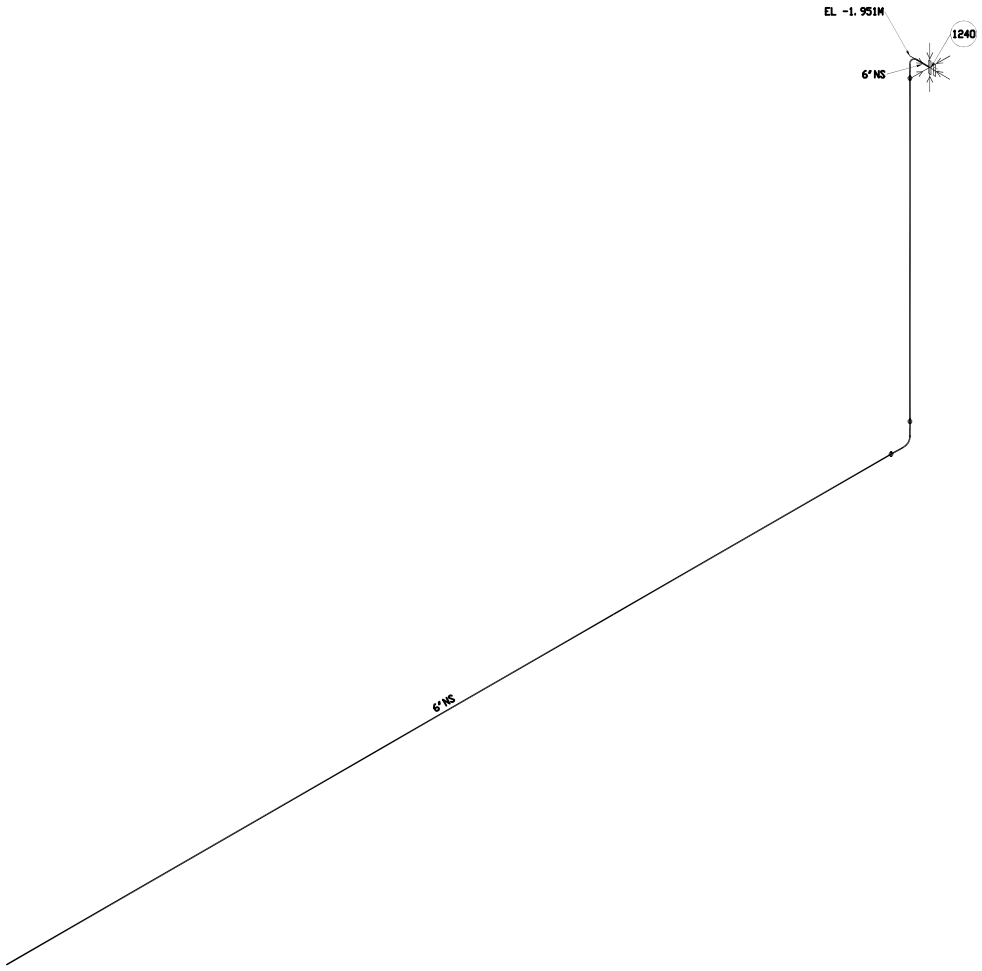

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INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

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		26 MAY 2024

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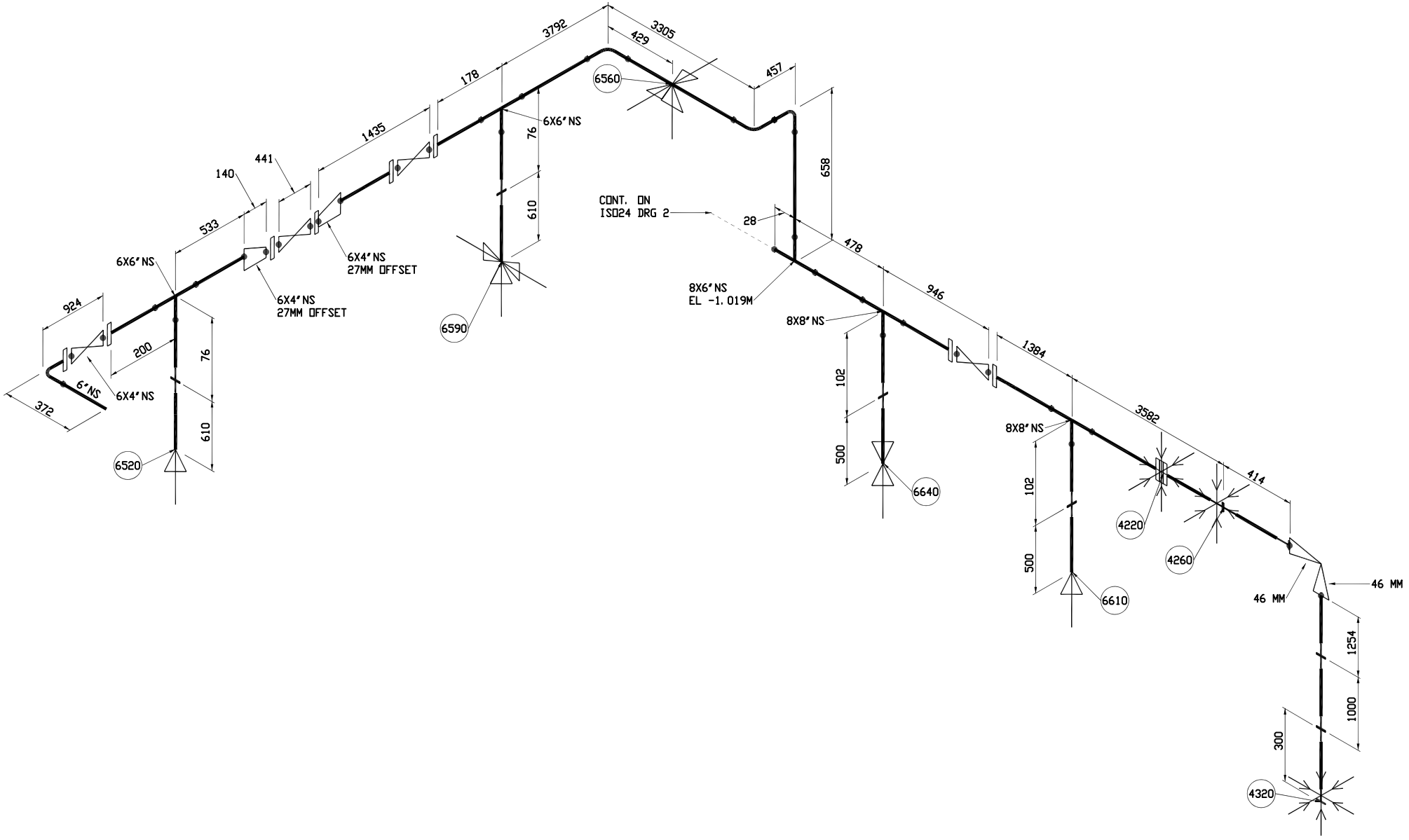

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INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

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REV.

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PIPELINE REFERENCE

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REV.	CHANGE	DATE
		26 MAY 2024

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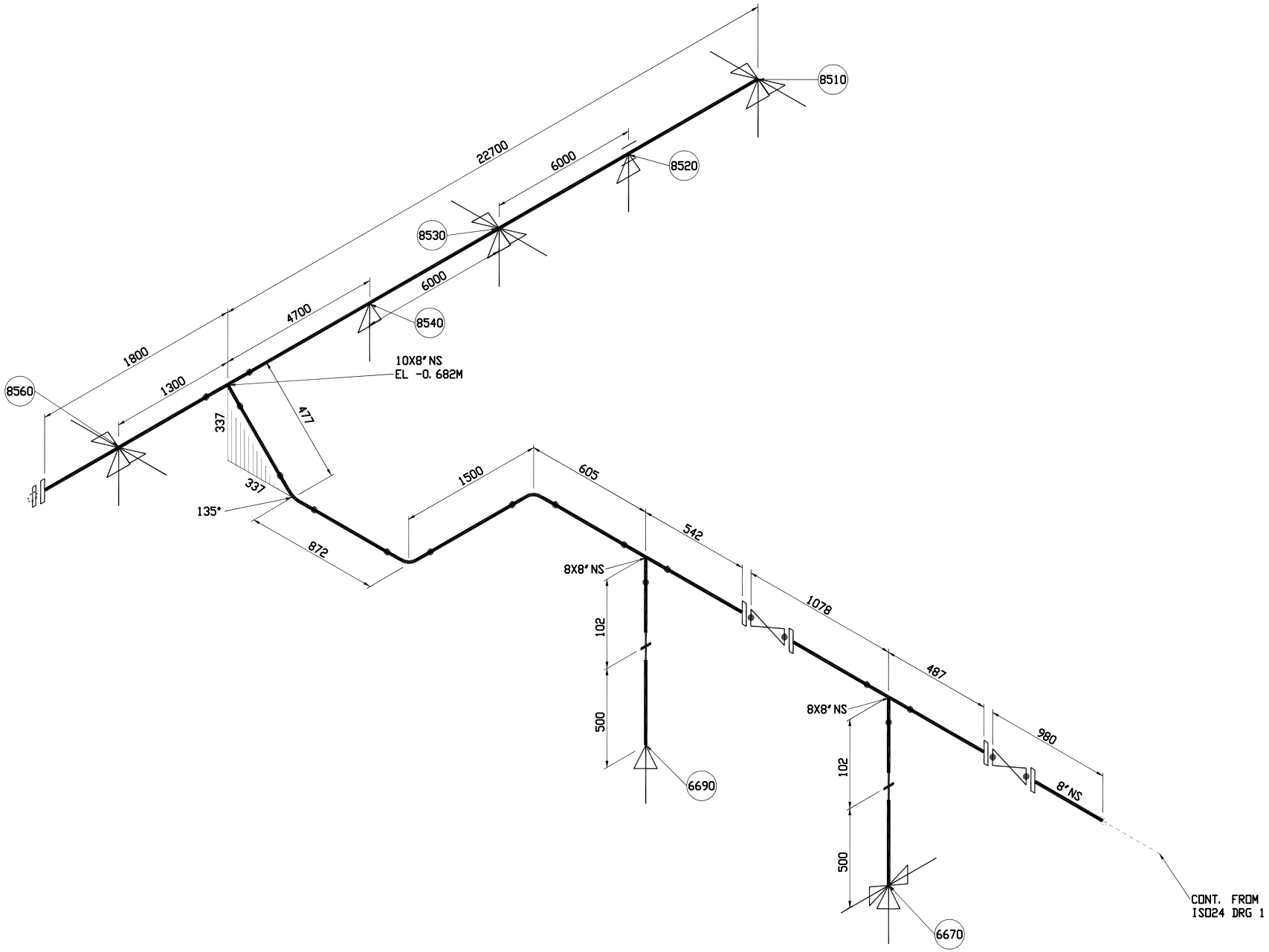

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INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

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PIPELINE REFERENCE

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REV.	CHANGE	DATE
		26 MAY 2024

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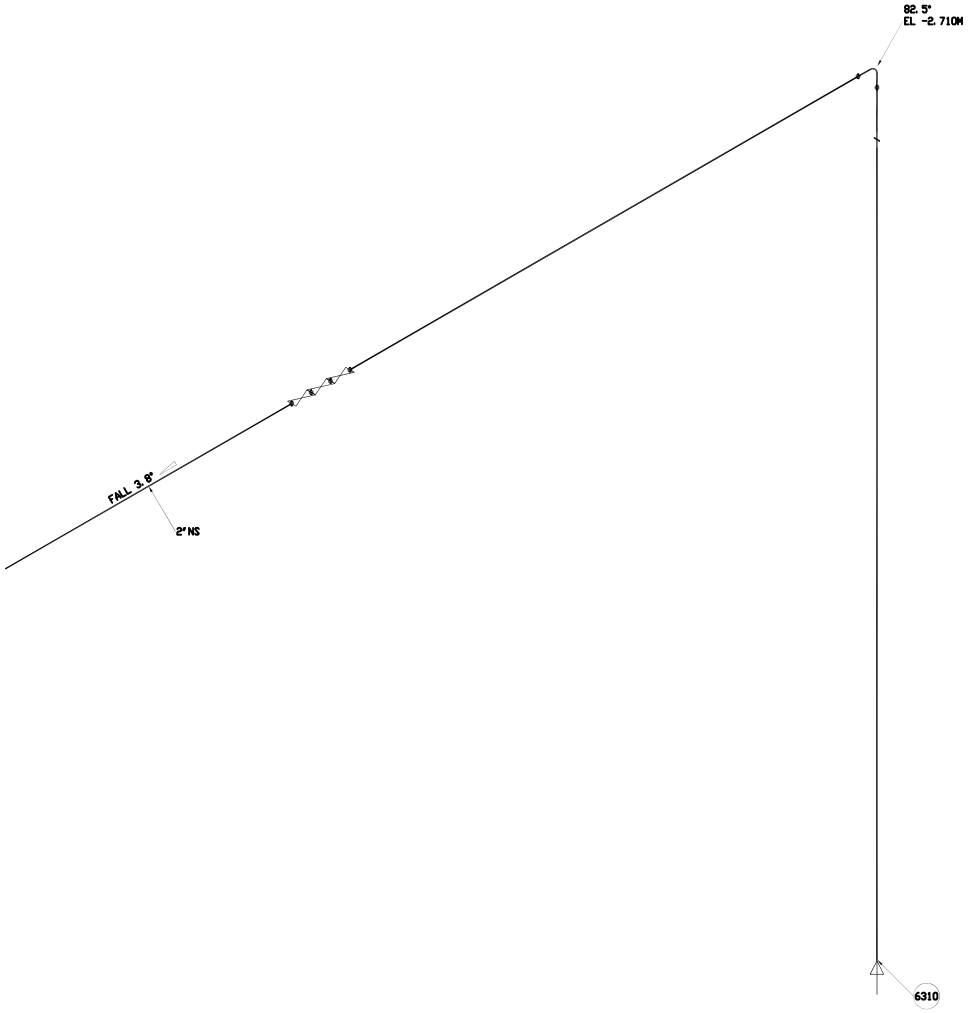

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INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

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REV.	CHANGE	DATE
		26 MAY 2024

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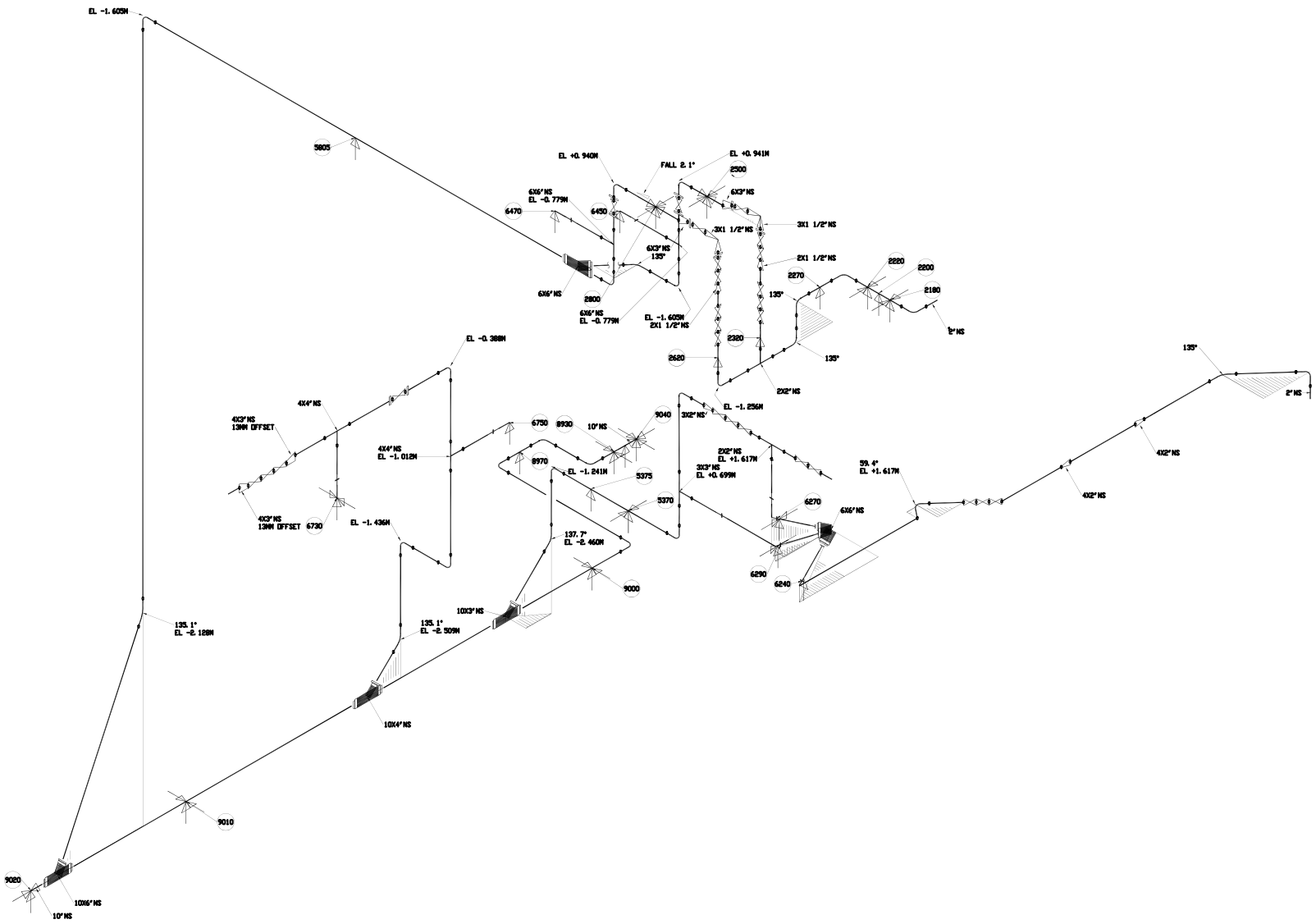

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INSULATION SPEC.		PROJECT NO.	
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PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

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REV.	CHANGE	DATE
		26 MAY 2024

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Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (OPE) W+D1+T2+P2+H
6 (Alt-SUS) W+P1+H
7 (OPE) W+D1+T2+P1+H
8 (Alt-SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L7
21 (OCC) L21=L14-L7
22 (OCC) L22=L15-L7
23 (OCC) L23=L16-L7
24 (OCC) L24=L17-L7
25 (OCC) L25=L18-L7
26 (OCC) L26=L19-L7
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L7-L11
36 (EXP) L36=L4-L7
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L7-L9

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
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CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 26,2024 10:46:20

PIPE DATA

From 10 To 20 DX= -101.600 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= 3.0000 mm.
Element Name= FLANGE_FLG_150
GENERAL
T1= 115 C T2= 60 C T3= 60 C P1= 2,200.0500 KPa P2= 1,810.0413 KPa
PHyd= 3,300.0752 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 197,200,352 KPa EH2= 200,644,016 KPa EH3= 200,644,016 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000181 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001500 kg./cu.cm.
RIGID Weight= 191.27 N.
DISPLACEMENTS
Node 20 DX1= 4.000 mm. DY1= 2.400 mm. DZ1= 1.500 mm.
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 25 To 40 DX= -101.600 mm.
RIGID Weight= 191.27 N.
RESTRAINTS
Node 25 ANC Cnode 20
EQUIPMENT LIMITS
Nozzle Node = 25 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 7,000.35 N.
FB= 7,000.35 N. FC= 5,000.25 N. MA= 4,000.17 N.m. MB= 1,200.05 N.m.
MC= 2,200.09 N.m. Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute

From 40 To 60 DX= -729.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 59
Angle/Node @2= .00 58

From 60 To 80 DY= .000 mm. DZ= 1,587.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 79
Angle/Node @2= .00 78

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  80  To  100  DX= .000 mm.  DY= -1,404.000 mm.
 ---------------------------------------------------------------------------
 From  100  To  120 DY= -1,153.000 mm.
 ---------------------------------------------------------------------------
 From  120  To  140 DY= -229.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  140  To  160 DY= -200.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   P2= .0000 KPa
    PHyd= .0000 KPa   Fluid Den= .0000000 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  160  -X   Mu = .30
    Node  160  Z   Cnode  121
    Node  121  +Y   Mu = .10
    Node  160  X   Cnode  121
 HANGERS
    Hanger Node = 160   Hanger Connecting Node = 121
    Available Space = -1,000.0000 mm.   Allowed Load Variation = 25.0000
    No. Hangers = 0.0   Short Range Flag = -1   User Operating Load = .00 N.
    Free Node = 0   Free Node = 0   Free Code = 0.0   Spring Rate = .00 N./cm.
    Theoretical Cold Load = .00 N.
 SIF's & TEE's
    Node  140   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  8260  To  8270 DY= .000 mm.  DZ= 500.000 mm.
 RESTRAINTS
    Node  8270  +Y   Mu = .30
    Node  8270  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  120  To  180 DY= -229.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000181 kg./cu.cm.
    Insul Thk= 40.000 mm.
 DOUBLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 179
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  180  To  200  DX= -229.000 mm.
 ---------------------------------------------------------------------------
 From  200  To  220  DX= -101.600 mm.
```

INPUT LISTING
```
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  220  To  240  DX= -101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  240  To  260  DX= -500.000 mm.
 ------------------------------------------------------------------------------
 From  260  To  280  DX= -344.500 mm.
 SIF's & TEE's
    Node  280   Weldolet
 ------------------------------------------------------------------------------
 From  280  To  300  DX= -500.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= 3.0000 mm.
 GENERAL
    P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 197,200,352 KPa   EH2= 200,644,016 KPa
    EH3= 200,644,016 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000181 kg./cu.cm.   Insul Thk= .000 mm.
    Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  300  Y   Mu = .30
    Node  300  Z   Gap= 3.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  300  To  320  DX= -203.000 mm.
 ------------------------------------------------------------------------------
 From  320  To  340  DX= -101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  340  To  360  DX= -489.000 mm.
    Element Name= GATE_NOFLG_300
 RIGID  Weight= 1,023.41 N.
 ------------------------------------------------------------------------------
 From  360  To  380  DX= -101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  380  To  400  DX= -861.000 mm.
 RESTRAINTS
    Node  400  Y   Mu = .30
    Node  400  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  400  To  420  DX= -1,557.000 mm.
 ------------------------------------------------------------------------------
 From  420  To  440  DX= -101.600 mm.
    Element Name= FLANGE_FLG_300
```

INPUT LISTING

```
 RIGID  Weight= 191.27 N.
 ---------------------------------------------------------------------------
 From  440  To  460  DX= -101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ---------------------------------------------------------------------------
 From  460  To  480  DX= -1,243.000 mm.
 RESTRAINTS
    Node  480  Y   Mu = .30
    Node  480  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  480  To  490  DX= -2,035.000 mm.
 ---------------------------------------------------------------------------
 From  500  To  6210 DY= -76.200 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  490  To  500  DX= -2,035.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 499
    Angle/Node @2= .00 498
 ---------------------------------------------------------------------------
 From  500  To  580 DY= 4,005.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 197,200,352 KPa   EH2= 200,644,016 KPa
    EH3= 200,644,016 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000058 kg./cu.cm.   Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 579
    Angle/Node @2= .00 578
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  580  To  590 DZ= 1,548.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= 3.0000 mm.
 GENERAL
    P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa   Fluid Den= .0000181 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001500 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  590  To  600 DZ= 1,202.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 599
    Angle/Node @2= .00 598
```

INPUT LISTING

```
 ------------------------------------------------------------------------------
 From  600  To  610  DX= -385.000 mm.
 ------------------------------------------------------------------------------
 From  610  To  620  DX= -345.000 mm.
 GENERAL
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 197,200,352 KPa
    EH2= 200,644,016 KPa   EH3= 200,644,016 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  590  To  5190 DY= 398.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
 GENERAL
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 197,200,352 KPa
    EH2= 200,644,016 KPa   EH3= 200,644,016 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5189
    Angle/Node @2= .00 5188
 SIF's & TEE's
    Node  590   Weldolet
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  5190  To  8160  DX= -229.000 mm.  DZ= 229.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 8159
    Angle/Node @2= .00 8158
 ------------------------------------------------------------------------------
 From  8160  To  8170 DZ= 523.000 mm.
 ------------------------------------------------------------------------------
 From  8170  To  8180 DZ= 77.000 mm.
 ------------------------------------------------------------------------------
 From  8180  To  8190 DZ= 101.600 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 6.020 mm.
 ------------------------------------------------------------------------------
 From  8190  To  8200 DZ= 210.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
    Insul Thk= 40.000 mm.
 ------------------------------------------------------------------------------
 From  8200  To  8210 DZ= 102.000 mm.
 REDUCER
```

INPUT LISTING
```
    Diam2= 60.325 mm.   Wall2= 5.537 mm.
 ---------------------------------------------------------------------------
 From  8210  To  5200 DZ= 290.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= 40.000 mm.
 ---------------------------------------------------------------------------
 From  5200  To  5210 DZ= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  5210  To  5220 DZ= 301.000 mm.
 RIGID  Weight= 93.41 N.
 ---------------------------------------------------------------------------
 From  5220  To  5230 DZ= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  5230  To  5240 DZ= 77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5239
    Angle/Node @2= .00 5238
 ---------------------------------------------------------------------------
 From  5240  To  5245  DX= -539.000 mm.
 ---------------------------------------------------------------------------
 From  5240  To  6230 DY= -17.961 mm.  DZ= 17.961 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6230   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  5245  To  5250  DX= -539.000 mm.
 ---------------------------------------------------------------------------
 From  5250  To  5260  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  5260  To  5270  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  5270  To  5275  DX= -150.000 mm.
 ---------------------------------------------------------------------------
 From  5275  To  6260 DY= -25.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6260   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  5275  To  5280  DX= -150.000 mm.
 ---------------------------------------------------------------------------
 From  5280  To  5290  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  5290  To  5300  DX= -200.000 mm.
 RIGID  Weight= 258.00 N.
 ---------------------------------------------------------------------------
 From  5300  To  5310  DX= -66.675 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   P2= 50.0011 KPa
```

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INPUT LISTING

```
    PHyd= 900.0205 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 187,483,936 KPa   EH2= 187,335,024 KPa   EH3= 205,934,864 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  5310  To  5320  DX= -89.000 mm.
 REDUCER
    Diam2= 88.900 mm.   Wall2= 7.620 mm.
 ---------------------------------------------------------------------------
 From  5320  To  5330  DX= -287.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5329
    Angle/Node @2= .00 5328
 ---------------------------------------------------------------------------
 From  5330  To  5340 DY= -918.000 mm.
 ---------------------------------------------------------------------------
 From  5340  To  6280  DX= 38.100 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6280   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  5340  To  5350 DY= -1,940.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5349
    Angle/Node @2= .00 5348
 ---------------------------------------------------------------------------
 From  5350  To  5370  DX= -3,156.000 mm.
 RESTRAINTS
    Node  5370  +Y   Mu = .30
    Node  5370  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  5370  To  5375  DX= -4,413.000 mm.
 RESTRAINTS
    Node  5375  +Y
 ---------------------------------------------------------------------------
 From  5375  To  5380  DX= -561.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5379
    Angle/Node @2= .00 5378
 ---------------------------------------------------------------------------
 From  5380  To  5390 DY= -1,219.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 42.270   Angle/Node @1= 21.14 5389
    Angle/Node @2= .00 5388
 ---------------------------------------------------------------------------
```

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Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 From  5390  To  6130  DX= -11.600 mm.  DY= -579.250 mm.  DZ= 526.400 mm.
 ---------------------------------------------------------------------------
 From  610  To  640 DY= -84.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.110 mm.
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
    PHyd= 3,300.0752 KPa   Insul Thk= 40.000 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  640   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  640  To  660 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   P2= .0000 KPa
    PHyd= .0000 KPa   Mat= (102)A53 Grade B   E= 203,401,232 KPa
    EH1= 203,401,232 KPa   EH2= 203,401,232 KPa   EH3= 203,401,232 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  660  +Y   Cnode  800   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  620  To  680  DX= -578.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
    PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 197,200,352 KPa   EH2= 200,644,016 KPa   EH3= 200,644,016 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000181 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001500 kg./cu.cm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 679
    Angle/Node @2= .00 678
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
```

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Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 From  680  To  700 DY= -229.000 mm.
 ------------------------------------------------------------------------------
 From  700  To  720 DY= -126.000 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 286.91 N.
 RESTRAINTS
    Node  720  ANC   Cnode  721
 ------------------------------------------------------------------------------
 From  721  To  760 DY= -104.775 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  760  To  780 DY= -196.000 mm.
 RESTRAINTS
    Node  780  ANC   Cnode  820
 EQUIPMENT LIMITS
    Nozzle Node = 780   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 9,600.48 N.
    FB= 9,600.48 N.   FC= 7,200.36 N.   MA= 5,760.24 N.m.   MB= 3,840.16 N.m.
    MC= 4,990.21 N.m.   Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------------
 From  780  To  800  DX= 923.000 mm.  DY= 271.775 mm.  DZ= .000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  780  To  6241  DX= 1,079.000 mm.  DY= 1,035.814 mm.  DZ= 1,172.611 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  780  To  6271  DX= -295.050 mm.  DY= 678.375 mm.  DZ= 854.650 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  780  To  6291  DX= -822.649 mm.  DY= 135.775 mm.  DZ= 854.650 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  820  To  840 DY= -3,570.000 mm.
 PIPE
    Dia= 914.400 mm.   Wall= 15.000 mm.
 GENERAL
    Mat= (383)A516 70   E= 203,401,232 KPa   EH1= 197,200,352 KPa
    EH2= 200,644,016 KPa   EH3= 200,644,016 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Insul Thk= 40.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  840  ANC
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 160,648 KPa
    Sh1= 157,769 KPa   Sh2= 160,373 KPa   Sh3= 160,373 KPa   Sh4= 160,648 KPa
    Sh5= 160,648 KPa   Sh6= 160,648 KPa   Sh7= 160,648 KPa   Sh8= 160,648 KPa
    Sh9= 160,648 KPa   Sy= 262,001 KPa
 ------------------------------------------------------------------------------
 From  280  To  4350 DZ= -122.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Cor= 3.0000 mm.
 GENERAL
    P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
    E= 203,401,232 KPa   EH1= 197,200,352 KPa   EH2= 200,644,016 KPa
    EH3= 200,644,016 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000181 kg./cu.cm.   Insul Thk= 40.000 mm.
    Insul Den= .0001500 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4350  To  4360 DZ= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  4360  To  4370 DZ= -301.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
 GENERAL
    T1= 175 C   T2= 142 C   T3= 142 C   P1= 6,200.1411 KPa   P2= 5,410.1230 KPa
    PHyd= 9,300.2119 KPa   Fluid Den= .0000430 kg./cu.cm.
    Insul Thk= 60.000 mm.
 RIGID  Weight= 311.38 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4370  To  4380 DZ= -82.550 mm.
 RIGID  Weight= 57.83 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4380  To  4390 DZ= -576.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4389
    Angle/Node @2= .00 4388
 ------------------------------------------------------------------------------
 From  4390  To  4395 DY= 257.000 mm.
 ------------------------------------------------------------------------------
 From  4390  To  6300 DY= -25.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6300   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  4395  To  880 DY= 257.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 879
    Angle/Node @2= .00 878
 ------------------------------------------------------------------------------
 From  880  To  900 DZ= 77.000 mm.
 ------------------------------------------------------------------------------
```

INPUT LISTING
```
 From  900  To  920 DZ= 82.550 mm.
    Element Name= BALL_FLG_600
 GENERAL
    P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa   Fluid Den= .0000430 kg./cu.cm.
 RIGID  Weight= 57.83 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  920  To  940 DZ= 301.000 mm.
    Element Name= CHECK_FLG_150
 RIGID  Weight= 427.03 N.
 ------------------------------------------------------------------------------
 From  940  To  960 DZ= 82.550 mm.
 RIGID  Weight= 57.83 N.
 ------------------------------------------------------------------------------
 From  960  To  980 DZ= 1,222.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 979
    Angle/Node @2= .00 978
 ------------------------------------------------------------------------------
 From  980  To  1000 DY= -100.000 mm.
 ------------------------------------------------------------------------------
 From  1000  To  1020 DY= -414.000 mm.
    Element Name= CHECK_FLG_600
 SIF's & TEE's
    Node  1020   Weldolet
 ------------------------------------------------------------------------------
 From  1020  To  1040  DX= 195.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 175 C   T2= 149 C   T3= 149 C   P1= 6,200.1411 KPa
    PHyd= 9,300.2119 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 193,178,448 KPa   EH2= 195,077,104 KPa   EH3= 195,077,104 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000430 kg./cu.cm.
    Insul Thk= 40.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,888 KPa   Sh3= 137,888 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1040  To  1060  DX= 150.000 mm.
 ------------------------------------------------------------------------------
 From  1060  To  1080  DX= 127.000 mm.
    Element Name= FLG.PR_FLG_150
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq   Class/Grade= ASME-2009-600-3.19
    G/C= 192.151 mm.   T/P table ( 1)=  37.8 C   -> 10,342.1 KPa   ( 2)=  93.3 C
    -> 10,342.1 KPa   ( 3)=  148.9 C   -> 10,031.9 KPa   ( 4)=  204.4 C
```

INPUT LISTING

```
    -> 9,721.6 KPa   ( 5)=  260.0 C   -> 9,170.0 KPa   ( 6)=  315.6 C
    -> 8,342.7 KPa   ( 7)=  343.3 C   -> 8,101.3 KPa   ( 8)=  371.1 C
    -> 7,825.5 KPa   ( 9)=  398.9 C   -> 7,342.9 KPa   (10)=  426.7 C
    -> 6,998.2 KPa   (11)=  454.4 C   -> 6,722.4 KPa   (12)=  482.2 C
    -> 6,205.3 KPa   (13)=  510.0 C   -> 5,343.4 KPa   (14)=  537.8 C
    -> 4,998.7 KPa   (15)=  565.6 C   -> 4,964.2 KPa   (16)=  593.3 C
    -> 4,447.1 KPa   (17)=  621.1 C   -> 3,792.1 KPa   (18)=  648.9 C
    -> 2,826.9 KPa   (19)=  676.7 C   -> 2,516.6 KPa   (20)=  704.4 C
    -> 1,896.1 KPa   (21)=  732.2 C   -> 1,413.4 KPa   (22)=  760.0 C
    -> 1,034.2 KPa   (23)=  787.8 C   -> 792.9 KPa   (24)=  815.6 C
    -> 586.1 KPa
 ---------------------------------------------------------------------------
 From  1080  To  1100  DX= 126.000 mm.
    Element Name= FLG.PR_FLG_150
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= From   Method= Peq
 ---------------------------------------------------------------------------
 From  1100  To  1120  DX= 1,152.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1119
    Angle/Node @2= .00 1118
 ---------------------------------------------------------------------------
 From  1120  To  8250 DY= .000 mm.  DZ= -229.000 mm.
 ---------------------------------------------------------------------------
 From  1120  To  8260 DY= -53.882 mm.  DZ= 53.882 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  8250  To  1140 DZ= -725.000 mm.
 ---------------------------------------------------------------------------
 From  1140  To  1160 DZ= -461.500 mm.
 ---------------------------------------------------------------------------
 From  1160  To  1180  DX= .000 mm.  DZ= -772.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1179
    Angle/Node @2= .00 1178
 ---------------------------------------------------------------------------
 From  1180  To  1200 DY= 835.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1199
    Angle/Node @2= .00 1198
 ---------------------------------------------------------------------------
 From  1200  To  1220  DX= 229.000 mm.
 ---------------------------------------------------------------------------
 From  1220  To  1240  DX= 127.000 mm.
    Element Name= FLANGE_FLG_600
 RIGID  Weight= 364.75 N.
 RESTRAINTS
    Node  1240  ANC   Cnode  1241
 FLANGES
    Location= To   Method= Peq
 EQUIPMENT LIMITS
    Nozzle Node = 1240
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 7,000.35 N.   FB= 7,000.35 N.
    FC= 5,000.25 N.   MA= 4,000.17 N.m.   MB= 1,200.05 N.m.   MC= 2,200.09 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
```

INPUT LISTING
```
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1241  To  8300  DX= 127.000 mm.
 RIGID  Weight= 364.75 N.
 DISPLACEMENTS
    Node  1241   DX1= 4.000 mm.   DY1= 2.400 mm.   DZ1= 1.500 mm.
 ---------------------------------------------------------------------------
 From  1020  To  8280  DX= -500.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.   Cor= 3.0000 mm.
 GENERAL
    P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 193,178,448 KPa   EH2= 195,077,104 KPa
    EH3= 195,077,104 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000430 kg./cu.cm.   Insul Thk= 60.000 mm.
    Insul Den= .0001500 kg./cu.cm.
 RESTRAINTS
    Node  8280  Y   Mu = .30
    Node  8280  Z   Gap= 3.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,888 KPa   Sh3= 137,888 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  8280  To  1260  DX= -900.000 mm.
 SIF's & TEE's
    Node  1260   Weldolet
 ---------------------------------------------------------------------------
 From  1260  To  1280  DX= -850.000 mm.
 RESTRAINTS
    Node  1280  Y   Mu = .30
    Node  1280  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1280  To  1300  DX= -650.000 mm.
 ---------------------------------------------------------------------------
 From  1300  To  1320  DX= -127.000 mm.
    Element Name= FLANGE_FLG_600
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ---------------------------------------------------------------------------
 From  1320  To  1340  DX= -568.000 mm.
    Element Name= CHECK_NOFLG_600
 RIGID  Weight= 3,087.07 N.
 ---------------------------------------------------------------------------
 From  1340  To  1360  DX= -127.000 mm.
    Element Name= FLANGE_NOFLG_600
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= From   Method= Peq
 ---------------------------------------------------------------------------
 From  1360  To  1380  DX= -1,549.000 mm.
 RESTRAINTS
```

INPUT LISTING
```
    Node  1380  Y   Mu = .30
    Node  1380  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1380  To  1390  DX= -2,035.000 mm.
 ---------------------------------------------------------------------------
 From  1400  To  6400 DY= -76.200 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1390  To  1400  DX= -2,035.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1399
    Angle/Node @2= .00 1398
 ---------------------------------------------------------------------------
 From  1400  To  1480 DY= 1,384.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
 GENERAL
    P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 193,178,448 KPa   EH2= 195,077,104 KPa
    EH3= 195,077,104 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000154 kg./cu.cm.   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1479
    Angle/Node @2= .00 1478
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,888 KPa   Sh3= 137,888 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1480  To  1485  DX= -4,760.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1484
    Angle/Node @2= .00 1483
 ---------------------------------------------------------------------------
 From  1485  To  1490 DZ= 1,800.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1489
    Angle/Node @2= .00 1488
 ---------------------------------------------------------------------------
 From  1490  To  1500  DX= -876.000 mm.
 RESTRAINTS
    Node  1500  +Y   Mu = .30
    Node  1500  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1500  To  1520  DX= -5,893.000 mm.
 RESTRAINTS
    Node  1520  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1520  To  1540  DX= -2,916.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1539
    Angle/Node @2= .00 1538
 ---------------------------------------------------------------------------
```

INPUT LISTING

```
 From  1540  To  1560 DZ= 1,068.000 mm.
 RESTRAINTS
    Node  1560  +Y   Mu = .30
    Node  1560  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1560  To  1580 DZ= 1,068.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1579
    Angle/Node @2= .00 1578
 ------------------------------------------------------------------------------
 From  1580  To  1600 DY= 2,730.000 mm.
 SIF's & TEE's
    Node  1600   Welding Tee
 ------------------------------------------------------------------------------
 From  1600  To  7390 DZ= -393.000 mm.
 RESTRAINTS
    Node  7390  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  7390  To  7020 DZ= -393.000 mm.
 SIF's & TEE's
    Node  7020   Welding Tee
 ------------------------------------------------------------------------------
 From  7020  To  7030 DZ= -245.000 mm.
 ------------------------------------------------------------------------------
 From  1600  To  7380 DZ= 393.000 mm.
 RESTRAINTS
    Node  7380  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  7380  To  7040 DZ= 393.000 mm.
 SIF's & TEE's
    Node  7040   Welding Tee
 ------------------------------------------------------------------------------
 From  7040  To  7050 DZ= 245.000 mm.
 ------------------------------------------------------------------------------
 From  7020  To  7060 DY= 2,163.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 8.560 mm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7059
    Angle/Node @2= .00 7058
 ------------------------------------------------------------------------------
 From  7060  To  7065  DX= -989.000 mm.
 ------------------------------------------------------------------------------
 From  7065  To  7070  DX= -511.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1621
    Angle/Node @2= .00 1622
 ------------------------------------------------------------------------------
 From  7070  To  7080 DZ= 531.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7079
    Angle/Node @2= .00 7078
 ------------------------------------------------------------------------------
 From  7080  To  1640 DY= -501.500 mm.
 ------------------------------------------------------------------------------
```

INPUT LISTING
```
 From  1640  To  1660 DY= -111.125 mm.
    Element Name= FLANGE_NOFLG_600
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1660  ANC   Cnode  1661
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  7040  To  7090 DY= 2,163.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7089
    Angle/Node @2= .00 7088
 ------------------------------------------------------------------------------
 From  7090  To  7095  DX= -989.000 mm.
 ------------------------------------------------------------------------------
 From  7095  To  7100  DX= -511.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7099
    Angle/Node @2= .00 7098
 ------------------------------------------------------------------------------
 From  7100  To  7110 DZ= -531.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7109
    Angle/Node @2= .00 7108
 ------------------------------------------------------------------------------
 From  7110  To  7120 DY= -501.500 mm.
 ------------------------------------------------------------------------------
 From  7120  To  7130 DY= -111.125 mm.
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  7130  ANC   Cnode  7131
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  1660  To  1680 DY= -111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 17.120 mm.   Cor= .0000 mm.
    Element Name= FLANGE_NOFLG_600
 GENERAL
    T1= 155 C   T2= 129 C   T3= 129 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
    PHyd= 2,800.0637 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 194,667,600 KPa   EH2= 196,356,512 KPa   EH3= 196,356,512 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000430 kg./cu.cm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1680  To  1700 DY= -200.000 mm.
 RESTRAINTS
    Node  1700  ANC   Cnode  1720
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 EQUIPMENT LIMITS
    Nozzle Node = 1700
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 15,090.75 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1720  To  7140 DY= -240.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  7131  To  7160 DY= -111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 17.120 mm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ---------------------------------------------------------------------------
 From  7160  To  7170 DY= -200.000 mm.
 RESTRAINTS
    Node  7170  ANC   Cnode  7171
 EQUIPMENT LIMITS
    Nozzle Node = 7170
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 15,090.75 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  7171  To  7150  DX= .000 mm.  DY= -240.000 mm.  DZ= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  7140  To  1760 DY= -240.000 mm.
 GENERAL
    P1= 2,200.0500 KPa
 RIGID  Weight= .00 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1780  To  1800 DY= -200.000 mm.
 RESTRAINTS
    Node  1780  ANC   Cnode  1760
 EQUIPMENT LIMITS
    Nozzle Node = 1780
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 16,200.81 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1800  To  1820 DY= -111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 17.120 mm.   Element Name= FLANGE_NOFLG_150
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1820  ANC   Cnode  1821
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  7150  To  7180 DY= -240.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  7180  ANC   Cnode  7181
 EQUIPMENT LIMITS
    Nozzle Node = 7180
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 16,200.81 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  7181  To  7190 DY= -200.000 mm.
 ---------------------------------------------------------------------------
 From  7190  To  7200 DY= -111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 17.120 mm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  7200  ANC   Cnode  7201
 ---------------------------------------------------------------------------
 From  7201  To  7210 DY= -139.125 mm.
 GENERAL
    T1= 175 C   T2= 60 C   T3= 60 C   P1= 6,200.1411 KPa   P2= 5,410.1230 KPa
    PHyd= 9,300.2119 KPa
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 FLANGES
    Location= From   Method= Peq
 ---------------------------------------------------------------------------
 From  7210  To  7220 DY= -153.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7219
 ---------------------------------------------------------------------------
 From  7220  To  7225 DZ= 265.500 mm.
 ---------------------------------------------------------------------------
 From  7225  To  7230 DZ= 265.500 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7229
    Angle/Node @2= .00 7228
 ---------------------------------------------------------------------------
 From  7230  To  7240 DY= -458.000 mm.
 ---------------------------------------------------------------------------
 From  7240  To  7250 DZ= 245.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
    Insul Thk= 40.000 mm.
 ---------------------------------------------------------------------------
 From  7240  To  7360 DZ= -494.000 mm.
 ---------------------------------------------------------------------------
 From  7360  To  7260 DZ= -292.000 mm.
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  7260  To  7370 DZ= -393.000 mm.
 RESTRAINTS
    Node  7370  +Y
 ---------------------------------------------------------------------------
 From  7370  To  7270 DZ= -393.000 mm.
 ---------------------------------------------------------------------------
 From  7270  To  7280 DZ= -245.000 mm.
 ---------------------------------------------------------------------------
 From  1740  To  7150 DZ= 255.000 mm.
 GENERAL
    T1= 155 C   T2= 129 C   T3= 129 C   P1= 2,200.0500 KPa   P2= 1,810.0413 KPa
    PHyd= 2,860.0652 KPa
 RIGID  Weight= 382.52 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  7150  To  1840 DZ= 550.000 mm.
 RIGID  Weight= 1,867.59 N.
 RESTRAINTS
    Node  1840  +Y
    Node  1840  X   Mu = .30
    Node  1840  Z   Gap= 6.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1840  To  1860  DX= -5,100.000 mm.
 RIGID  Weight=10,500.52 N.
 RESTRAINTS
    Node  1860  Y   Mu = .10
    Node  1860  Z   Gap= 6.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1860  To  1880 DZ= -1,400.000 mm.
 RIGID  Weight= 4,500.22 N.
 RESTRAINTS
    Node  1880  Y   Mu = .10
    Node  1880  Z   Gap= 6.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1880  To  1900  DX= 5,100.000 mm.
 RIGID  Weight=10,500.52 N.
 RESTRAINTS
    Node  1900  Y   Mu = .10
    Node  1900  X   Mu = .30
    Node  1900  Z   Gap= 6.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1900  To  7140  DX= .000 mm.  DY= .000 mm.  DZ= 340.000 mm.
 RIGID  Weight= 1,867.59 N.
 ---------------------------------------------------------------------------
 From  7140  To  1740 DZ= 255.000 mm.
 RIGID  Weight= 382.52 N.
 ---------------------------------------------------------------------------
 From  1821  To  1920 DY= -139.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
    Element Name= FLANGE_NOFLG_150
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 GENERAL
    T1= 175 C   T2= 60 C   T3= 60 C   P1= 6,200.1411 KPa   P2= 5,410.1230 KPa
    PHyd= 9,300.2119 KPa   Mat= (165)A312 TP316L   E= 195,127,520 KPa
    EH1= 184,539,120 KPa   EH2= 192,364,096 KPa   EH3= 192,364,096 KPa
    EH4= 195,127,520 KPa   EH5= 195,127,520 KPa   EH6= 195,127,520 KPa
    EH7= 195,127,520 KPa   EH8= 195,127,520 KPa   EH9= 195,127,520 KPa
    v = .292   Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000596 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001500 kg./cu.cm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 FLANGES
    Location= From   Method= Peq
 ------------------------------------------------------------------------------
 From  1920  To  1940 DY= -153.000 mm.
 GENERAL
    P1= 6,200.1411 KPa   P2= 5,410.1230 KPa   Fluid Den= .0000183 kg./cu.cm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1939
 ------------------------------------------------------------------------------
 From  1940  To  1960 DY= .000 mm.  DZ= -531.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1959
    Angle/Node @2= .00 1958
 ------------------------------------------------------------------------------
 From  1960  To  7270 DY= -458.000 mm.  DZ= .000 mm.
 SIF's & TEE's
    Node  7270   Welding Tee
 ------------------------------------------------------------------------------
 From  7260  To  7290  DX= .000 mm.  DY= -1,349.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 89.719   Angle/Node @1= 44.86 7289
    Angle/Node @2= .00 7288
 ------------------------------------------------------------------------------
 From  7290  To  7400 DY= -4.725 mm.  DZ= 962.988 mm.
 RESTRAINTS
    Node  7400  +Y   Mu = .30
    Node  7400  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  7400  To  7300 DY= -10.422 mm.  DZ= 2,124.012 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 89.999   Angle/Node @1= 45.00 7299
    Angle/Node @2= .00 7298
 ------------------------------------------------------------------------------
 From  7300  To  2000  DX= 4,199.000 mm.  DY= -20.000 mm.
 ------------------------------------------------------------------------------
 From  2000  To  6420 DY= -76.200 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
```

INPUT LISTING
```
    P1= 6,200.1411 KPa   P2= 5,410.1230 KPa   PHyd= 9,300.2119 KPa
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 184,539,120 KPa
    EH2= 192,364,096 KPa   EH3= 192,364,096 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000183 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6420   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  2000  To  4100  DX= 550.000 mm.  DY= -2.750 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa   Mat= (165)A312 TP316L
    E= 195,127,520 KPa   EH1= 184,539,120 KPa   EH2= 192,364,096 KPa
    EH3= 192,364,096 KPa   EH4= 195,127,520 KPa   EH5= 195,127,520 KPa
    EH6= 195,127,520 KPa   EH7= 195,127,520 KPa   EH8= 195,127,520 KPa
    EH9= 195,127,520 KPa   v = .292   Pipe Den= .0080272 kg./cu.cm.
    Fluid Den= .0000600 kg./cu.cm.   Insul Thk= .000 mm.
 SIF's & TEE's
    Node  4100   Welding Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  4100  To  4400 DY= -7.210 mm.  DZ= 1,447.982 mm.
 ------------------------------------------------------------------------------
 From  4400  To  4410 DY= -.632 mm.  DZ= 126.998 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  4410  To  4420 DY= -2.828 mm.  DZ= 567.993 mm.
 RIGID  Weight= 3,087.07 N.
 ------------------------------------------------------------------------------
 From  4420  To  4430 DY= -.632 mm.  DZ= 126.998 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= From   Method= Peq
 ------------------------------------------------------------------------------
 From  4430  To  4440 DY= -1.661 mm.  DZ= 333.496 mm.
 ------------------------------------------------------------------------------
 From  4440  To  6480 DY= -76.200 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6480   Unreinforced Tee   Pad= 7.110 mm.
 ------------------------------------------------------------------------------
```

INPUT LISTING
```
 From  4440  To  4450 DY= -1.661 mm.  DZ= 333.496 mm.
 ---------------------------------------------------------------------------
 From  4450  To  4460 DY= -.632 mm.  DZ= 126.998 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ---------------------------------------------------------------------------
 From  4460  To  4470 DY= -2.828 mm.  DZ= 567.993 mm.
 RIGID  Weight= 733.96 N.
 ---------------------------------------------------------------------------
 From  4470  To  4480 DY= -.632 mm.  DZ= 126.998 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= From   Method= Peq
 ---------------------------------------------------------------------------
 From  4480  To  4482 DY= -3.070 mm.  DZ= 564.500 mm.
 ---------------------------------------------------------------------------
 From  4485  To  6760  DX= -53.882 mm.  DY= -53.882 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6760   Unreinforced Tee   Pad= 7.110 mm.
 ---------------------------------------------------------------------------
 From  4482  To  4485 DY= -3.070 mm.  DZ= 564.500 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4484
    Angle/Node @2= .00 4483
 ---------------------------------------------------------------------------
 From  4485  To  4490  DX= 1,042.000 mm.  DY= .000 mm.  DZ= .000 mm.
 ---------------------------------------------------------------------------
 From  4490  To  4500  DX= 127.000 mm.  DY= .000 mm.  DZ= .000 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ---------------------------------------------------------------------------
 From  4500  To  4505  DX= 598.000 mm.  DY= .000 mm.  DZ= .000 mm.
 RIGID  Weight= 1,005.30 N.
 ---------------------------------------------------------------------------
 From  4505  To  6790  DX= 127.000 mm.  DY= .000 mm.  DZ= .000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa   Mat= (165)A312 TP316L
    E= 195,127,520 KPa   EH1= 184,539,120 KPa   EH2= 192,364,096 KPa
    EH3= 192,364,096 KPa   EH4= 195,127,520 KPa   EH5= 195,127,520 KPa
    EH6= 195,127,520 KPa   EH7= 195,127,520 KPa   EH8= 195,127,520 KPa
    EH9= 195,127,520 KPa   v = .292   Pipe Den= .0080272 kg./cu.cm.
    Fluid Den= .0000600 kg./cu.cm.   Insul Thk= .000 mm.
    Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= 364.75 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 FLANGES
    Location= From   Method= Peq
```

INPUT LISTING

```
 ------------------------------------------------------------------------------
 From  6790  To  6780  DX= 324.000 mm.
 ------------------------------------------------------------------------------
 From  6795  To  7000  DX= 53.882 mm.  DY= -53.882 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  7000   Unreinforced Tee   Pad= 7.110 mm.
 ------------------------------------------------------------------------------
 From  6780  To  6795  DX= 324.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 6794
    Angle/Node @2= .00 6793
 ------------------------------------------------------------------------------
 From  6795  To  6800 DY= -49.000 mm.  DZ= 1,406.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 6799
    Angle/Node @2= .00 6798
 ------------------------------------------------------------------------------
 From  6800  To  6810  DX= -2,068.000 mm.  DY= .000 mm.  DZ= .000 mm.
 ------------------------------------------------------------------------------
 From  6810  To  6820  DX= -2,000.000 mm.  DY= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 6819
    Angle/Node @2= .00 6818
 ------------------------------------------------------------------------------
 From  6820  To  6830  DX= -166.000 mm.  DY= -166.000 mm.
 ------------------------------------------------------------------------------
 From  4100  To  4560 DZ= -285.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa   Mat= (165)A312 TP316L
    E= 195,127,520 KPa   EH1= 184,539,120 KPa   EH2= 192,364,096 KPa
    EH3= 192,364,096 KPa   EH4= 195,127,520 KPa   EH5= 195,127,520 KPa
    EH6= 195,127,520 KPa   EH7= 195,127,520 KPa   EH8= 195,127,520 KPa
    EH9= 195,127,520 KPa   v = .292   Pipe Den= .0080272 kg./cu.cm.
    Fluid Den= .0000600 kg./cu.cm.   Insul Thk= 40.000 mm.
    Insul Den= .0001500 kg./cu.cm.
 SIF's & TEE's
    Node  4560   Welding Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  4560  To  4570  DX= 143.000 mm.
 ------------------------------------------------------------------------------
 From  4570  To  8140  DX= 140.000 mm.  DY= -27.000 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 6.020 mm.
 ------------------------------------------------------------------------------
 From  4560  To  4580  DX= -143.000 mm.
 ------------------------------------------------------------------------------
 From  4580  To  4590  DX= -372.000 mm.
 PIPE
```

INPUT LISTING
```
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4589
    Angle/Node @2= .00 4588
 ------------------------------------------------------------------------------
 From  4590  To  4600 DZ= -229.000 mm.
 ------------------------------------------------------------------------------
 From  4600  To  4610 DZ= -127.000 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  4610  To  4620 DZ= -568.000 mm.
 RIGID  Weight= 2,708.97 N.
 ------------------------------------------------------------------------------
 From  4620  To  4630 DZ= -127.000 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= From   Method= Peq
 ------------------------------------------------------------------------------
 From  4630  To  4640 DZ= -200.000 mm.
 ------------------------------------------------------------------------------
 From  4640  To  6510 DY= -76.200 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6510   Unreinforced Tee   Pad= 7.110 mm.
 ------------------------------------------------------------------------------
 From  4640  To  4650 DZ= -532.500 mm.
 ------------------------------------------------------------------------------
 From  4650  To  4660 DY= -27.000 mm.  DZ= -140.000 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 6.020 mm.
 ------------------------------------------------------------------------------
 From  4660  To  4670 DZ= -111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 191.27 N.
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  4670  To  4680 DZ= -441.000 mm.
 RIGID  Weight= 387.00 N.
 ------------------------------------------------------------------------------
 From  4680  To  4690 DZ= -111.125 mm.
 RIGID  Weight= 191.27 N.
 FLANGES
    Location= From   Method= Peq
 ------------------------------------------------------------------------------
 From  4690  To  4700 DY= 27.000 mm.  DZ= -140.000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 7.112 mm.
 ------------------------------------------------------------------------------
 From  4700  To  4710 DZ= -300.000 mm.
```

INPUT LISTING
```
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
    Insul Thk= .000 mm.
 ---------------------------------------------------------------------------
 From  4710  To  6530 DY= -76.200 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6530   Unreinforced Tee   Pad= 7.112 mm.
 ---------------------------------------------------------------------------
 From  4710  To  4720 DZ= -300.000 mm.
 ---------------------------------------------------------------------------
 From  4720  To  4730 DZ= -127.000 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ---------------------------------------------------------------------------
 From  4730  To  4740 DZ= -568.000 mm.
 RIGID  Weight= 2,708.97 N.
 ---------------------------------------------------------------------------
 From  4740  To  4750 DZ= -101.600 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 900.0205 KPa   P2= 510.0116 KPa
    PHyd= 1,350.0308 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 199,086,608 KPa   EH2= 202,089,360 KPa   EH3= 202,089,360 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000060 kg./cu.cm.
    Insul Thk= .000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  8150  To  4140 DZ= -3,792.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4139
    Angle/Node @2= .00 4138
 ---------------------------------------------------------------------------
 From  4140  To  6560  DX= 429.000 mm.
 RESTRAINTS
    Node  6560  +Y   Mu = .30
    Node  6560  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  6560  To  4760  DX= 2,876.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4759
    Angle/Node @2= .00 4758
 ---------------------------------------------------------------------------
 From  4760  To  4770 DZ= -457.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4769
 ---------------------------------------------------------------------------
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 From  4770  To  7330 DY= -658.000 mm.
 SIF's & TEE's
    Node  7330   Welding Tee
 ------------------------------------------------------------------------------
 From  4780  To  4160  DX= 900.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 12.700 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 900.0205 KPa   PHyd= 1,350.0308 KPa   Fluid Den= .0000060 kg./cu.cm.
    Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4160  To  6600 DY= -101.600 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6600   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  4160  To  4180  DX= 3,188.000 mm.
 ------------------------------------------------------------------------------
 From  4180  To  4200  DX= 114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  4200  To  4220  DX= 20.000 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 30.00 N.
 RESTRAINTS
    Node  4220  ANC   Cnode  4221
 ------------------------------------------------------------------------------
 From  4220  To  4240  DX= 104.775 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  4240  To  4260  DX= 155.000 mm.
 RESTRAINTS
    Node  4260  ANC   Cnode  4261
 EQUIPMENT LIMITS
    Nozzle Node = 4260
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,400.19 N.m.   MC= 5,020.21 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------------
 From  4261  To  4280  DX= 460.000 mm.
 PIPE
    Dia= 920.000 mm.   Wall= 12.000 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  4280  To  4300 DY= -1,300.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
```

INPUT LISTING

```
 From  4300  To  4310 DY= -1,000.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------
 From  4310  To  4320 DY= -300.000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  4320  ANC
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------
 From  4780  To  6620  DX= -242.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 12.700 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------
 From  7320  To  6630 DY= -101.600 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6630   Unreinforced Tee
 ------------------------------------------------------------------------
 From  6620  To  4800  DX= -242.000 mm.
 ------------------------------------------------------------------------
 From  4800  To  4810  DX= -114.300 mm.
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------
 From  4810  To  4820  DX= -542.000 mm.
 RIGID  Weight= 3,362.86 N.
 ------------------------------------------------------------------------
 From  4820  To  4830  DX= -114.300 mm.
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------
 From  4830  To  7320  DX= -290.000 mm.
 ------------------------------------------------------------------------
 From  7320  To  7330  DX= -478.000 mm.
 ------------------------------------------------------------------------
 From  7330  To  4840  DX= -288.000 mm.
 ------------------------------------------------------------------------
 From  4840  To  4850  DX= -114.300 mm.
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------
 From  4850  To  4860  DX= -606.000 mm.
 RIGID  Weight= 360.31 N.
 ------------------------------------------------------------------------
 From  4860  To  4870  DX= -104.775 mm.
 RIGID  Weight= 177.93 N.
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  4870  To  4880  DX= -200.000 mm.
 ---------------------------------------------------------------------------
 From  4880  To  6650  DX= -287.000 mm.
 ---------------------------------------------------------------------------
 From  6650  To  6660 DY= -101.600 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6660   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  6650  To  4890  DX= -487.000 mm.
 ---------------------------------------------------------------------------
 From  4890  To  4900  DX= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ---------------------------------------------------------------------------
 From  4900  To  4910  DX= -486.500 mm.
 RIGID  Weight= 2,259.70 N.
 ---------------------------------------------------------------------------
 From  4910  To  4920  DX= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ---------------------------------------------------------------------------
 From  4920  To  4930  DX= -542.000 mm.
 ---------------------------------------------------------------------------
 From  4930  To  6680 DY= -101.600 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6680   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  4930  To  4940  DX= -605.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4939
    Angle/Node @2= .00 4938
 ---------------------------------------------------------------------------
 From  4940  To  4950 DZ= 1,500.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4949
    Angle/Node @2= .00 4948
 ---------------------------------------------------------------------------
 From  4950  To  4960  DX= -871.500 mm.  DY= .000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 4959
    Angle/Node @2= .00 4958
 ---------------------------------------------------------------------------
 From  4960  To  4970  DX= -337.000 mm.  DY= 337.000 mm.
 ---------------------------------------------------------------------------
 From  8140  To  4980  DX= 383.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
 GENERAL
    T1= 175 C   T2= 60 C   T3= 60 C   P1= 6,200.1411 KPa   P2= 5,410.1230 KPa
    PHyd= 9,300.2119 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 193,178,448 KPa   EH2= 200,637,808 KPa   EH3= 200,637,808 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000060 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001500 kg./cu.cm.
```

INPUT LISTING
```
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  4570  To  8140  DX= 140.000 mm.  DY= -27.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
    Insul Thk= 40.000 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 6.020 mm.
 ---------------------------------------------------------------------------
 From  4980  To  4990  DX= 111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
    E= 203,401,232 KPa   EH1= 193,178,448 KPa   EH2= 200,637,808 KPa
    EH3= 200,637,808 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 FLANGES
    Location= To   Method= Peq
 ---------------------------------------------------------------------------
 From  4990  To  5000  DX= 441.000 mm.
 RIGID  Weight= 1,116.50 N.
 ---------------------------------------------------------------------------
 From  5000  To  5010  DX= 111.125 mm.
 RIGID  Weight= 191.27 N.
 FLANGES
    Location= From   Method= Peq
 ---------------------------------------------------------------------------
 From  5010  To  5020  DX= 153.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5019
 ---------------------------------------------------------------------------
 From  5020  To  5025 DZ= -498.350 mm.
 ---------------------------------------------------------------------------
 From  5020  To  6700  DX= 35.355 mm.  DY= -35.355 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6700   Unreinforced Tee   Pad= 7.112 mm.
 ---------------------------------------------------------------------------
 From  5025  To  5030 DZ= -498.350 mm.
 ---------------------------------------------------------------------------
 From  5030  To  5040 DY= -13.000 mm.  DZ= -102.000 mm.
 REDUCER
    Diam2= 88.900 mm.   Wall2= 5.486 mm.
 ---------------------------------------------------------------------------
 From  5040  To  5060 DZ= -92.075 mm.
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 106.76 N.
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  5060  To  5070 DZ= -481.000 mm.
 RIGID  Weight= 217.96 N.
 ------------------------------------------------------------------------------
 From  5070  To  5080 DZ= -92.075 mm.
 RIGID  Weight= 106.76 N.
 FLANGES
    Location= From   Method= Peq
 ------------------------------------------------------------------------------
 From  5080  To  5090 DY= 12.500 mm.  DZ= -102.000 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 6.020 mm.
 ------------------------------------------------------------------------------
 From  5090  To  5095 DZ= -248.500 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
    Insul Thk= 40.000 mm.
 ------------------------------------------------------------------------------
 From  5095  To  6720 DY= -50.800 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6720   Reinforced Tee   Pad= 6.020 mm.
 ------------------------------------------------------------------------------
 From  5095  To  5100 DZ= -248.500 mm.
 ------------------------------------------------------------------------------
 From  5100  To  5110 DZ= -111.125 mm.
 RIGID  Weight= 191.27 N.
 FLANGES
    Location= To   Method= Peq
 ------------------------------------------------------------------------------
 From  5110  To  5120 DZ= -441.000 mm.
 RIGID  Weight= 1,116.50 N.
 ------------------------------------------------------------------------------
 From  5120  To  5130 DZ= -79.375 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 8.560 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 272 C   T2= 270 C   T3= -28 C   P1= 600.0137 KPa   P2= 50.0011 KPa
    PHyd= 900.0205 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 187,335,024 KPa   EH2= 187,483,936 KPa   EH3= 205,934,864 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= 71.17 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,638 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  5130  To  5140 DZ= -153.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5139
 ---------------------------------------------------------------------------
 From  5140  To  5145 DY= -624.000 mm.
 ---------------------------------------------------------------------------
 From  5145  To  6740 DZ= -50.800 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6740   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  5145  To  5150 DY= -424.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5149
    Angle/Node @2= .00 5148
 ---------------------------------------------------------------------------
 From  5150  To  5160  DX= -885.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5159
    Angle/Node @2= .00 5158
 ---------------------------------------------------------------------------
 From  5160  To  5170 DY= -1,073.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 44.939   Angle/Node @1= 22.47 5169
    Angle/Node @2= .00 5168
 ---------------------------------------------------------------------------
 From  5170  To  3965  DX= .000 mm.  DY= -530.000 mm.  DZ= 528.876 mm.
 ---------------------------------------------------------------------------
 From  4710  To  6530 DY= -76.200 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    T1= 85 C   T2= 38 C   T3= 38 C   P1= 6,200.1411 KPa   P2= 5,410.1230 KPa
    PHyd= 9,300.2119 KPa   Mat= (165)A312 TP316L   E= 195,127,520 KPa
    EH1= 190,812,912 KPa   EH2= 193,729,152 KPa   EH3= 193,729,152 KPa
    EH4= 195,127,520 KPa   EH5= 195,127,520 KPa   EH6= 195,127,520 KPa
    EH7= 195,127,520 KPa   EH8= 195,127,520 KPa   EH9= 195,127,520 KPa
    v = .292   Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000600 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6530   Unreinforced Tee   Pad= 7.112 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ---------------------------------------------------------------------------
 From  1260  To  2140 DY= 1,530.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 175 C   T2= 142 C   T3= 142 C   P1= 6,200.1411 KPa
    PHyd= 9,300.2119 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 193,178,448 KPa   EH2= 195,549,872 KPa   EH3= 195,549,872 KPa
```

INPUT LISTING
```
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000430 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2139
    Angle/Node @2= .00 2138
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  2140  To  2160  DX= .000 mm.  DZ= 3,672.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2159
    Angle/Node @2= .00 2158
 ---------------------------------------------------------------------------
 From  2160  To  2180  DX= -3,864.000 mm.
 RESTRAINTS
    Node  2180  +Y   Mu = .30
    Node  2180  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  2180  To  2200  DX= -4,915.000 mm.
 RESTRAINTS
    Node  2200  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  2200  To  2220  DX= -4,791.000 mm.
 RESTRAINTS
    Node  2220  +Y   Mu = .30
    Node  2220  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  2220  To  2260  DX= -738.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000
 ---------------------------------------------------------------------------
 From  2260  To  2270 DZ= 3,675.000 mm.
 RESTRAINTS
    Node  2270  +Y
 ---------------------------------------------------------------------------
 From  2270  To  7340 DZ= 1,259.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 7339
    Angle/Node @2= .00 7338
 ---------------------------------------------------------------------------
 From  7340  To  2280  DX= 226.000 mm.  DZ= 226.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 2279
    Angle/Node @2= .00 2278
 ---------------------------------------------------------------------------
 From  2280  To  7350 DZ= 99.000 mm.
 SIF's & TEE's
    Node  7350   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  7350  To  2320 DY= 658.000 mm.
 RESTRAINTS
```

INPUT LISTING

```
    Node  2320  +Y
 ------------------------------------------------------------------------------
 From  2320  To  2330 DY= 228.000 mm.
 ------------------------------------------------------------------------------
 From  2330  To  2340 DY= 213.000 mm.
 ------------------------------------------------------------------------------
 From  2340  To  2360 DY= 82.550 mm.
    Element Name= GATE_FLG_600
 RIGID  Weight= 57.83 N.
 ------------------------------------------------------------------------------
 From  2360  To  5650 DY= 301.000 mm.
 RIGID  Weight= 311.38 N.
 ------------------------------------------------------------------------------
 From  5650  To  5660 DY= 82.550 mm.
 RIGID  Weight= 57.83 N.
 ------------------------------------------------------------------------------
 From  5660  To  2400 DY= 365.000 mm.
 ------------------------------------------------------------------------------
 From  2400  To  5670 DY= 106.000 mm.
 REDUCER
    Diam2= 48.260 mm.   Wall2= 7.137 mm.
 ------------------------------------------------------------------------------
 From  5670  To  5680 DY= 79.375 mm.
 PIPE
    Dia= 48.260 mm.   Wall= 7.137 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 35.59 N.
 ------------------------------------------------------------------------------
 From  5680  To  5690 DY= 79.375 mm.
 RIGID  Weight= 35.59 N.
 ------------------------------------------------------------------------------
 From  5690  To  2420 DY= 41.500 mm.
 RIGID  Weight= 25.00 N.
 FORCES & MOMENTS
    Node  2420   FX1= 2,000.10 N.   FY1= 1,000.05 N.   FZ1= .00 N.
 ------------------------------------------------------------------------------
 From  2420  To  2440  DX= -156.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 100.00 N.
 ------------------------------------------------------------------------------
 From  2440  To  2460  DX= -73.025 mm.  DZ= .000 mm.
 PIPE
    Cor= 6.0000 mm.   Element Name= FLANGE_FLG_150
 GENERAL
    T1= 272 C   T2= 270 C   T3= -28 C   P1= 600.0137 KPa   P2= 50.0011 KPa
    PHyd= 900.0205 KPa   Fluid Den= .0000015 kg./cu.cm.
 RIGID  Weight= 54.49 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,638 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2460  To  2480  DX= -140.000 mm.  DY= -39.700 mm.  DZ= .000 mm.
```

INPUT LISTING
```
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ---------------------------------------------------------------------------
 From  2480  To  2500  DX= -345.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2500  +Y   Mu = .30
    Node  2500  Z   Gap= 3.000 mm.
    Node  2500  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  2500  To  2520  DX= -574.000 mm.  DZ= .000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2519
    Angle/Node @2= .00 2518
 ---------------------------------------------------------------------------
 From  2520  To  2540 DY= -229.000 mm.
 ---------------------------------------------------------------------------
 From  2540  To  5700 DY= -92.075 mm.
    Element Name= BALL_FLG_150
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  5700  To  2560 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ---------------------------------------------------------------------------
 From  2560  To  2570 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  2570  To  5710 DY= -1,030.000 mm.
 ---------------------------------------------------------------------------
 From  5710  To  6440  DX= -76.200 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  6440   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  5710  To  2580 DY= -826.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2579
    Angle/Node @2= .00 2578
 ---------------------------------------------------------------------------
 From  2580  To  5840  DX= -324.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 5839
 ---------------------------------------------------------------------------
 From  5840  To  5800  DX= -500.000 mm.  DZ= 500.000 mm.
 ---------------------------------------------------------------------------
 From  7350  To  2300 DZ= 500.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 175 C   T2= 142 C   T3= 142 C   P1= 6,200.1411 KPa   P2= 5,410.1230 KPa
    PHyd= 9,300.2119 KPa   Fluid Den= .0000430 kg./cu.cm.   Insul Thk= .000 mm.
```

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```
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2299
    Angle/Node @2= .00 2298
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2300  To  2620 DY= 658.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 3.0000 mm.
 GENERAL
    P1= 6,200.1411 KPa   P2= 5,410.1230 KPa   PHyd= 9,300.2119 KPa
    Fluid Den= .0000154 kg./cu.cm.   Insul Thk= .000 mm.
 RESTRAINTS
    Node  2620  +Y
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,571 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2620  To  2640 DY= 441.000 mm.
 ------------------------------------------------------------------------------
 From  2640  To  5720 DY= 82.550 mm.
 RIGID  Weight= 57.83 N.
 ------------------------------------------------------------------------------
 From  5720  To  2660 DY= 301.000 mm.
    Element Name= GATE_FLG_600
 RIGID  Weight= 311.38 N.
 ------------------------------------------------------------------------------
 From  2660  To  5730 DY= 82.550 mm.
 RIGID  Weight= 57.83 N.
 ------------------------------------------------------------------------------
 From  5730  To  2700 DY= 365.000 mm.
 ------------------------------------------------------------------------------
 From  2700  To  5740 DY= 106.000 mm.
 REDUCER
    Diam2= 48.260 mm.   Wall2= 7.137 mm.
 ------------------------------------------------------------------------------
 From  5740  To  5750 DY= 79.375 mm.
 PIPE
    Dia= 48.260 mm.   Wall= 7.137 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 35.59 N.
 ------------------------------------------------------------------------------
 From  5750  To  5760 DY= 79.375 mm.
 RIGID  Weight= 35.59 N.
 ------------------------------------------------------------------------------
 From  5760  To  2720 DY= 41.000 mm.
 RIGID  Weight= 35.59 N.
 FORCES & MOMENTS
    Node  2720   FX2= 2,000.10 N.   FY2= 1,000.05 N.   FZ2= .00 N.
 ------------------------------------------------------------------------------
 From  2720  To  2740  DX= -156.000 mm.  DZ= .000 mm.
```

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INPUT LISTING

```
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 100.00 N.
 ------------------------------------------------------------------------------
 From  2740  To  2760  DX= -73.025 mm.  DZ= .000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.   Cor= 6.0000 mm.
    Element Name= FLANGE_FLG_150
 GENERAL
    T1= 272 C   T2= 270 C   T3= -28 C   P1= 600.0137 KPa   P2= 50.0011 KPa
    PHyd= 900.0205 KPa   Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 54.49 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,638 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2760  To  2780  DX= -140.000 mm.  DY= -39.700 mm.  DZ= .000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------------
 From  2780  To  2800  DX= -345.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2800  +Y
    Node  2800  Z   Gap= 3.000 mm.
    Node  2800  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  2800  To  2820  DX= -574.000 mm.  DZ= .000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2819
    Angle/Node @2= .00 2818
 ------------------------------------------------------------------------------
 From  2820  To  2840 DY= -229.000 mm.
 ------------------------------------------------------------------------------
 From  2840  To  2846 DY= -92.075 mm.
    Element Name= BALL_FLG_150
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  2846  To  2852 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ------------------------------------------------------------------------------
 From  2852  To  2860 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  2860  To  2870 DY= -1,030.000 mm.
 ------------------------------------------------------------------------------
 From  2870  To  6460  DX= -76.200 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  2870  To  2880 DY= -826.000 mm.
 BEND at "TO" end
```

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```
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2879
    Angle/Node @2= .00 2878
 ---------------------------------------------------------------------------
 From  2880  To  5800  DX= -824.000 mm.
 SIF's & TEE's
    Node  5800   Welding Tee
 ---------------------------------------------------------------------------
 From  5800  To  5805  DX= -1,228.000 mm.
 RESTRAINTS
    Node  5805  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  5805  To  5810  DX= -1,118.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5809
    Angle/Node @2= .00 5808
 ---------------------------------------------------------------------------
 From  5810  To  5820 DY= -523.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 44.937   Angle/Node @1= 22.47 5819
    Angle/Node @2= .00 5818
 ---------------------------------------------------------------------------
 From  5820  To  6120  DX= .000 mm.  DY= -912.000 mm.  DZ= 910.000 mm.
 ---------------------------------------------------------------------------
 From  4750  To  8150 DZ= -178.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 900.0205 KPa   P2= 510.0116 KPa
    PHyd= 1,350.0308 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 199,086,608 KPa   EH2= 202,089,360 KPa   EH3= 202,089,360 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000060 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  8150  To  6550 DY= -76.200 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  6210  To  6220 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   P2= .0000 KPa
    PHyd= .0000 KPa   Mat= (102)A53 Grade B   E= 203,401,232 KPa
    EH1= 203,401,232 KPa   EH2= 203,401,232 KPa   EH3= 203,401,232 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  6220  +Y   Mu = .30
```

INPUT LISTING
```
    Node  6220  Z   Gap= 3.000 mm.   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  6230  To  6240 DZ= 300.000 mm.
 PIPE
    Dia= 48.260 mm.   Wall= 3.683 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  6240  +Y   Cnode  6241
 ------------------------------------------------------------------------------
 From  6260  To  6270 DY= -350.000 mm.
 RESTRAINTS
    Node  6270  +Y   Cnode  6271   Mu = .30
    Node  6270  Z   Cnode  6271   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  6280  To  6290  DX= 300.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 3.912 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  6290  +Y   Cnode  6291   Mu = .30
    Node  6290  Z   Cnode  6291
 ------------------------------------------------------------------------------
 From  6300  To  6310 DY= -900.000 mm.
 RESTRAINTS
    Node  6310  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  6400  To  6410 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  6410  +Y   Mu = .30
    Node  6410  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  6420  To  6425 DY= -230.000 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  6425  To  6430 DY= -380.000 mm.
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
```

```
INPUT LISTING
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  6430  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  6440  To  6450  DX= -300.000 mm.
 RESTRAINTS
    Node  6450  +Y
 ------------------------------------------------------------------------------
 From  6460  To  6470  DX= -300.000 mm.
 RESTRAINTS
    Node  6470  +Y
 ------------------------------------------------------------------------------
 From  6480  To  6485 DY= -230.000 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  6485  To  6490 DY= -380.000 mm.
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  6490  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  6510  To  6515 DY= -230.000 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
```

INPUT LISTING
Sh1= 115,142 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 6515 To 6520 DY= -380.000 mm.
GENERAL
Mat= (102)A53 Grade B E= 203,401,232 KPa EH1= 203,401,232 KPa
EH2= 203,401,232 KPa EH3= 203,401,232 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm.
RESTRAINTS
Node 6520 +Y Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 6530 To 6535 DY= -230.000 mm.
GENERAL
Mat= (165)A312 TP316L E= 195,127,520 KPa EH1= 195,127,520 KPa
EH2= 195,127,520 KPa EH3= 195,127,520 KPa EH4= 195,127,520 KPa
EH5= 195,127,520 KPa EH6= 195,127,520 KPa EH7= 195,127,520 KPa
EH8= 195,127,520 KPa EH9= 195,127,520 KPa v = .292
Pipe Den= .0080272 kg./cu.cm.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 115,142 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 6535 To 6540 DY= -380.000 mm.
GENERAL
Mat= (102)A53 Grade B E= 203,401,232 KPa EH1= 203,401,232 KPa
EH2= 203,401,232 KPa EH3= 203,401,232 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm.
RESTRAINTS
Node 6540 +Y Mu = .30
Node 6540 X Gap= 3.000 mm. Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 6550 To 6590 DY= -610.000 mm.
RESTRAINTS
Node 6590 +Y Mu = .30
Node 6590 X Gap= 3.000 mm. Mu = .30

From 6600 To 6610 DY= -500.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm.

INPUT LISTING
```
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  6610  +Y
 ------------------------------------------------------------------------------
 From  6630  To  6640 DY= -500.000 mm.
 RESTRAINTS
    Node  6640  Y
 ------------------------------------------------------------------------------
 From  6660  To  6670 DY= -500.000 mm.
 RESTRAINTS
    Node  6670  +Y
    Node  6670  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  6680  To  6690 DY= -500.000 mm.
 RESTRAINTS
    Node  6690  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  6700  To  6705  DX= 100.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  6705  To  6710  DX= 400.000 mm.
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  6710  +Y
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  6720  To  6730 DY= -700.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  6730  +Y   Mu = .30
    Node  6730  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  6740  To  6750 DZ= -300.000 mm.
```

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INPUT LISTING

```
 RESTRAINTS
    Node  6750  +Y
 ------------------------------------------------------------------------
 From  6760  To  6765  DX= -100.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------
 From  6765  To  6770  DX= -450.000 mm.
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  6770  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------
 From  7000  To  7005  DX= 100.000 mm.
 GENERAL
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 195,127,520 KPa
    EH2= 195,127,520 KPa   EH3= 195,127,520 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------
 From  7005  To  7010  DX= 400.000 mm.
 GENERAL
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.
 RESTRAINTS
    Node  7010  +Y   Mu = .30
    Node  7010  Z   Gap= 3.000 mm.
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  8510  To  8520 DZ= 6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 900.0205 KPa   P2= 510.0116 KPa
    PHyd= 1,350.0308 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 199,086,608 KPa   EH2= 202,081,088 KPa   EH3= 202,081,088 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000059 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  8520  +Y   Mu = .30
    Node  8520  LIM   Gap= 3.000 mm.
    Node  8510  +Y
    Node  8510  X   Gap= 3.000 mm.
 UNIFORM LOAD
   Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
   Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
   Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  8520  To  8530 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  8530  +Y   Mu = .30
    Node  8530  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  8530  To  8540 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  8540  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  8540  To  4970 DZ= 4,700.000 mm.
 SIF's & TEE's
    Node  4970   Welding Tee
 ---------------------------------------------------------------------------
 From  4970  To  8560 DZ= 1,300.000 mm.
 RESTRAINTS
    Node  8560  +Y   Mu = .30
    Node  8560  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  8560  To  8570 DZ= 500.000 mm.
 ---------------------------------------------------------------------------
 From  8570  To  8580 DZ= 120.650 mm.
 RIGID  Weight= 409.24 N.
 ---------------------------------------------------------------------------
 From  8580  To  8590 DZ= 120.650 mm.
```

INPUT LISTING

```
 RIGID  Weight= 409.24 N.
 ---------------------------------------------------------------------------
 From  8700  To  8710 DZ= 341.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    T1= 175 C   T2= 60 C   T3= 60 C   P1= 6,200.1411 KPa   P2= 5,410.1230 KPa
    PHyd= 9,300.2119 KPa   Mat= (165)A312 TP316L   E= 195,127,520 KPa
    EH1= 184,539,120 KPa   EH2= 192,364,096 KPa   EH3= 192,364,096 KPa
    EH4= 195,127,520 KPa   EH5= 195,127,520 KPa   EH6= 195,127,520 KPa
    EH7= 195,127,520 KPa   EH8= 195,127,520 KPa   EH9= 195,127,520 KPa
    v = .292   Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000596 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001500 kg./cu.cm.
 RESTRAINTS
    Node  8700  +Y   Mu = .30
    Node  8700  X   Gap= 3.000 mm.
    Node  8700  Z   Gap= 3.000 mm.
 UNIFORM LOAD
   Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
   Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
   Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 111,904 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ---------------------------------------------------------------------------
 From  8710  To  8720 DZ= 5,576.000 mm.
 RESTRAINTS
    Node  8720  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  8720  To  8730 DZ= 2,000.000 mm.
 ---------------------------------------------------------------------------
 From  8730  To  8740 DZ= 4,000.000 mm.
 RESTRAINTS
    Node  8740  +Y   Mu = .30
    Node  8740  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  8740  To  8750 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  8750  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  8750  To  8760 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  8760  +Y   Mu = .30
    Node  8760  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  8760  To  8770 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  8770  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  8770  To  6830 DZ= 423.000 mm.
 SIF's & TEE's
    Node  6830   Welding Tee
 ---------------------------------------------------------------------------
 From  6830  To  8780 DZ= 777.000 mm.
```

INPUT LISTING
```
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8779
    Angle/Node @2= .00 8778
 ---------------------------------------------------------------------------
 From  8780  To  8790  DX= 334.000 mm.  DY= -334.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 8789
    Angle/Node @2= .00 8788
 ---------------------------------------------------------------------------
 From  8790  To  8800  DX= 816.000 mm.
 ---------------------------------------------------------------------------
 From  8800  To  8810  DX= 5,847.000 mm.
 RESTRAINTS
    Node  8810  +Y   Mu = .30
    Node  8810  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  8920  To  8930 DZ= 6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   P2= 50.0011 KPa
    PHyd= 900.0205 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 187,483,936 KPa   EH2= 187,335,024 KPa   EH3= 205,934,864 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  8930  +Y   Mu = .30
    Node  8930  X
 UNIFORM LOAD
   Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
   Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
   Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  8930  To  8940 DZ= 4,480.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8939
    Angle/Node @2= .00 8938
 ---------------------------------------------------------------------------
 From  8940  To  8950  DX= -6,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8949
    Angle/Node @2= .00 8948
 ---------------------------------------------------------------------------
 From  8950  To  8960 DZ= 517.000 mm.
 ---------------------------------------------------------------------------
 From  8960  To  8970 DZ= 500.000 mm.
 RESTRAINTS
    Node  8970  +Y   Mu = .30
 ---------------------------------------------------------------------------
```

INPUT LISTING
```
 From  8970  To  8980 DZ= 983.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8979
    Angle/Node @2= .00 8978
 ------------------------------------------------------------------------------
 From  8980  To  8990  DX= 6,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8989
    Angle/Node @2= .00 8988
 ------------------------------------------------------------------------------
 From  8990  To  9000 DZ= 5,520.000 mm.
 RESTRAINTS
    Node  9000  +Y   Mu = .30
    Node  9000  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  9000  To  6130 DZ= 1,413.000 mm.
 SIF's & TEE's
    Node  6130   Welding Tee
 ------------------------------------------------------------------------------
 From  6130  To  3965 DZ= 598.000 mm.
 SIF's & TEE's
    Node  3965   Welding Tee
 ------------------------------------------------------------------------------
 From  3965  To  9010 DZ= 4,447.000 mm.
 RESTRAINTS
    Node  9010  +Y   Mu = .30
    Node  9010  X
 ------------------------------------------------------------------------------
 From  9010  To  6120 DZ= 1,776.000 mm.
 SIF's & TEE's
    Node  6120   Welding Tee
 ------------------------------------------------------------------------------
 From  6120  To  9020 DZ= 4,224.000 mm.
 RESTRAINTS
    Node  9020  +Y   Mu = .30
    Node  9020  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  8920  To  9030 DZ= -3,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   P2= 50.0011 KPa
    PHyd= 900.0205 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 187,483,936 KPa   EH2= 187,335,024 KPa   EH3= 205,934,864 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  8920  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
 From  9030  To  9040 DZ= -3,000.000 mm.
 RESTRAINTS
    Node  9040  +Y   Mu = .30
    Node  9040  Z   Gap= 3.000 mm.
    Node  9040  X   Gap= 3.000 mm.
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 MATERIAL Changes:
    10              20             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   280             300             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   500             580             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   610             620             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   590            5190             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  5300            5310             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   640             660             Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   620             680             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   820             840             Mat= (383)A516 70   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   280            4350             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  1020            1040             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  1020            8280             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  1400            1480             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  1660            1680             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  1821            1920             Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                   v = .292   Density= .0080 kg./cu.cm.
  2000            6420             Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                   v = .292   Density= .0080 kg./cu.cm.
  2000            4100             Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                   v = .292   Density= .0080 kg./cu.cm.
  4505            6790             Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                   v = .292   Density= .0080 kg./cu.cm.
  4100            4560             Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                   v = .292   Density= .0080 kg./cu.cm.
  4740            4750             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  8140            4980             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  4980            4990             E= 203,401,232 KPa   v = .292
                                   Density= .0078 kg./cu.cm.
  5120            5130             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
```

INPUT LISTING

4710	6530	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
1260	2140	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
4750	8150	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
6210	6220	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
6420	6425	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
6425	6430	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
6480	6485	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
6485	6490	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
6510	6515	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
6515	6520	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
6530	6535	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
6535	6540	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
6700	6705	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
6705	6710	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
6760	6765	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
6765	6770	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
7000	7005	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
7005	7010	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
8510	8520	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
8700	8710	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
8920	8930	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
8920	9030	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.

ALLOWABLE STRESS Changes

10	20	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
140	160	B31.3 (2016) Cycle Max Switch = ---

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Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   120              180          B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   280              300          B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   500              580          B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   580              590          B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   610              620          B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   590             5190          B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
  5300             5310          B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 129,638 KPa
                                 Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   610              640          B31.3 (2016)        Cycle Max Switch = ---
```

INPUT LISTING

```
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   640              660         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   620              680         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   820              840         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 160,648 KPa   Sh1= 157,769 KPa
                                Sh2= 160,373 KPa   Sh3= 160,373 KPa
                                Sh4= 160,648 KPa   Sh5= 160,648 KPa
                                Sh6= 160,648 KPa   Sh7= 160,648 KPa
                                Sh8= 160,648 KPa   Sh9= 160,648 KPa
                                Sy= 262,001 KPa
   280             4350         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4360             4370         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4370             4380         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   900              920         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1020             1040         B31.3 (2016)        Cycle Max Switch = ---
```

INPUT LISTING

```
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,888 KPa   Sh3= 137,888 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1020            8280          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,888 KPa   Sh3= 137,888 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1400            1480          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,888 KPa   Sh3= 137,888 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1660            1680          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  7140            1760          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  7201            7210          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1740            7150          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1821            1920          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  2000            6420          B31.3 (2016)        Cycle Max Switch = ---
```

INPUT LISTING

```
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  2000            4100          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  4505            6790          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  4100            4560          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 111,904 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  4740            4750          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4780            4160          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4310            4320          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4780            6620          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  8140            4980          B31.3 (2016)        Cycle Max Switch = ---
```

INPUT LISTING

```
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4980            4990          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  5120            5130          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,638 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4710            6530          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  1260            2140          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2440            2460          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,638 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  7350            2300          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2300            2620          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,571 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2740            2760          B31.3 (2016)        Cycle Max Switch = ---
```

INPUT LISTING

```
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,638 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4750            8150          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6210            6220          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6420            6425          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6425            6430          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6480            6485          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6485            6490          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6510            6515          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6515            6520          B31.3 (2016)        Cycle Max Switch = ---
```

INPUT LISTING

```
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6530            6535          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6535            6540          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6700            6705          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6705            6710          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  6760            6765          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  6765            6770          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  7000            7005          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  7005            7010          B31.3 (2016)        Cycle Max Switch = ---
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  8510            8520            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  8700            8710            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 115,142 KPa   Sh1= 111,904 KPa
                                  Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                  Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                  Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                  Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                  Sy= 172,369 KPa
  8920            8930            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  8920            9030            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
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BEND ELEMENTS
   40              60             Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 59
                                  Angle/Node @2= .00 58
   60              80             Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 79
                                  Angle/Node @2= .00 78
  120             180             Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 179
  490             500             Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 499   Angle/Node @2= .00 498
  500             580             Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 579   Angle/Node @2= .00 578
  590             600             Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
```

INPUT LISTING

```
                                599   Angle/Node @2= .00 598
  590           5190              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                5189   Angle/Node @2= .00 5188
 5190           8160              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 45.000   Angle/Node @1= 22.50
                                8159   Angle/Node @2= .00 8158
 5230           5240              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                5239   Angle/Node @2= .00 5238
 5320           5330              Radius= 114.300 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                5329   Angle/Node @2= .00 5328
 5340           5350              Radius= 114.300 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                5349   Angle/Node @2= .00 5348
 5375           5380              Radius= 114.300 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                5379   Angle/Node @2= .00 5378
 5380           5390              Radius= 114.300 mm. (LONG)
                                  Bend Angle= 42.270   Angle/Node @1= 21.14
                                5389   Angle/Node @2= .00 5388
  620            680              Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                679   Angle/Node @2= .00 678
 4380           4390              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4389   Angle/Node @2= .00 4388
 4395            880              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                879   Angle/Node @2= .00 878
  960            980              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                979   Angle/Node @2= .00 978
 1100           1120              Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1119   Angle/Node @2= .00 1118
 1160           1180              Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1179   Angle/Node @2= .00 1178
 1180           1200              Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1199   Angle/Node @2= .00 1198
 1390           1400              Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1399   Angle/Node @2= .00 1398
 1400           1480              Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1479   Angle/Node @2= .00 1478
 1480           1485              Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1484   Angle/Node @2= .00 1483
 1485           1490              Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1489   Angle/Node @2= .00 1488
 1520           1540              Radius= 228.600 mm. (LONG)
```

INPUT LISTING

		Bend Angle= 90.000 Angle/Node @1= 45.00 1539 Angle/Node @2= .00 1538
1560	1580	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1579 Angle/Node @2= .00 1578
7020	7060	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 7059 Angle/Node @2= .00 7058
7065	7070	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1621 Angle/Node @2= .00 1622
7070	7080	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 7079 Angle/Node @2= .00 7078
7040	7090	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 7089 Angle/Node @2= .00 7088
7095	7100	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 7099 Angle/Node @2= .00 7098
7100	7110	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 7109 Angle/Node @2= .00 7108
7210	7220	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 7219
7225	7230	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 7229 Angle/Node @2= .00 7228
1920	1940	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1939
1940	1960	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1959 Angle/Node @2= .00 1958
7260	7290	Radius= 228.600 mm. (LONG)
		Bend Angle= 89.719 Angle/Node @1= 44.86 7289 Angle/Node @2= .00 7288
7400	7300	Radius= 228.600 mm. (LONG)
		Bend Angle= 89.999 Angle/Node @1= 45.00 7299 Angle/Node @2= .00 7298
4482	4485	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 4484 Angle/Node @2= .00 4483
6780	6795	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 6794 Angle/Node @2= .00 6793
6795	6800	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 6799 Angle/Node @2= .00 6798
6810	6820	Radius= 228.600 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50 6819 Angle/Node @2= .00 6818
4580	4590	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 4589 Angle/Node @2= .00 4588

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INPUT LISTING

```
  8150            4140              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4139   Angle/Node @2= .00 4138
  6560            4760              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4759   Angle/Node @2= .00 4758
  4760            4770              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4769
  4930            4940              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4939   Angle/Node @2= .00 4938
  4940            4950              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4949   Angle/Node @2= .00 4948
  4950            4960              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50
                                  4959   Angle/Node @2= .00 4958
  5010            5020              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  5019
  5130            5140              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  5139
  5145            5150              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  5149   Angle/Node @2= .00 5148
  5150            5160              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  5159   Angle/Node @2= .00 5158
  5160            5170              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 44.939   Angle/Node @1= 22.47
                                  5169   Angle/Node @2= .00 5168
  1260            2140              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2139   Angle/Node @2= .00 2138
  2140            2160              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2159   Angle/Node @2= .00 2158
  2220            2260              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000
  2270            7340              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50
                                  7339   Angle/Node @2= .00 7338
  7340            2280              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50
                                  2279   Angle/Node @2= .00 2278
  2500            2520              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2519   Angle/Node @2= .00 2518
  5710            2580              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2579   Angle/Node @2= .00 2578
  2580            5840              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50
                                  5839
```

INPUT LISTING

7350	2300	Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2299 Angle/Node @2= .00 2298
2800	2820	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2819 Angle/Node @2= .00 2818
2870	2880	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2879 Angle/Node @2= .00 2878
5805	5810	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5809 Angle/Node @2= .00 5808
5810	5820	Radius= 228.600 mm. (LONG) Bend Angle= 44.937 Angle/Node @1= 22.47 5819 Angle/Node @2= .00 5818
6830	8780	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8779 Angle/Node @2= .00 8778
8780	8790	Radius= 228.600 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 8789 Angle/Node @2= .00 8788
8930	8940	Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8939 Angle/Node @2= .00 8938
8940	8950	Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8949 Angle/Node @2= .00 8948
8970	8980	Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8979 Angle/Node @2= .00 8978
8980	8990	Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 8989 Angle/Node @2= .00 8988

RIGIDS

10	20	RIGID Weight= 191.27 N.
25	40	RIGID Weight= 191.27 N.
120	140	RIGID Weight= .00 N.
200	220	RIGID Weight= 191.27 N.
220	240	RIGID Weight= 191.27 N.
320	340	RIGID Weight= 191.27 N.
340	360	RIGID Weight= 1,023.41 N.
360	380	RIGID Weight= 191.27 N.
420	440	RIGID Weight= 191.27 N.
440	460	RIGID Weight= 191.27 N.
500	6210	RIGID Weight= .00 N.
5200	5210	RIGID Weight= 44.48 N.
5210	5220	RIGID Weight= 93.41 N.
5220	5230	RIGID Weight= 44.48 N.
5240	6230	RIGID Weight= .00 N.
5250	5260	RIGID Weight= 44.48 N.
5260	5270	RIGID Weight= 44.48 N.
5275	6260	RIGID Weight= .00 N.

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INPUT LISTING

5280	5290	RIGID	Weight= 44.48 N.
5290	5300	RIGID	Weight= 258.00 N.
5300	5310	RIGID	Weight= 31.14 N.
5340	6280	RIGID	Weight= .00 N.
610	640	RIGID	Weight= .00 N.
700	720	RIGID	Weight= 286.91 N.
721	760	RIGID	Weight= 177.93 N.
780	800	RIGID	Weight= .00 N.
780	6241	RIGID	Weight= .00 N.
780	6271	RIGID	Weight= .00 N.
780	6291	RIGID	Weight= .00 N.
820	840	RIGID	Weight= .00 N.
4350	4360	RIGID	Weight= 44.48 N.
4360	4370	RIGID	Weight= 311.38 N.
4370	4380	RIGID	Weight= 57.83 N.
4390	6300	RIGID	Weight= .00 N.
900	920	RIGID	Weight= 57.83 N.
920	940	RIGID	Weight= 427.03 N.
940	960	RIGID	Weight= 57.83 N.
1060	1080	RIGID	Weight= 364.75 N.
1080	1100	RIGID	Weight= 364.75 N.
1120	8260	RIGID	Weight= .00 N.
1220	1240	RIGID	Weight= 364.75 N.
1241	8300	RIGID	Weight= 364.75 N.
1300	1320	RIGID	Weight= 364.75 N.
1320	1340	RIGID	Weight= 3,087.07 N.
1340	1360	RIGID	Weight= 364.75 N.
1400	6400	RIGID	Weight= .00 N.
1640	1660	RIGID	Weight= 191.27 N.
7120	7130	RIGID	Weight= 191.27 N.
1660	1680	RIGID	Weight= 191.27 N.
1720	7140	RIGID	Weight= .00 N.
7131	7160	RIGID	Weight= 191.27 N.
7171	7150	RIGID	Weight= .00 N.
7140	1760	RIGID	Weight= .00 N.
1800	1820	RIGID	Weight= 191.27 N.
7150	7180	RIGID	Weight= .00 N.
7190	7200	RIGID	Weight= 191.27 N.
7201	7210	RIGID	Weight= 191.27 N.
1740	7150	RIGID	Weight= 382.52 N.
7150	1840	RIGID	Weight= 1,867.59 N.
1840	1860	RIGID	Weight=10,500.52 N.
1860	1880	RIGID	Weight= 4,500.22 N.
1880	1900	RIGID	Weight=10,500.52 N.
1900	7140	RIGID	Weight= 1,867.59 N.
7140	1740	RIGID	Weight= 382.52 N.
1821	1920	RIGID	Weight= 191.27 N.
2000	6420	RIGID	Weight= .00 N.
4400	4410	RIGID	Weight= 364.75 N.
4410	4420	RIGID	Weight= 3,087.07 N.
4420	4430	RIGID	Weight= 364.75 N.
4440	6480	RIGID	Weight= .00 N.
4450	4460	RIGID	Weight= 364.75 N.
4460	4470	RIGID	Weight= 733.96 N.
4470	4480	RIGID	Weight= 364.75 N.
4485	6760	RIGID	Weight= .00 N.

INPUT LISTING

4490	4500	RIGID	Weight= 364.75 N.
4500	4505	RIGID	Weight= 1,005.30 N.
4505	6790	RIGID	Weight= 364.75 N.
6795	7000	RIGID	Weight= .00 N.
4600	4610	RIGID	Weight= 364.75 N.
4610	4620	RIGID	Weight= 2,708.97 N.
4620	4630	RIGID	Weight= 364.75 N.
4640	6510	RIGID	Weight= .00 N.
4660	4670	RIGID	Weight= 191.27 N.
4670	4680	RIGID	Weight= 387.00 N.
4680	4690	RIGID	Weight= 191.27 N.
4710	6530	RIGID	Weight= .00 N.
4720	4730	RIGID	Weight= 364.75 N.
4730	4740	RIGID	Weight= 2,708.97 N.
4740	4750	RIGID	Weight= 191.27 N.
4160	6600	RIGID	Weight= .00 N.
4180	4200	RIGID	Weight= 302.48 N.
4200	4220	RIGID	Weight= 30.00 N.
4220	4240	RIGID	Weight= 177.93 N.
4261	4280	RIGID	Weight= .00 N.
4280	4300	RIGID	Weight= .00 N.
4300	4310	RIGID	Weight= .00 N.
4310	4320	RIGID	Weight= .00 N.
7320	6630	RIGID	Weight= .00 N.
4800	4810	RIGID	Weight= 302.48 N.
4810	4820	RIGID	Weight= 3,362.86 N.
4820	4830	RIGID	Weight= 302.48 N.
4840	4850	RIGID	Weight= 302.48 N.
4850	4860	RIGID	Weight= 360.31 N.
4860	4870	RIGID	Weight= 177.93 N.
6650	6660	RIGID	Weight= .00 N.
4890	4900	RIGID	Weight= 177.93 N.
4900	4910	RIGID	Weight= 2,259.70 N.
4910	4920	RIGID	Weight= 177.93 N.
4930	6680	RIGID	Weight= .00 N.
4980	4990	RIGID	Weight= 191.27 N.
4990	5000	RIGID	Weight= 1,116.50 N.
5000	5010	RIGID	Weight= 191.27 N.
5020	6700	RIGID	Weight= .00 N.
5040	5060	RIGID	Weight= 106.76 N.
5060	5070	RIGID	Weight= 217.96 N.
5070	5080	RIGID	Weight= 106.76 N.
5095	6720	RIGID	Weight= .00 N.
5100	5110	RIGID	Weight= 191.27 N.
5110	5120	RIGID	Weight= 1,116.50 N.
5120	5130	RIGID	Weight= 71.17 N.
5145	6740	RIGID	Weight= .00 N.
4710	6530	RIGID	Weight= .00 N.
2340	2360	RIGID	Weight= 57.83 N.
2360	5650	RIGID	Weight= 311.38 N.
5650	5660	RIGID	Weight= 57.83 N.
5670	5680	RIGID	Weight= 35.59 N.
5680	5690	RIGID	Weight= 35.59 N.
5690	2420	RIGID	Weight= 25.00 N.
2420	2440	RIGID	Weight= 100.00 N.
2440	2460	RIGID	Weight= 54.49 N.

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2540	5700	RIGID	Weight= 111.21 N.
5700	2560	RIGID	Weight= 1,005.30 N.
2560	2570	RIGID	Weight= 111.21 N.
5710	6440	RIGID	Weight= .00 N.
2640	5720	RIGID	Weight= 57.83 N.
5720	2660	RIGID	Weight= 311.38 N.
2660	5730	RIGID	Weight= 57.83 N.
5740	5750	RIGID	Weight= 35.59 N.
5750	5760	RIGID	Weight= 35.59 N.
5760	2720	RIGID	Weight= 35.59 N.
2720	2740	RIGID	Weight= 100.00 N.
2740	2760	RIGID	Weight= 54.49 N.
2840	2846	RIGID	Weight= 111.21 N.
2846	2852	RIGID	Weight= 1,005.30 N.
2852	2860	RIGID	Weight= 111.21 N.
2870	6460	RIGID	Weight= .00 N.
8150	6550	RIGID	Weight= .00 N.
8570	8580	RIGID	Weight= 409.24 N.
8580	8590	RIGID	Weight= 409.24 N.

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SIF's & TEE's

140	160	Node	140	Unreinforced Tee
260	280	Node	280	Weldolet
590	5190	Node	590	Weldolet
5240	6230	Node	6230	Unreinforced Tee
5275	6260	Node	6260	Unreinforced Tee
5340	6280	Node	6280	Unreinforced Tee
610	640	Node	640	Unreinforced Tee
4390	6300	Node	6300	Unreinforced Tee
1000	1020	Node	1020	Weldolet
8280	1260	Node	1260	Weldolet
1580	1600	Node	1600	Welding Tee
7390	7020	Node	7020	Welding Tee
7380	7040	Node	7040	Welding Tee
1960	7270	Node	7270	Welding Tee
2000	6420	Node	6420	Unreinforced Tee
2000	4100	Node	4100	Welding Tee
4440	6480	Node	6480	Unreinforced Tee
		Pad= 7.110 mm.		
4485	6760	Node	6760	Unreinforced Tee
		Pad= 7.110 mm.		
6795	7000	Node	7000	Unreinforced Tee
		Pad= 7.110 mm.		
4100	4560	Node	4560	Welding Tee
4640	6510	Node	6510	Unreinforced Tee
		Pad= 7.110 mm.		
4710	6530	Node	6530	Unreinforced Tee
		Pad= 7.112 mm.		
4770	7330	Node	7330	Welding Tee
4160	6600	Node	6600	Unreinforced Tee
7320	6630	Node	6630	Unreinforced Tee
6650	6660	Node	6660	Unreinforced Tee
4930	6680	Node	6680	Unreinforced Tee

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INPUT LISTING

5020	6700	Node 6700 Unreinforced Tee Pad= 7.112 mm.
5095	6720	Node 6720 Reinforced Tee Pad= 6.020 mm.
5145	6740	Node 6740 Unreinforced Tee
4710	6530	Node 6530 Unreinforced Tee Pad= 7.112 mm.
2280	7350	Node 7350 Unreinforced Tee
5710	6440	Node 6440 Unreinforced Tee
2880	5800	Node 5800 Welding Tee
8540	4970	Node 4970 Welding Tee
8770	6830	Node 6830 Welding Tee
9000	6130	Node 6130 Welding Tee
6130	3965	Node 3965 Welding Tee
9010	6120	Node 6120 Welding Tee

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REDUCERS

8180	8190	Diam2= 114.300 mm. Wall2= 6.020 mm.
8200	8210	Diam2= 60.325 mm. Wall2= 5.537 mm.
5310	5320	Diam2= 88.900 mm. Wall2= 7.620 mm.
4570	8140	Diam2= 114.300 mm. Wall2= 6.020 mm.
4650	4660	Diam2= 114.300 mm. Wall2= 6.020 mm.
4690	4700	Diam2= 168.275 mm. Wall2= 7.112 mm.
4570	8140	Diam2= 114.300 mm. Wall2= 6.020 mm.
5030	5040	Diam2= 88.900 mm. Wall2= 5.486 mm.
5080	5090	Diam2= 114.300 mm. Wall2= 6.020 mm.
2400	5670	Diam2= 48.260 mm. Wall2= 7.137 mm.
2460	2480	Diam2= 168.275 mm. Wall2= 10.973 mm.
2700	5740	Diam2= 48.260 mm. Wall2= 7.137 mm.
2760	2780	Diam2= 168.275 mm. Wall2= 10.973 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
25	ANC	20				.000	.000	.000
160	-X				.30	1.000	.000	.000
160	Z	121				.000	.000	1.000
121	+Y				.10	.000	1.000	.000
160	X	121				1.000	.000	.000
8270	+Y				.30	.000	1.000	.000
8270	X			3.00		1.000	.000	.000
300	Y				.30	.000	1.000	.000
300	Z			3.00		.000	.000	1.000
400	Y				.30	.000	1.000	.000
400	Z			3.00	.30	.000	.000	1.000
480	Y				.30	.000	1.000	.000
480	Z			3.00	.30	.000	.000	1.000
5370	+Y				.30	.000	1.000	.000
5370	Z			3.00	.30	.000	.000	1.000
5375	+Y					.000	1.000	.000
660	+Y	800			.30	.000	1.000	.000
720	ANC	721				.000	.000	.000

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INPUT LISTING

780	ANC	820			.000	.000	.000
840	ANC				.000	.000	.000
1240	ANC	1241			.000	.000	.000
8280	Y			.30	.000	1.000	.000
8280	Z		3.00		.000	.000	1.000
1280	Y			.30	.000	1.000	.000
1280	Z		3.00	.30	.000	.000	1.000
1380	Y			.30	.000	1.000	.000
1380	Z		3.00	.30	.000	.000	1.000
1500	+Y			.30	.000	1.000	.000
1500	Z		3.00		.000	.000	1.000
1520	+Y			.30	.000	1.000	.000
1560	+Y			.30	.000	1.000	.000
1560	X		3.00	.30	1.000	.000	.000
7390	+Y			.30	.000	1.000	.000
7380	+Y			.30	.000	1.000	.000
1660	ANC	1661			.000	.000	.000
7130	ANC	7131			.000	.000	.000
1700	ANC	1720			.000	.000	.000
7170	ANC	7171			.000	.000	.000
1780	ANC	1760			.000	.000	.000
1820	ANC	1821			.000	.000	.000
7180	ANC	7181			.000	.000	.000
7200	ANC	7201			.000	.000	.000
7370	+Y				.000	1.000	.000
1840	+Y				.000	1.000	.000
1840	X			.30	1.000	.000	.000
1840	Z		6.00	.30	.000	.000	1.000
1860	Y			.10	.000	1.000	.000
1860	Z		6.00	.30	.000	.000	1.000
1880	Y			.10	.000	1.000	.000
1880	Z		6.00	.30	.000	.000	1.000
1900	Y			.10	.000	1.000	.000
1900	X			.30	1.000	.000	.000
1900	Z		6.00	.30	.000	.000	1.000
7400	+Y			.30	.000	1.000	.000
7400	X		3.00		1.000	.000	.000
6560	+Y			.30	.000	1.000	.000
6560	Z		3.00	.30	.000	.000	1.000
4220	ANC	4221			.000	.000	.000
4260	ANC	4261			.000	.000	.000
4320	ANC				.000	.000	.000
2180	+Y			.30	.000	1.000	.000
2180	Z		3.00	.30	.000	.000	1.000
2200	+Y			.30	.000	1.000	.000
2220	+Y			.30	.000	1.000	.000
2220	Z		3.00	.30	.000	.000	1.000
2270	+Y				.000	1.000	.000
2320	+Y				.000	1.000	.000
2500	+Y			.30	.000	1.000	.000
2500	Z		3.00		.000	.000	1.000
2500	X		3.00	.30	1.000	.000	.000
2620	+Y				.000	1.000	.000
2800	+Y				.000	1.000	.000
2800	Z		3.00		.000	.000	1.000
2800	X		3.00		1.000	.000	.000

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INPUT LISTING

5805	+Y			.30	.000	1.000	.000
6220	+Y			.30	.000	1.000	.000
6220	Z		3.00	.30	.000	.000	1.000
6240	+Y	6241			.000	1.000	.000
6270	+Y	6271		.30	.000	1.000	.000
6270	Z	6271	3.00		.000	.000	1.000
6290	+Y	6291		.30	.000	1.000	.000
6290	Z	6291			.000	.000	1.000
6310	+Y			.30	.000	1.000	.000
6410	+Y			.30	.000	1.000	.000
6410	Z		3.00	.30	.000	.000	1.000
6430	+Y			.30	.000	1.000	.000
6450	+Y				.000	1.000	.000
6470	+Y				.000	1.000	.000
6490	+Y			.30	.000	1.000	.000
6520	+Y			.30	.000	1.000	.000
6540	+Y			.30	.000	1.000	.000
6540	X		3.00	.30	1.000	.000	.000
6590	+Y			.30	.000	1.000	.000
6590	X		3.00	.30	1.000	.000	.000
6610	+Y				.000	1.000	.000
6640	Y				.000	1.000	.000
6670	+Y				.000	1.000	.000
6670	Z		3.00		.000	.000	1.000
6690	+Y			.30	.000	1.000	.000
6710	+Y				.000	1.000	.000
6730	+Y			.30	.000	1.000	.000
6730	X		3.00		1.000	.000	.000
6750	+Y				.000	1.000	.000
6770	+Y			.30	.000	1.000	.000
7010	+Y			.30	.000	1.000	.000
7010	Z		3.00		.000	.000	1.000
8520	+Y			.30	.000	1.000	.000
8520	LIM		3.00		.000	.000	.000
8510	+Y				.000	1.000	.000
8510	X		3.00		1.000	.000	.000
8530	+Y			.30	.000	1.000	.000
8530	X		3.00		1.000	.000	.000
8540	+Y			.30	.000	1.000	.000
8560	+Y			.30	.000	1.000	.000
8560	X		3.00		1.000	.000	.000
8700	+Y			.30	.000	1.000	.000
8700	X		3.00		1.000	.000	.000
8700	Z		3.00		.000	.000	1.000
8720	+Y			.30	.000	1.000	.000
8740	+Y			.30	.000	1.000	.000
8740	X		3.00	.30	1.000	.000	.000
8750	+Y			.30	.000	1.000	.000
8760	+Y			.30	.000	1.000	.000
8760	X		3.00		1.000	.000	.000
8770	+Y			.30	.000	1.000	.000
8810	+Y			.30	.000	1.000	.000
8810	Z		3.00		.000	.000	1.000
8930	+Y			.30	.000	1.000	.000
8930	X				1.000	.000	.000
8970	+Y			.30	.000	1.000	.000

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INPUT LISTING

```
    9000   +Y                                      .30    .000  1.000   .000
    9000   X                          3.00              1.000   .000   .000
    9010   +Y                                      .30    .000  1.000   .000
    9010   X                                             1.000   .000   .000
    9020   +Y                                      .30    .000  1.000   .000
    9020   Z                          3.00               .000   .000  1.000
    8920   +Y                                      .30    .000  1.000   .000
    9040   +Y                                      .30    .000  1.000   .000
    9040   Z                          3.00               .000   .000  1.000
    9040   X                          3.00              1.000   .000   .000
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```

DISPLACEMENTS

```
   10              20             Node    20  DX1= 4.000 mm.  DY1= 2.400 mm.
                                  DZ1= 1.500 mm.
 1241            8300             Node  1241  DX1= 4.000 mm.  DY1= 2.400 mm.
                                  DZ1= 1.500 mm.
```

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HANGER CONTROL AND LOCATION DATA

```
                                  No. of Hanger Design Load Cases = 1
                                  Actual Cold Load Flag = 0.0
                                  Short Range Spring Flag = 1
                                  Allowed Load Variation (%) = 25.0000
                                  Default Hanger Table = 5

  140             160             Hanger Node = 160
                                  Hanger Connecting Node = 121
                                  Available Space = -1,000.0000 mm.
                                  Allowed Load Variation = 25.0000
                                  No. Hangers = 0.0   Short Range Flag = -1
                                  User Operating Load = .00 N.   Free Node = 0
                                  Free Node = 0   Free Code = 0.0
                                  Spring Rate = .00 N./cm.
                                  Theoretical Cold Load = .00 N.
```

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FLANGES

```
 1060            1080             Location= To   Method= Peq
                                  Class/Grade= ASME-2009-600-3.19
                                  G/C= 192.151 mm.   T/P table ( 1)=  37.8 C
                                  -> 10,342.1 KPa   ( 2)=  93.3 C
                                  -> 10,342.1 KPa   ( 3)=  148.9 C
                                  -> 10,031.9 KPa   ( 4)=  204.4 C
                                  -> 9,721.6 KPa   ( 5)=  260.0 C
                                  -> 9,170.0 KPa   ( 6)=  315.6 C
                                  -> 8,342.7 KPa   ( 7)=  343.3 C
                                  -> 8,101.3 KPa   ( 8)=  371.1 C
                                  -> 7,825.5 KPa   ( 9)=  398.9 C
                                  -> 7,342.9 KPa   (10)=  426.7 C
```

INPUT LISTING

```
                                    -> 6,998.2 KPa   (11)=  454.4 C
                                    -> 6,722.4 KPa   (12)=  482.2 C
                                    -> 6,205.3 KPa   (13)=  510.0 C
                                    -> 5,343.4 KPa   (14)=  537.8 C
                                    -> 4,998.7 KPa   (15)=  565.6 C
                                    -> 4,964.2 KPa   (16)=  593.3 C
                                    -> 4,447.1 KPa   (17)=  621.1 C
                                    -> 3,792.1 KPa   (18)=  648.9 C
                                    -> 2,826.9 KPa   (19)=  676.7 C
                                    -> 2,516.6 KPa   (20)=  704.4 C
                                    -> 1,896.1 KPa   (21)=  732.2 C
                                    -> 1,413.4 KPa   (22)=  760.0 C
                                    -> 1,034.2 KPa   (23)=  787.8 C
                                    -> 792.9 KPa   (24)=  815.6 C   -> 586.1 KPa
  1080            1100              Location= From   Method= Peq
  1220            1240              Location= To   Method= Peq
  1300            1320              Location= To   Method= Peq
  1340            1360              Location= From   Method= Peq
  1640            1660              Location= To   Method= Peq
  7120            7130              Location= To   Method= Peq
  7201            7210              Location= From   Method= Peq
  1821            1920              Location= From   Method= Peq
  4400            4410              Location= To   Method= Peq
  4420            4430              Location= From   Method= Peq
  4450            4460              Location= To   Method= Peq
  4470            4480              Location= From   Method= Peq
  4490            4500              Location= To   Method= Peq
  4505            6790              Location= From   Method= Peq
  4600            4610              Location= To   Method= Peq
  4620            4630              Location= From   Method= Peq
  4660            4670              Location= To   Method= Peq
  4680            4690              Location= From   Method= Peq
  4720            4730              Location= To   Method= Peq
  4980            4990              Location= To   Method= Peq
  5000            5010              Location= From   Method= Peq
  5040            5060              Location= To   Method= Peq
  5070            5080              Location= From   Method= Peq
  5100            5110              Location= To   Method= Peq
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 EQUIPMENT LIMITS
    25              40              Nozzle Node = 25


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 7,000.35 N.   FB= 7,000.35 N.
    FC= 5,000.25 N.   MA= 4,000.17 N.m.   MB= 1,200.05 N.m.   MC= 2,200.09 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
   760             780              Nozzle Node = 780


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 9,600.48 N.   FB= 9,600.48 N.
    FC= 7,200.36 N.   MA= 5,760.24 N.m.   MB= 3,840.16 N.m.   MC= 4,990.21 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
```

INPUT LISTING
```
    Interact. Mtd= Absolute
  1220            1240              Nozzle Node = 1240


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 7,000.35 N.   FB= 7,000.35 N.
    FC= 5,000.25 N.   MA= 4,000.17 N.m.   MB= 1,200.05 N.m.   MC= 2,200.09 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
  1680            1700              Nozzle Node = 1700


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 15,090.75 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  7160            7170              Nozzle Node = 7170


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 15,090.75 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  1780            1800              Nozzle Node = 1780


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 16,200.81 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  7150            7180              Nozzle Node = 7180


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 16,200.81 N.   FB= 15,090.75 N.
    FC= 12,000.60 N.   MA= 9,150.39 N.m.   MB= 4,890.21 N.m.   MC= 6,420.27 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  4240            4260              Nozzle Node = 4260


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,400.19 N.m.   MC= 5,020.21 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
```


FORCES AND MOMENTS
```
  5690            2420              Node  2420   FX1= 2,000.10 N.
                                    FY1= 1,000.05 N.   FZ1= .00 N.
  5760            2720              Node  2720   FX2= 2,000.10 N.
                                    FY2= 1,000.05 N.   FZ2= .00 N.
```

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INPUT LISTING
UNIFORM LOAD Changes

10	20	Vector1 in G-s
		X1 Dir = .26 g's Y1 Dir = .00 g's
		Z1 Dir = .00 g's
		Vector2 in G-s
		X2 Dir = .00 g's Y2 Dir = .12 g's
		Z2 Dir = .00 g's
		Vector3 in G-s
		X3 Dir = .00 g's Y3 Dir = .00 g's
		Z3 Dir = .26 g's
8510	8520	Vector1 in G-s
		X1 Dir = .26 g's Y1 Dir = .00 g's
		Z1 Dir = .00 g's
		Vector2 in G-s
		X2 Dir = .00 g's Y2 Dir = .12 g's
		Z2 Dir = .00 g's
		Vector3 in G-s
		X3 Dir = .00 g's Y3 Dir = .00 g's
		Z3 Dir = .26 g's
8700	8710	Vector1 in G-s
		X1 Dir = .26 g's Y1 Dir = .00 g's
		Z1 Dir = .00 g's
		Vector2 in G-s
		X2 Dir = .00 g's Y2 Dir = .12 g's
		Z2 Dir = .00 g's
		Vector3 in G-s
		X3 Dir = .00 g's Y3 Dir = .00 g's
		Z3 Dir = .26 g's
8920	8930	Vector1 in G-s
		X1 Dir = .26 g's Y1 Dir = .00 g's
		Z1 Dir = .00 g's
		Vector2 in G-s
		X2 Dir = .00 g's Y2 Dir = .12 g's
		Z2 Dir = .00 g's
		Vector3 in G-s
		X3 Dir = .00 g's Y3 Dir = .00 g's
		Z3 Dir = .26 g's

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INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg

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INPUT LISTING

UNIFORM LOAD	lb./in.	x	1.751	=	N./cm.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS =	NO
MISSING MASS ZPA =	EXTRACTED
MIN WALL MILL TOLERANCE =	12.5000
WRC-107 VERSION =	MAR 79 1B1/2B1
WRC-107 INTERPOLATION =	LAST VALUE
DEFAULT AMBIENT TEMPERATURE=	21.1111 C
BOURDON PRESSURE=	NONE
COEFFICIENT OF FRICTION (MU) =	0.000000
INCLUDE SPRG STIF IN HGR OPE =	NO
INCLUDE INSULATION IN HYDROTEST =	NO
REDUCED INTERSECTION =	B31.1(POST1980)
USE WRC329	NO
NO REDUCED SIF FOR RFT AND WLT	NO
B31.1 REDUCED Z FIX =	YES
CLASS 1 BRANCH FLEX	NO
ALL STRESS CASES CORRODED =	NO
ADD TORSION IN SL STRESS =	DEFAULT
ADD F/A IN STRESS =	DEFAULT
OCCASIONAL LOAD FACTOR =	0.000000
DEFAULT CODE =	B31.3

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INPUT LISTING

```
  B31.3 SUS CASE SIF FACTOR =            0.000000
  ALLOW USERS BEND SIF =            NO
  USE SCHNEIDER                     NO
  YIELD CRITERION STRESS =          MAX 3D SHEAR
  USE PD/4T                          NO
  BASE HOOP STRESS ON ? =            ID
  EN13480 USE IN OUTPLANE SIFS=      NO
  LIBERAL EXPANSION ALLOWABLE=      YES
  B31.3 SEC 319.2.3C SAXIAL=        Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178      YES
  IGNORE B31.1/B31.3 Wc FACTOR=     YES
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152730
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
 CAESAR II 2018  Ver.10.00.00.7700,  (Build 170726)  MAY 26,2024  10:46:20



 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
    Uniform Load Option ........    1.000

    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
 CAESAR II 2018  Ver.10.00.00.7700,  (Build 170726)  MAY 26,2024  10:46:20

 COORDINATE REPORT
          /--------------------(mm.)----------------------/
  NODE           X              Y              Z
    10          .000          .000          .000
    25      -101.600          .000          .000
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 26, 2024 Time: 10:46
Job:: BNK-GCS-CN-008-05
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

40	-203.200	.000	.000
60	-932.200	.000	.000
80	-932.200	.000	1587.000
100	-932.200	-1404.000	1587.000
120	-932.200	-2557.000	1587.000
140	-932.200	-2786.000	1587.000
160	-932.200	-2986.000	1587.000
8260	-458.900	-2839.882	2251.406
8270	-458.900	-2839.882	2751.406
120	-932.200	-2557.000	1587.000
180	-932.200	-2786.000	1587.000
200	-1161.200	-2786.000	1587.000
220	-1262.800	-2786.000	1587.000
240	-1364.400	-2786.000	1587.000
260	-1864.400	-2786.000	1587.000
280	-2208.900	-2786.000	1587.000
300	-2708.900	-2786.000	1587.000
320	-2911.900	-2786.000	1587.000
340	-3013.500	-2786.000	1587.000
360	-3502.500	-2786.000	1587.000
380	-3604.100	-2786.000	1587.000
400	-4465.100	-2786.000	1587.000
420	-6022.100	-2786.000	1587.000
440	-6123.700	-2786.000	1587.000
460	-6225.300	-2786.000	1587.000
480	-7468.300	-2786.000	1587.000
490	-9503.301	-2786.000	1587.000
500	-11538.301	-2786.000	1587.000
6210	-11538.301	-2862.200	1587.000
490	-9503.301	-2786.000	1587.000
500	-11538.301	-2786.000	1587.000
580	-11538.301	1219.000	1587.000
590	-11538.301	1219.000	3135.000
600	-11538.301	1219.000	4337.000
610	-11923.301	1219.000	4337.000
620	-12268.301	1219.000	4337.000
590	-11538.301	1219.000	3135.000
5190	-11538.301	1617.000	3135.000
8160	-11767.301	1617.000	3364.000
8170	-11767.301	1617.000	3887.000
8180	-11767.301	1617.000	3964.000
8190	-11767.301	1617.000	4065.600
8200	-11767.301	1617.000	4275.600
8210	-11767.301	1617.000	4377.600
5200	-11767.301	1617.000	4667.600
5210	-11767.301	1617.000	4740.625
5220	-11767.301	1617.000	5041.625
5230	-11767.301	1617.000	5114.650
5240	-11767.301	1617.000	5191.650
5245	-12306.301	1617.000	5191.650
5240	-11767.301	1617.000	5191.650
6230	-11767.301	1599.039	5209.610
5245	-12306.301	1617.000	5191.650
5250	-12845.301	1617.000	5191.650
5260	-12918.326	1617.000	5191.650
5270	-12991.352	1617.000	5191.650

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Job:: BNK-GCS-CN-008-05
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INPUT LISTING

5275	-13141.352	1617.000	5191.650
6260	-13141.352	1591.600	5191.650
5275	-13141.352	1617.000	5191.650
5280	-13291.352	1617.000	5191.650
5290	-13364.377	1617.000	5191.650
5300	-13564.377	1617.000	5191.650
5310	-13631.052	1617.000	5191.650
5320	-13720.052	1617.000	5191.650
5330	-14007.052	1617.000	5191.650
5340	-14007.052	699.000	5191.650
6280	-13968.952	699.000	5191.650
5340	-14007.052	699.000	5191.650
5350	-14007.052	-1241.000	5191.650
5370	-17163.051	-1241.000	5191.650
5375	-21576.051	-1241.000	5191.650
5380	-22137.051	-1241.000	5191.650
5390	-22137.051	-2460.000	5191.650
6130	-22148.650	-3039.250	5718.050
610	-11923.301	1219.000	4337.000
640	-11923.301	1135.000	4337.000
660	-11923.301	835.000	4337.000
620	-12268.301	1219.000	4337.000
680	-12846.301	1219.000	4337.000
700	-12846.301	990.000	4337.000
720	-12846.301	864.000	4337.000
760	-12846.301	759.225	4337.000
780	-12846.301	563.225	4337.000
780	-12846.301	563.225	4337.000
660	-11923.301	835.000	4337.000
780	-12846.301	563.225	4337.000
6240	-11767.301	1599.039	5509.611
780	-12846.301	563.225	4337.000
6270	-13141.351	1241.600	5191.650
780	-12846.301	563.225	4337.000
6290	-13668.950	699.000	5191.650
780	-12846.301	563.225	4337.000
840	-12846.301	-3006.775	4337.000
280	-2208.900	-2786.000	1587.000
4350	-2208.900	-2786.000	1465.000
4360	-2208.900	-2786.000	1391.975
4370	-2208.900	-2786.000	1090.975
4380	-2208.900	-2786.000	1008.425
4390	-2208.900	-2786.000	432.425
4395	-2208.900	-2529.000	432.425
4390	-2208.900	-2786.000	432.425
6300	-2208.900	-2811.400	432.425
4395	-2208.900	-2529.000	432.425
880	-2208.900	-2272.000	432.425
900	-2208.900	-2272.000	509.425
920	-2208.900	-2272.000	591.975
940	-2208.900	-2272.000	892.975
960	-2208.900	-2272.000	975.525
980	-2208.900	-2272.000	2197.525
1000	-2208.900	-2372.000	2197.525
1020	-2208.900	-2786.000	2197.525
1040	-2013.900	-2786.000	2197.525

INPUT LISTING

1060	-1863.900	-2786.000	2197.525
1080	-1736.900	-2786.000	2197.525
1100	-1610.900	-2786.000	2197.525
1120	-458.900	-2786.000	2197.525
8250	-458.900	-2786.000	1968.525
1120	-458.900	-2786.000	2197.525
8260	-458.900	-2839.882	2251.406
8250	-458.900	-2786.000	1968.525
1140	-458.900	-2786.000	1243.525
1160	-458.900	-2786.000	782.025
1180	-458.900	-2786.000	10.025
1200	-458.900	-1951.000	10.025
1220	-229.900	-1951.000	10.025
1240	-102.900	-1951.000	10.025
8300	24.100	-1951.000	10.025
1020	-2208.900	-2786.000	2197.525
8280	-2708.900	-2786.000	2197.525
1260	-3608.900	-2786.000	2197.525
1280	-4458.900	-2786.000	2197.525
1300	-5108.900	-2786.000	2197.525
1320	-5235.900	-2786.000	2197.525
1340	-5803.900	-2786.000	2197.525
1360	-5930.900	-2786.000	2197.525
1380	-7479.900	-2786.000	2197.525
1390	-9514.900	-2786.000	2197.525
1400	-11549.900	-2786.000	2197.525
6400	-11549.900	-2862.200	2197.525
1390	-9514.900	-2786.000	2197.525
1400	-11549.900	-2786.000	2197.525
1480	-11549.900	-1402.000	2197.525
1485	-16309.900	-1402.000	2197.525
1490	-16309.900	-1402.000	3997.525
1500	-17185.900	-1402.000	3997.525
1520	-23078.900	-1402.000	3997.525
1540	-25994.900	-1402.000	3997.525
1560	-25994.900	-1402.000	5065.525
1580	-25994.900	-1402.000	6133.525
1600	-25994.900	1328.000	6133.525
7390	-25994.900	1328.000	5740.525
7020	-25994.900	1328.000	5347.525
7030	-25994.900	1328.000	5102.525
1600	-25994.900	1328.000	6133.525
7380	-25994.900	1328.000	6526.525
7040	-25994.900	1328.000	6919.525
7050	-25994.900	1328.000	7164.525
7020	-25994.900	1328.000	5347.525
7060	-25994.900	3491.000	5347.525
7065	-26983.900	3491.000	5347.525
7070	-27494.900	3491.000	5347.525
7080	-27494.900	3491.000	5878.525
1640	-27494.900	2989.500	5878.525
1660	-27494.900	2878.375	5878.525
7040	-25994.900	1328.000	6919.525
7090	-25994.900	3491.000	6919.525
7095	-26983.900	3491.000	6919.525
7100	-27494.900	3491.000	6919.525

INPUT LISTING

7110	-27494.900	3491.000	6388.525
7120	-27494.900	2989.500	6388.525
7130	-27494.900	2878.375	6388.525
1660	-27494.900	2878.375	5878.525
1680	-27494.900	2767.250	5878.525
1700	-27494.900	2567.250	5878.525
7140	-27494.900	2327.250	5878.525
7130	-27494.900	2878.375	6388.525
7160	-27494.900	2767.250	6388.525
7170	-27494.900	2567.250	6388.525
7150	-27494.900	2327.250	6388.525
7140	-27494.900	2327.250	5878.525
1780	-27494.900	2087.250	5878.525
1800	-27494.900	1887.250	5878.525
1820	-27494.900	1776.125	5878.525
7150	-27494.900	2327.250	6388.525
7180	-27494.900	2087.250	6388.525
7190	-27494.900	1887.250	6388.525
7200	-27494.900	1776.125	6388.525
7210	-27494.900	1637.000	6388.525
7220	-27494.900	1484.000	6388.525
7225	-27494.900	1484.000	6654.025
7230	-27494.900	1484.000	6919.525
7240	-27494.900	1026.000	6919.525
7250	-27494.900	1026.000	7164.525
7240	-27494.900	1026.000	6919.525
7360	-27494.900	1026.000	6425.525
7260	-27494.900	1026.000	6133.525
7370	-27494.900	1026.000	5740.525
7270	-27494.900	1026.000	5347.525
7280	-27494.900	1026.000	5102.525
1740	-27494.900	2327.250	6133.525
7150	-27494.900	2327.250	6388.525
1840	-27494.900	2327.250	6938.525
1860	-32594.900	2327.250	6938.525
1880	-32594.900	2327.250	5538.525
1900	-27494.900	2327.250	5538.525
7140	-27494.900	2327.250	5878.525
1740	-27494.900	2327.250	6133.525
1820	-27494.900	1776.125	5878.525
1920	-27494.900	1637.000	5878.525
1940	-27494.900	1484.000	5878.525
1960	-27494.900	1484.000	5347.525
7270	-27494.900	1026.000	5347.525
7260	-27494.900	1026.000	6133.525
7290	-27494.900	-323.000	6133.525
7400	-27494.900	-327.725	7096.513
7300	-27494.900	-338.147	9220.525
2000	-23295.900	-358.147	9220.525
6420	-23295.900	-434.347	9220.525
2000	-23295.900	-358.147	9220.525
4100	-22745.900	-360.897	9220.525
4400	-22745.900	-368.107	10668.508
4410	-22745.900	-368.740	10795.506
4420	-22745.900	-371.568	11363.499
4430	-22745.900	-372.200	11490.497

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INPUT LISTING

4440	-22745.900	-373.861	11823.993
6480	-22745.900	-450.061	11823.993
4440	-22745.900	-373.861	11823.993
4450	-22745.900	-375.521	12157.489
4460	-22745.900	-376.154	12284.487
4470	-22745.900	-378.982	12852.480
4480	-22745.900	-379.614	12979.479
4482	-22745.900	-382.684	13543.979
4485	-22745.900	-385.754	14108.479
6760	-22799.781	-439.636	14108.479
4482	-22745.900	-382.684	13543.979
4485	-22745.900	-385.754	14108.479
4490	-21703.900	-385.754	14108.479
4500	-21576.900	-385.754	14108.479
4505	-20978.900	-385.754	14108.479
6790	-20851.900	-385.754	14108.479
6780	-20527.900	-385.754	14108.479
6795	-20203.900	-385.754	14108.479
7000	-20150.018	-439.636	14108.479
6780	-20527.900	-385.754	14108.479
6795	-20203.900	-385.754	14108.479
6800	-20203.900	-434.754	15514.479
6810	-22271.900	-434.754	15514.479
6820	-24271.900	-434.754	15514.479
6830	-24437.900	-600.754	15514.479
4100	-22745.900	-360.897	9220.525
4560	-22745.900	-360.897	8935.525
4570	-22602.900	-360.897	8935.525
8140	-22462.900	-387.897	8935.525
4560	-22745.900	-360.897	8935.525
4580	-22888.900	-360.897	8935.525
4590	-23260.900	-360.897	8935.525
4600	-23260.900	-360.897	8706.525
4610	-23260.900	-360.897	8579.525
4620	-23260.900	-360.897	8011.525
4630	-23260.900	-360.897	7884.525
4640	-23260.900	-360.897	7684.525
6510	-23260.900	-437.097	7684.525
4640	-23260.900	-360.897	7684.525
4650	-23260.900	-360.897	7152.025
4660	-23260.900	-387.897	7012.025
4670	-23260.900	-387.897	6900.900
4680	-23260.900	-387.897	6459.900
4690	-23260.900	-387.897	6348.775
4700	-23260.900	-360.897	6208.775
4710	-23260.900	-360.897	5908.775
6530	-23260.900	-437.097	5908.775
4710	-23260.900	-360.897	5908.775
4720	-23260.900	-360.897	5608.775
4730	-23260.900	-360.897	5481.775
4740	-23260.900	-360.897	4913.775
4750	-23260.900	-360.897	4812.175
8150	-23260.900	-360.897	4634.175
4140	-23260.900	-360.897	842.175
6560	-22831.900	-360.897	842.175
4760	-19955.900	-360.897	842.175

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Job:: BNK-GCS-CN-008-05
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INPUT LISTING

4770	-19955.900	-360.897	385.175
7330	-19955.900	-1018.897	385.175
4780	-17933.299	-1018.897	385.175
4160	-17033.299	-1018.897	385.175
6600	-17033.299	-1120.497	385.175
4160	-17033.299	-1018.897	385.175
4180	-13845.299	-1018.897	385.175
4200	-13730.999	-1018.897	385.175
4220	-13710.999	-1018.897	385.175
4240	-13606.224	-1018.897	385.175
4260	-13451.224	-1018.897	385.175
4280	-12991.224	-1018.897	385.175
4300	-12991.224	-2318.897	385.175
4310	-12991.224	-3318.897	385.175
4320	-12991.224	-3618.897	385.175
4780	-17933.299	-1018.897	385.175
6620	-18175.299	-1018.897	385.175
7320	-19477.900	-1018.897	385.175
6630	-19477.900	-1120.497	385.175
6620	-18175.299	-1018.897	385.175
4800	-18417.299	-1018.897	385.175
4810	-18531.600	-1018.897	385.175
4820	-19073.600	-1018.897	385.175
4830	-19187.900	-1018.897	385.175
7320	-19477.900	-1018.897	385.175
7330	-19955.900	-1018.897	385.175
4840	-20243.900	-1018.897	385.175
4850	-20358.201	-1018.897	385.175
4860	-20964.201	-1018.897	385.175
4870	-21068.977	-1018.897	385.175
4880	-21268.977	-1018.897	385.175
6650	-21555.977	-1018.897	385.175
6660	-21555.977	-1120.497	385.175
6650	-21555.977	-1018.897	385.175
4890	-22042.977	-1018.897	385.175
4900	-22147.752	-1018.897	385.175
4910	-22634.252	-1018.897	385.175
4920	-22739.027	-1018.897	385.175
4930	-23281.027	-1018.897	385.175
6680	-23281.027	-1120.497	385.175
4930	-23281.027	-1018.897	385.175
4940	-23886.027	-1018.897	385.175
4950	-23886.027	-1018.897	1885.175
4960	-24757.527	-1018.897	1885.175
4970	-25094.527	-681.897	1885.175
8140	-22462.900	-387.897	8935.525
4980	-22079.900	-387.897	8935.525
4570	-22602.900	-360.897	8935.525
8140	-22462.900	-387.897	8935.525
4980	-22079.900	-387.897	8935.525
4990	-21968.775	-387.897	8935.525
5000	-21527.775	-387.897	8935.525
5010	-21416.650	-387.897	8935.525
5020	-21263.650	-387.897	8935.525
5025	-21263.650	-387.897	8437.176
5020	-21263.650	-387.897	8935.525

INPUT LISTING

6700	-21228.295	-423.253	8935.525
5025	-21263.650	-387.897	8437.176
5030	-21263.650	-387.897	7938.826
5040	-21263.650	-400.897	7836.826
5060	-21263.650	-400.897	7744.750
5070	-21263.650	-400.897	7263.750
5080	-21263.650	-400.897	7171.675
5090	-21263.650	-388.397	7069.675
5095	-21263.650	-388.397	6821.175
6720	-21263.650	-439.197	6821.175
5095	-21263.650	-388.397	6821.175
5100	-21263.650	-388.397	6572.675
5110	-21263.650	-388.397	6461.550
5120	-21263.650	-388.397	6020.550
5130	-21263.650	-388.397	5941.175
5140	-21263.650	-388.397	5788.175
5145	-21263.650	-1012.397	5788.175
6740	-21263.650	-1012.397	5737.375
5145	-21263.650	-1012.397	5788.175
5150	-21263.650	-1436.397	5788.175
5160	-22148.650	-1436.397	5788.175
5170	-22148.650	-2509.397	5788.175
3965	-22148.650	-3039.397	6317.051
4710	-23260.900	-360.897	5908.775
6530	-23260.900	-437.097	5908.775
1260	-3608.900	-2786.000	2197.525
2140	-3608.900	-1256.000	2197.525
2160	-3608.900	-1256.000	5869.525
2180	-7472.900	-1256.000	5869.525
2200	-12387.900	-1256.000	5869.525
2220	-17178.900	-1256.000	5869.525
2260	-17916.900	-1256.000	5869.525
2270	-17916.900	-1256.000	9544.525
7340	-17916.900	-1256.000	10803.525
2280	-17690.900	-1256.000	11029.525
7350	-17690.900	-1256.000	11128.525
2320	-17690.900	-598.000	11128.525
2330	-17690.900	-370.000	11128.525
2340	-17690.900	-157.000	11128.525
2360	-17690.900	-74.450	11128.525
5650	-17690.900	226.550	11128.525
5660	-17690.900	309.100	11128.525
2400	-17690.900	674.100	11128.525
5670	-17690.900	780.100	11128.525
5680	-17690.900	859.475	11128.525
5690	-17690.900	938.850	11128.525
2420	-17690.900	980.350	11128.525
2440	-17846.900	980.350	11128.525
2460	-17919.926	980.350	11128.525
2480	-18059.926	940.650	11128.525
2500	-18404.926	940.650	11128.525
2520	-18978.926	940.650	11128.525
2540	-18978.926	711.650	11128.525
5700	-18978.926	619.575	11128.525
2560	-18978.926	343.575	11128.525
2570	-18978.926	251.500	11128.525

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INPUT LISTING

5710	-18978.926	-778.500	11128.525
6440	-19055.125	-778.500	11128.525
5710	-18978.926	-778.500	11128.525
2580	-18978.926	-1604.500	11128.525
5840	-19302.926	-1604.500	11128.525
5800	-19802.926	-1604.500	11628.525
7350	-17690.900	-1256.000	11128.525
2300	-17690.900	-1256.000	11628.525
2620	-17690.900	-598.000	11628.525
2640	-17690.900	-157.000	11628.525
5720	-17690.900	-74.450	11628.525
2660	-17690.900	226.550	11628.525
5730	-17690.900	309.100	11628.525
2700	-17690.900	674.100	11628.525
5740	-17690.900	780.100	11628.525
5750	-17690.900	859.475	11628.525
5760	-17690.900	938.850	11628.525
2720	-17690.900	979.850	11628.525
2740	-17846.900	979.850	11628.525
2760	-17919.926	979.850	11628.525
2780	-18059.926	940.150	11628.525
2800	-18404.926	940.150	11628.525
2820	-18978.926	940.150	11628.525
2840	-18978.926	711.150	11628.525
2846	-18978.926	619.075	11628.525
2852	-18978.926	343.075	11628.525
2860	-18978.926	251.000	11628.525
2870	-18978.926	-779.000	11628.525
6460	-19055.125	-779.000	11628.525
2870	-18978.926	-779.000	11628.525
2880	-18978.926	-1605.000	11628.525
2880	-18978.926	-1604.500	11628.525
5800	-19802.926	-1604.500	11628.525
5805	-21030.926	-1604.500	11628.525
5810	-22148.926	-1604.500	11628.525
5820	-22148.926	-2127.500	11628.525
6120	-22148.926	-3039.500	12538.525
4750	-23260.900	-360.897	4812.175
8150	-23260.900	-360.897	4634.175
6550	-23260.900	-437.097	4634.175
6210	-11538.301	-2862.200	1587.000
6220	-11538.301	-3162.200	1587.000
6230	-11767.301	1599.039	5209.610
6240	-11767.301	1599.039	5509.610
6260	-13141.352	1591.600	5191.650
6270	-13141.352	1241.600	5191.650
6280	-13968.952	699.000	5191.650
6290	-13668.952	699.000	5191.650
6300	-2208.900	-2811.400	432.425
6310	-2208.900	-3711.400	432.425
6400	-11549.900	-2862.200	2197.525
6410	-11549.900	-3162.200	2197.525
6420	-23295.900	-434.347	9220.525
6425	-23295.900	-664.347	9220.525
6430	-23295.900	-1044.347	9220.525
6440	-19055.125	-778.500	11128.525

INPUT LISTING

6450	-19355.125	-778.500	11128.525
6460	-19055.125	-779.000	11628.525
6470	-19355.125	-779.000	11628.525
6480	-22745.900	-450.061	11823.993
6485	-22745.900	-680.061	11823.993
6490	-22745.900	-1060.061	11823.993
6510	-23260.900	-437.097	7684.525
6515	-23260.900	-667.097	7684.525
6520	-23260.900	-1047.097	7684.525
6530	-23260.900	-437.097	5908.775
6535	-23260.900	-667.097	5908.775
6540	-23260.900	-1047.097	5908.775
6550	-23260.900	-437.097	4634.175
6590	-23260.900	-1047.097	4634.175
6600	-17033.299	-1120.497	385.175
6610	-17033.299	-1620.497	385.175
6630	-19477.900	-1120.497	385.175
6640	-19477.900	-1620.497	385.175
6660	-21555.977	-1120.497	385.175
6670	-21555.977	-1620.497	385.175
6680	-23281.027	-1120.497	385.175
6690	-23281.027	-1620.497	385.175
6700	-21228.295	-423.253	8935.525
6705	-21128.295	-423.253	8935.525
6710	-20728.295	-423.253	8935.525
6720	-21263.650	-439.197	6821.175
6730	-21263.650	-1139.197	6821.175
6740	-21263.650	-1012.397	5737.375
6750	-21263.650	-1012.397	5437.375
6760	-22799.781	-439.636	14108.479
6765	-22899.781	-439.636	14108.479
6770	-23349.781	-439.636	14108.479
7000	-20150.018	-439.636	14108.479
7005	-20050.018	-439.636	14108.479
7010	-19650.018	-439.636	14108.479
8510	-25094.527	-681.897	-20814.824
8520	-25094.527	-681.897	-14814.824
8530	-25094.527	-681.897	-8814.824
8540	-25094.527	-681.897	-2814.825
4970	-25094.527	-681.897	1885.175
8560	-25094.527	-681.897	3185.175
8570	-25094.527	-681.897	3685.175
8580	-25094.527	-681.897	3805.825
8590	-25094.527	-681.897	3926.475
8700	-24437.900	-600.754	-14825.521
8710	-24437.900	-600.754	-14484.521
8720	-24437.900	-600.754	-8908.521
8730	-24437.900	-600.754	-6908.521
8740	-24437.900	-600.754	-2908.521
8750	-24437.900	-600.754	3091.479
8760	-24437.900	-600.754	9091.479
8770	-24437.900	-600.754	15091.479
6830	-24437.900	-600.754	15514.479
8780	-24437.900	-600.754	16291.479
8790	-24103.900	-934.754	16291.479
8800	-23287.900	-934.754	16291.479

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INPUT LISTING

8810	-17440.900	-934.754	16291.479
8920	-22148.650	-3039.250	-13694.949
8930	-22148.650	-3039.250	-7694.950
8940	-22148.650	-3039.250	-3214.950
8950	-28148.650	-3039.250	-3214.950
8960	-28148.650	-3039.250	-2697.950
8970	-28148.650	-3039.250	-2197.950
8980	-28148.650	-3039.250	-1214.950
8990	-22148.650	-3039.250	-1214.950
9000	-22148.650	-3039.250	4305.050
6130	-22148.650	-3039.250	5718.050
3965	-22148.650	-3039.250	6316.050
3965	-22148.650	-3039.397	6317.051
9010	-22148.650	-3039.397	10764.051
9010	-22148.926	-3039.500	10762.525
6120	-22148.926	-3039.500	12538.525
9020	-22148.926	-3039.500	16762.525
8920	-22148.650	-3039.250	-13694.949
9030	-22148.650	-3039.250	-16694.949
9040	-22148.650	-3039.250	-19694.949

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Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (OPE) W+D1+T2+P2+H
6 (Alt-SUS) W+P1+H
7 (OPE) W+D1+T2+P1+H
8 (Alt-SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L7
21 (OCC) L21=L14-L7
22 (OCC) L22=L15-L7
23 (OCC) L23=L16-L7
24 (OCC) L24=L17-L7
25 (OCC) L25=L18-L7
26 (OCC) L26=L19-L7
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L7-L11
36 (EXP) L36=L4-L7
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L7-L9

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP
CASE 4 (OPE) W+D1+T1+P1+H
CASE 7 (OPE) W+D1+T2+P1+H
CASE 9 (OPE) W+D1+T3+P1+H
CASE 11 (SUS) W+P1+H
CASE 12 (SUS) WNC
CASE 13 (OPE) W+D1+T2+P1+H+U1
CASE 14 (OPE) W+D1+T2+P1+H-U1
CASE 15 (OPE) W+D1+T2+P1+H+U2
CASE 16 (OPE) W+D1+T2+P1+H-U2
CASE 17 (OPE) W+D1+T2+P1+H+U3
CASE 18 (OPE) W+D1+T2+P1+H+F1
CASE 19 (OPE) W+D1+T2+P1+H+F2
CASE 20 (OCC) L20=L13-L7
CASE 21 (OCC) L21=L14-L7
CASE 22 (OCC) L22=L15-L7
CASE 23 (OCC) L23=L16-L7
CASE 24 (OCC) L24=L17-L7
CASE 25 (OCC) L25=L18-L7
CASE 26 (OCC) L26=L19-L7

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
20		TYPE=Displ. Reaction;					
	3(HYD)	-45	-912	-80	0	0	0
	4(OPE)	41	-454	-341	0	0	0
	7(OPE)	-284	-966	11	0	0	0
	9(OPE)	-284	-966	11	0	0	0
	11(SUS)	-30	-738	-59	0	0	0
	12(SUS)	67	-922	24	0	0	0
	13(OPE)	107	-941	-31	0	0	0
	14(OPE)	-676	-1047	98	0	0	0
	15(OPE)	-290	-879	17	0	0	0
	16(OPE)	-272	-1069	11	0	0	0
	17(OPE)	-421	-1094	475	0	0	0
	18(OPE)	-284	-966	11	0	0	0
	19(OPE)	-284	-966	11	0	0	0
	20(OCC)	392	24	-42	0	0	0
	21(OCC)	-392	-81	87	0	0	0
	22(OCC)	-5	87	6	0	0	0
	23(OCC)	12	-103	-0	0	0	0
	24(OCC)	-137	-128	464	0	0	0
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	-676/L14	-1094/L17	475/L17			
25		TYPE=Rigid ANC;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	3(HYD)	-45	-702	-80	0	0	11
	4(OPE)	41	-256	-341	0	0	10
	7(OPE)	-284	-767	11	-0	0	10
	9(OPE)	-284	-767	11	-0	0	10
	11(SUS)	-30	-540	-59	0	-0	10
	12(SUS)	67	-724	24	-0	0	10
	13(OPE)	56	-743	-31	-0	-0	10
	14(OPE)	-624	-848	98	0	-0	10
	15(OPE)	-290	-704	17	-0	-0	9
	16(OPE)	-272	-847	11	-0	0	11
	17(OPE)	-421	-895	423	0	3	10
	18(OPE)	-284	-767	11	-0	0	10
	19(OPE)	-284	-767	11	0	0	10
	20(OCC)	340	24	-42	-0	-0	0
	21(OCC)	-340	-81	87	0	-0	0
	22(OCC)	-5	63	6	0	-0	-1
	23(OCC)	12	-79	-0	0	0	1
	24(OCC)	-137	-128	412	0	3	0
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	-624/L14	-895/L17	423/L17	-0/L13	3/L17	11/L16
121		TYPE=Rigid +Y;					
	3(HYD)	0	-2321	67	0	0	0
	4(OPE)	0	-1653	165	0	0	0
	7(OPE)	0	-1645	164	0	0	0
	9(OPE)	0	-1645	164	0	0	0
	11(SUS)	0	-1645	44	0	0	0
	12(SUS)	-1	-39	-4	0	0	0
	13(OPE)	0	-1645	165	0	0	0
	14(OPE)	0	-1647	165	0	0	0
	15(OPE)	0	-1645	164	0	0	0
	16(OPE)	0	-1647	165	0	0	0
	17(OPE)	0	-1655	165	0	0	0
	18(OPE)	0	-1645	164	0	0	0
	19(OPE)	0	-1645	164	0	0	0
	20(OCC)	0	-0	0	0	0	0
	21(OCC)	-0	-2	0	0	0	0
	22(OCC)	-0	0	-0	0	0	0
	23(OCC)	-0	-2	0	0	0	0
	24(OCC)	-0	-10	1	0	0	0
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	-0	0	0	0	0	0
	MAX	-1/L12	-2321/L3	165/L17			
160		TYPE=Rigid -X; Rigid X; Rigid Z;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
		Prog Design VSH;					
	3(HYD)	624	-2321	134	0	0	0
	4(OPE)	2990	-2247	833	0	0	0
	7(OPE)	2589	-2236	487	0	0	0
	9(OPE)	2581	-2236	488	0	0	0
	11(SUS)	461	-1705	88	0	0	0
	12(SUS)	-1	-39	-4	0	0	0
	13(OPE)	4486	-2611	516	0	0	0
	14(OPE)	631	-1685	355	0	0	0
	15(OPE)	2374	-2036	507	0	0	0
	16(OPE)	2818	-2422	503	0	0	0
	17(OPE)	2300	-1971	801	0	0	0
	18(OPE)	2587	-2235	483	0	0	0
	19(OPE)	2589	-2236	487	0	0	0
	20(OCC)	1897	-375	29	0	0	0
	21(OCC)	-1958	552	-132	0	0	0
	22(OCC)	-215	200	20	0	0	0
	23(OCC)	229	-186	16	0	0	0
	24(OCC)	-289	265	314	0	0	0
	25(OCC)	-2	1	-3	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	4486/L13	-2611/L13	833/L4			
300		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	-231	-2101	-454	0	0	0
	4(OPE)	-649	-2172	54	0	0	0
	7(OPE)	-327	-1093	20	0	0	0
	9(OPE)	-327	-1092	20	0	0	0
	11(SUS)	-177	-1796	-382	0	0	0
	12(SUS)	12	-4529	-398	0	0	0
	13(OPE)	-230	-796	63	0	0	0
	14(OPE)	-460	-1549	70	0	0	0
	15(OPE)	-280	-937	29	0	0	0
	16(OPE)	-435	-1454	37	0	0	0
	17(OPE)	-155	-1554	440	0	0	0
	18(OPE)	-327	-1092	19	0	0	0
	19(OPE)	-327	-1093	20	0	0	0
	20(OCC)	97	298	43	0	0	0
	21(OCC)	-132	-456	49	0	0	0
	22(OCC)	48	156	9	0	0	0
	23(OCC)	-107	-361	17	0	0	0
	24(OCC)	172	-461	419	0	0	0
	25(OCC)	0	1	-2	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	-649/L4	-4529/L12	-454/L3			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
400		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	-141	-1467	70	0	0	0
	4(OPE)	-165	-550	-12	0	0	0
	7(OPE)	-345	-1152	-10	0	0	0
	9(OPE)	-347	-1157	-11	0	0	0
	11(SUS)	-112	-1101	58	0	0	0
	12(SUS)	0	282	85	0	0	0
	13(OPE)	-350	-1166	13	0	0	0
	14(OPE)	-315	-1052	-22	0	0	0
	15(OPE)	-303	-1011	-3	0	0	0
	16(OPE)	-361	-1205	-10	0	0	0
	17(OPE)	-144	-861	215	0	0	0
	18(OPE)	-345	-1152	-10	0	0	0
	19(OPE)	-345	-1152	-10	0	0	0
	20(OCC)	-4	-14	22	0	0	0
	21(OCC)	31	100	-12	0	0	0
	22(OCC)	42	141	7	0	0	0
	23(OCC)	-16	-53	-0	0	0	0
	24(OCC)	202	291	224	0	0	0
	25(OCC)	-0	-0	-1	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-361/L16	-1467/L3	224/L24			
480		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	-8	-2079	10	0	0	0
	4(OPE)	-631	-2128	-99	0	0	0
	7(OPE)	-487	-1630	-45	0	0	0
	9(OPE)	-483	-1619	-46	0	0	0
	11(SUS)	-22	-1330	5	0	0	0
	12(SUS)	54	-1418	42	0	0	0
	13(OPE)	-528	-1762	-31	0	0	0
	14(OPE)	-443	-1496	-68	0	0	0
	15(OPE)	-439	-1470	-40	0	0	0
	16(OPE)	-536	-1794	-49	0	0	0
	17(OPE)	-410	-1691	299	0	0	0
	18(OPE)	-487	-1630	-46	0	0	0
	19(OPE)	-487	-1630	-45	0	0	0
	20(OCC)	-41	-132	14	0	0	0
	21(OCC)	44	135	-23	0	0	0
	22(OCC)	48	160	5	0	0	0
	23(OCC)	-49	-164	-4	0	0	0
	24(OCC)	77	-61	344	0	0	0
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	-631/L4	-2128/L4	344/L24			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
660		TYPE=Rigid +Y;					
	3(HYD)	-202	-1434	184	0	0	0
	4(OPE)	-149	-1165	-316	0	0	0
	7(OPE)	-185	-1114	-278	0	0	0
	9(OPE)	-219	-988	-200	0	0	0
	11(SUS)	-150	-1040	124	0	0	0
	12(SUS)	-149	-1028	134	0	0	0
	13(OPE)	-355	-1377	-212	0	0	0
	14(OPE)	-75	-817	-233	0	0	0
	15(OPE)	-141	-975	-256	0	0	0
	16(OPE)	-222	-1255	-304	0	0	0
	17(OPE)	-267	-1088	187	0	0	0
	18(OPE)	-183	-1116	-280	0	0	0
	19(OPE)	-185	-1115	-278	0	0	0
	20(OCC)	-169	-262	67	0	0	0
	21(OCC)	111	298	45	0	0	0
	22(OCC)	44	140	22	0	0	0
	23(OCC)	-37	-140	-26	0	0	0
	24(OCC)	-82	27	465	0	0	0
	25(OCC)	2	-2	-2	0	0	0
	26(OCC)	0	-0	-0	0	0	0
	MAX	-355/L13	-1434/L3	465/L24			
720		TYPE=Rigid ANC;					
	3(HYD)	228	-345	-128	-114	16	-54
	4(OPE)	-74	169	297	219	575	-282
	7(OPE)	367	-32	140	20	153	-197
	9(OPE)	-23	-221	315	63	76	-123
	11(SUS)	167	-311	-84	-85	12	-39
	12(SUS)	165	-311	-83	-82	11	-38
	13(OPE)	1278	243	-165	-40	67	-372
	14(OPE)	-503	-313	227	69	401	-34
	15(OPE)	308	5	94	29	193	-184
	16(OPE)	376	-66	151	10	142	-199
	17(OPE)	426	6	407	172	-121	-208
	18(OPE)	360	-30	134	19	158	-196
	19(OPE)	367	-32	140	20	154	-198
	20(OCC)	911	274	-305	-60	-87	-174
	21(OCC)	-870	-281	87	49	247	164
	22(OCC)	-59	37	-46	9	39	14
	23(OCC)	9	-34	10	-9	-12	-2
	24(OCC)	59	38	267	153	-274	-10
	25(OCC)	-7	2	-6	-0	5	2
	26(OCC)	1	0	-0	-0	0	-0
	MAX	1278/L13	-345/L3	407/L17	219/L4	575/L4	-372/L13

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
780		TYPE=Rigid ANC;					
	3(HYD)	70	-3617	34	1244	-110	-637
	4(OPE)	146	-2396	399	1258	1620	-393
	7(OPE)	500	-2507	317	994	1148	-410
	9(OPE)	-599	-3197	68	1649	-70	-249
	11(SUS)	8	-3092	24	1230	-103	-319
	12(SUS)	6	-3078	35	1236	-113	-307
	13(OPE)	1361	-2506	345	920	1119	-1110
	14(OPE)	-282	-2455	286	1032	1203	236
	15(OPE)	484	-2134	311	857	1132	-401
	16(OPE)	553	-2861	321	1115	1183	-425
	17(OPE)	536	-2426	1471	1404	708	-420
	18(OPE)	501	-2505	318	992	1148	-412
	19(OPE)	500	-2505	318	992	1148	-412
	20(OCC)	862	0	28	-74	-28	-700
	21(OCC)	-782	52	-31	38	56	647
	22(OCC)	-15	373	-7	-136	-16	9
	23(OCC)	53	-354	4	121	35	-14
	24(OCC)	37	81	1154	410	-439	-10
	25(OCC)	2	2	0	-2	-0	-1
	26(OCC)	-0	2	0	-2	0	-2
	MAX	1361/L13	-3617/L3	1471/L17	1649/L9	1620/L4	-1110/L13
840		TYPE=Rigid ANC;					
	3(HYD)	70	-3617	34	1364	-110	-888
	4(OPE)	146	-2396	399	2683	1620	-914
	7(OPE)	500	-2507	317	2126	1148	-2194
	9(OPE)	-599	-3197	68	1893	-70	1888
	11(SUS)	8	-3092	24	1316	-103	-348
	12(SUS)	6	-3078	35	1362	-113	-329
	13(OPE)	1361	-2506	345	2153	1119	-5970
	14(OPE)	-282	-2455	286	2053	1203	1244
	15(OPE)	484	-2134	311	1966	1132	-2130
	16(OPE)	553	-2861	321	2262	1183	-2398
	17(OPE)	536	-2426	1471	6656	708	-2335
	18(OPE)	501	-2505	318	2126	1148	-2201
	19(OPE)	500	-2505	318	2126	1148	-2196
	20(OCC)	862	0	28	26	-28	-3776
	21(OCC)	-782	52	-31	-73	56	3439
	22(OCC)	-15	373	-7	-160	-16	64
	23(OCC)	53	-354	4	135	35	-204
	24(OCC)	37	81	1154	4530	-439	-141
	25(OCC)	2	2	0	-1	-0	-7
	26(OCC)	-0	2	0	-1	0	-2
	MAX	1361/L13	-3617/L3	1471/L17	6656/L17	1620/L4	-5970/L13

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1240		TYPE=Rigid ANC;					
	3(HYD)	-237	-1810	293	0	0	24
	4(OPE)	3085	-1418	-1270	-0	0	24
	7(OPE)	2507	-1384	-1157	-0	0	24
	9(OPE)	2507	-1384	-1157	-0	0	24
	11(SUS)	-192	-1497	236	0	0	24
	12(SUS)	-191	-1483	234	0	0	24
	13(OPE)	3251	-1370	-1039	-0	0	24
	14(OPE)	1823	-1429	-1138	0	0	24
	15(OPE)	2454	-1256	-1067	-0	0	21
	16(OPE)	2519	-1562	-1140	-0	0	27
	17(OPE)	2067	-1528	-167	0	6	24
	18(OPE)	2509	-1384	-1161	0	0	24
	19(OPE)	2506	-1384	-1157	-0	0	24
	20(OCC)	744	14	118	0	-0	0
	21(OCC)	-684	-46	19	0	-0	0
	22(OCC)	-53	128	91	0	-0	-3
	23(OCC)	13	-179	17	0	-0	3
	24(OCC)	-440	-144	990	0	6	0
	25(OCC)	3	-0	-4	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	3251/L13	-1810/L3	-1270/L4	-0/L7	6/L17	27/L16
1241		TYPE=Displ. Reaction;					
	3(HYD)	-237	-2196	293	0	0	0
	4(OPE)	3085	-1792	-1270	0	0	0
	7(OPE)	2507	-1758	-1157	0	0	0
	9(OPE)	2507	-1758	-1157	0	0	0
	11(SUS)	-192	-1871	236	0	0	0
	12(SUS)	-191	-1856	234	0	0	0
	13(OPE)	3348	-1744	-1039	0	0	0
	14(OPE)	1726	-1803	-1138	0	0	0
	15(OPE)	2454	-1585	-1067	0	0	0
	16(OPE)	2519	-1982	-1140	0	0	0
	17(OPE)	2067	-1902	-70	0	0	0
	18(OPE)	2509	-1758	-1161	0	0	0
	19(OPE)	2506	-1758	-1157	0	0	0
	20(OCC)	841	14	118	0	0	0
	21(OCC)	-781	-46	19	0	0	0
	22(OCC)	-53	173	91	0	0	0
	23(OCC)	13	-224	17	0	0	0
	24(OCC)	-440	-144	1087	0	0	0
	25(OCC)	3	-0	-4	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	3348/L13	-2196/L3	-1270/L4			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1280		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	-81	-4025	206	0	0	0
	4(OPE)	-433	-1462	69	0	0	0
	7(OPE)	-507	-1693	31	0	0	0
	9(OPE)	-508	-1695	30	0	0	0
	11(SUS)	-53	-3836	151	0	0	0
	12(SUS)	-52	-3821	151	0	0	0
	13(OPE)	-440	-1493	85	0	0	0
	14(OPE)	-574	-1922	58	0	0	0
	15(OPE)	-406	-1368	59	0	0	0
	16(OPE)	-647	-2162	49	0	0	0
	17(OPE)	-342	-1830	430	0	0	0
	18(OPE)	-504	-1681	30	0	0	0
	19(OPE)	-507	-1694	31	0	0	0
	20(OCC)	67	200	54	0	0	0
	21(OCC)	-67	-229	27	0	0	0
	22(OCC)	101	324	29	0	0	0
	23(OCC)	-140	-469	19	0	0	0
	24(OCC)	165	-138	399	0	0	0
	25(OCC)	3	11	-1	0	0	0
	26(OCC)	-0	-1	-0	0	0	0
	MAX	-647/L16	-4025/L3	430/L17			
1380		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	-275	-3066	-387	0	0	0
	4(OPE)	-2472	-8320	-345	0	0	0
	7(OPE)	-2117	-7183	-401	0	0	0
	9(OPE)	-2118	-7185	-402	0	0	0
	11(SUS)	-210	-2818	-299	0	0	0
	12(SUS)	-207	-2791	-298	0	0	0
	13(OPE)	-2255	-7643	-414	0	0	0
	14(OPE)	-2084	-7046	-354	0	0	0
	15(OPE)	-2023	-6854	-367	0	0	0
	16(OPE)	-2210	-7495	-414	0	0	0
	17(OPE)	-2095	-7061	313	0	0	0
	18(OPE)	-2117	-7183	-401	0	0	0
	19(OPE)	-2117	-7183	-401	0	0	0
	20(OCC)	-138	-460	-13	0	0	0
	21(OCC)	33	137	47	0	0	0
	22(OCC)	94	329	34	0	0	0
	23(OCC)	-93	-312	-13	0	0	0
	24(OCC)	22	122	714	0	0	0
	25(OCC)	0	1	-0	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-2472/L4	-8320/L4	714/L24			

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1500		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-213	-3773	-322	0	0	0
	4(OPE)	170	-758	261	0	0	0
	7(OPE)	322	-1254	196	0	0	0
	9(OPE)	320	-1255	199	0	0	0
	11(SUS)	-172	-2971	-250	0	0	0
	12(SUS)	-172	-2955	-248	0	0	0
	13(OPE)	300	-1258	229	0	0	0
	14(OPE)	378	-1352	147	0	0	0
	15(OPE)	199	-885	176	0	0	0
	16(OPE)	450	-1627	189	0	0	0
	17(OPE)	206	-1399	1292	0	0	0
	18(OPE)	322	-1254	195	0	0	0
	19(OPE)	322	-1254	196	0	0	0
	20(OCC)	-21	-4	33	0	0	0
	21(OCC)	56	-97	-48	0	0	0
	22(OCC)	-123	369	-19	0	0	0
	23(OCC)	128	-373	-6	0	0	0
	24(OCC)	-116	-144	1097	0	0	0
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	-0	0	0	0	0	0
	MAX	450/L16	-3773/L3	1292/L17			
1520		TYPE=Rigid +Y;					
	3(HYD)	-183	-3411	262	0	0	0
	4(OPE)	-765	-2572	-105	0	0	0
	7(OPE)	-765	-2553	-41	0	0	0
	9(OPE)	-765	-2552	-40	0	0	0
	11(SUS)	-149	-2683	205	0	0	0
	12(SUS)	-148	-2668	205	0	0	0
	13(OPE)	-653	-2395	-299	0	0	0
	14(OPE)	-596	-2292	-343	0	0	0
	15(OPE)	-680	-2269	-24	0	0	0
	16(OPE)	-850	-2838	-38	0	0	0
	17(OPE)	-542	-2583	554	0	0	0
	18(OPE)	-765	-2554	-40	0	0	0
	19(OPE)	-765	-2553	-41	0	0	0
	20(OCC)	112	159	-258	0	0	0
	21(OCC)	169	262	-302	0	0	0
	22(OCC)	85	285	17	0	0	0
	23(OCC)	-86	-284	3	0	0	0
	24(OCC)	223	-29	595	0	0	0
	25(OCC)	-0	-1	1	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-850/L16	-3411/L3	595/L24			

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Various Load Cases

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1560		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	274	-2688	-193	0	0	0
	4(OPE)	-14724	-7511	6130	0	0	0
	7(OPE)	-11846	-7015	5193	0	0	0
	9(OPE)	-11812	-7013	5180	0	0	0
	11(SUS)	227	-2111	-151	0	0	0
	12(SUS)	226	-2100	-150	0	0	0
	13(OPE)	-10324	-6542	2577	0	0	0
	14(OPE)	-14296	-6966	4537	0	0	0
	15(OPE)	-11710	-6507	5002	0	0	0
	16(OPE)	-11911	-7525	5367	0	0	0
	17(OPE)	-11099	-7240	5363	0	0	0
	18(OPE)	-11843	-7016	5194	0	0	0
	19(OPE)	-11846	-7015	5193	0	0	0
	20(OCC)	1521	473	-2616	0	0	0
	21(OCC)	-2451	49	-656	0	0	0
	22(OCC)	136	508	-191	0	0	0
	23(OCC)	-66	-510	174	0	0	0
	24(OCC)	747	-225	170	0	0	0
	25(OCC)	3	-1	1	0	0	0
	26(OCC)	-0	0	0	0	0	0
	MAX	-14724/L4	-7525/L16	6130/L4			
1660		TYPE=Rigid ANC;					
	3(HYD)	0	0	0	0	-0	-0
	4(OPE)	0	0	0	-0	-0	-0
	7(OPE)	0	0	0	-0	0	-0
	9(OPE)	0	0	0	-0	-0	-0
	11(SUS)	0	0	0	0	0	0
	12(SUS)	0	0	0	0	-0	0
	13(OPE)	0	0	0	-0	0	-0
	14(OPE)	0	0	0	-0	-0	-0
	15(OPE)	0	0	0	-0	-0	-0
	16(OPE)	0	0	0	0	-0	0
	17(OPE)	0	0	0	0	0	-0
	18(OPE)	0	0	0	0	-0	-0
	19(OPE)	0	0	0	-0	0	-0
	20(OCC)	0	0	0	-0	0	0
	21(OCC)	0	0	0	-0	-0	0
	22(OCC)	0	0	0	0	-0	0
	23(OCC)	0	0	0	0	-0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	-0	0
	26(OCC)	0	0	0	0	0	0
	MAX		0/L13	0/L17	-0/L13	-0/L14	-0/L4

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1700		TYPE=Rigid ANC;					
	3(HYD)	33	-1016	-33	-159	16	-94
	4(OPE)	-1155	537	656	442	542	1827
	7(OPE)	-944	236	601	317	390	1443
	9(OPE)	-943	236	600	317	389	1441
	11(SUS)	32	-938	-29	-138	12	-89
	12(SUS)	32	-935	-29	-137	12	-89
	13(OPE)	-351	151	407	368	282	1006
	14(OPE)	-1518	313	496	422	678	1829
	15(OPE)	-939	387	581	349	394	1476
	16(OPE)	-941	84	621	285	375	1402
	17(OPE)	-902	178	1256	496	-18	1399
	18(OPE)	-944	237	601	317	390	1443
	19(OPE)	-944	236	601	317	390	1443
	20(OCC)	593	-85	-194	51	-108	-437
	21(OCC)	-574	77	-104	106	288	386
	22(OCC)	5	150	-19	32	4	33
	23(OCC)	3	-152	21	-32	-15	-41
	24(OCC)	42	-58	655	179	-408	-44
	25(OCC)	-0	0	0	-0	-0	0
	26(OCC)	-0	-0	-0	0	0	-0
	MAX	-1518/L14	-1016/L3	1256/L17	496/L17	678/L14	1829/L14
1780		TYPE=Rigid ANC;					
	3(HYD)	-48	-605	-187	101	1	-89
	4(OPE)	1002	16131	6964	828	-390	748
	7(OPE)	334	7300	4666	-503	-133	245
	9(OPE)	350	7280	4635	-489	-139	259
	11(SUS)	-51	-614	-160	76	4	-90
	12(SUS)	-51	-609	-156	75	4	-90
	13(OPE)	-53	7518	5240	-821	87	-126
	14(OPE)	289	7339	4806	-588	-199	229
	15(OPE)	342	7377	4688	-512	-134	257
	16(OPE)	325	7223	4644	-493	-131	231
	17(OPE)	155	7130	4323	-267	-91	21
	18(OPE)	334	7300	4666	-503	-133	245
	19(OPE)	334	7300	4666	-503	-133	245
	20(OCC)	-387	218	574	-319	220	-370
	21(OCC)	-45	39	140	-86	-66	-16
	22(OCC)	8	77	22	-10	-1	12
	23(OCC)	-10	-77	-22	10	2	-14
	24(OCC)	-179	-170	-344	236	42	-224
	25(OCC)	-0	-0	-0	0	0	-0
	26(OCC)	0	-0	-0	0	-0	0
	MAX	1002/L4	16131/L4	6964/L4	828/L4	-390/L4	748/L4

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1820		TYPE=Rigid ANC;					
	3(HYD)	48	318	187	-43	-1	74
	4(OPE)	-1002	-16414	-6964	-2994	390	-436
	7(OPE)	-334	-7583	-4666	-949	133	-141
	9(OPE)	-350	-7564	-4635	-953	139	-150
	11(SUS)	51	331	160	-26	-4	74
	12(SUS)	51	326	156	-26	-4	74
	13(OPE)	127	-7802	-5240	-809	-87	101
	14(OPE)	-362	-7623	-4806	-907	199	-132
	15(OPE)	-342	-7627	-4688	-946	134	-151
	16(OPE)	-325	-7540	-4644	-952	131	-130
	17(OPE)	-155	-7413	-4249	-1070	91	27
	18(OPE)	-334	-7583	-4666	-949	133	-141
	19(OPE)	-334	-7583	-4666	-949	133	-141
	20(OCC)	461	-218	-574	140	-220	242
	21(OCC)	-28	-39	-140	42	66	9
	22(OCC)	-8	-43	-22	3	1	-10
	23(OCC)	10	43	22	-3	-2	11
	24(OCC)	179	170	417	-121	-42	168
	25(OCC)	0	0	0	-0	-0	0
	26(OCC)	-0	0	0	-0	0	-0
	MAX	-1002/L4	-16414/L4	-6964/L4	-2994/L4	390/L4	-436/L4
1840		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	3(HYD)	-67	-9538	-20	0	0	0
	4(OPE)	489	-1217	147	0	0	0
	7(OPE)	566	-5404	170	0	0	0
	9(OPE)	554	-5399	166	0	0	0
	11(SUS)	-61	-9147	-18	0	0	0
	12(SUS)	-61	-9112	-18	0	0	0
	13(OPE)	6599	-4702	1980	0	0	0
	14(OPE)	-4093	-5316	1228	0	0	0
	15(OPE)	567	-4264	170	0	0	0
	16(OPE)	545	-6542	163	0	0	0
	17(OPE)	1510	-6826	5167	0	0	0
	18(OPE)	565	-5402	170	0	0	0
	19(OPE)	566	-5404	170	0	0	0
	20(OCC)	6033	702	1810	0	0	0
	21(OCC)	-4659	87	1058	0	0	0
	22(OCC)	1	1140	0	0	0	0
	23(OCC)	-21	-1138	-6	0	0	0
	24(OCC)	944	-1422	4997	0	0	0
	25(OCC)	-1	2	-0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	6599/L13	-9538/L3	5167/L17			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1860		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	0	-8043	-1	0	0	0
	4(OPE)	-765	-7929	208	0	0	0
	7(OPE)	-761	-7881	206	0	0	0
	9(OPE)	-761	-7882	206	0	0	0
	11(SUS)	0	-7696	-1	0	0	0
	12(SUS)	0	-7670	-1	0	0	0
	13(OPE)	-749	-7770	205	0	0	0
	14(OPE)	-758	-7852	205	0	0	0
	15(OPE)	-672	-6962	182	0	0	0
	16(OPE)	-849	-8799	230	0	0	0
	17(OPE)	-1486	-7852	3516	0	0	0
	18(OPE)	-761	-7881	206	0	0	0
	19(OPE)	-761	-7881	206	0	0	0
	20(OCC)	11	111	-1	0	0	0
	21(OCC)	3	29	-1	0	0	0
	22(OCC)	89	918	-24	0	0	0
	23(OCC)	-89	-919	24	0	0	0
	24(OCC)	-726	29	3310	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	-1486/L17	-8799/L16	3516/L17			
1880		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	-0	-8037	-1	0	0	0
	4(OPE)	-822	-8218	-3	0	0	0
	7(OPE)	-806	-8060	-3	0	0	0
	9(OPE)	-806	-8062	-3	0	0	0
	11(SUS)	-0	-7689	-1	0	0	0
	12(SUS)	-0	-7664	-1	0	0	0
	13(OPE)	-790	-7901	-1	0	0	0
	14(OPE)	-807	-8070	-3	0	0	0
	15(OPE)	-714	-7143	-2	0	0	0
	16(OPE)	-898	-8977	-3	0	0	0
	17(OPE)	-684	-8020	419	0	0	0
	18(OPE)	-806	-8060	-3	0	0	0
	19(OPE)	-806	-8060	-3	0	0	0
	20(OCC)	16	159	2	0	0	0
	21(OCC)	-1	-10	-0	0	0	0
	22(OCC)	92	917	1	0	0	0
	23(OCC)	-92	-917	-1	0	0	0
	24(OCC)	122	40	421	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	26(OCC)	-0	-0	-0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-898/L16	-8977/L16	421/L24			
1900		TYPE=Rigid Y; Rigid X; Rigid Z w/gap;					
	3(HYD)	-36	-10166	-72	0	0	0
	4(OPE)	1534	13958	-912	0	0	0
	7(OPE)	964	1940	227	0	0	0
	9(OPE)	984	1962	176	0	0	0
	11(SUS)	-36	-9781	-43	0	0	0
	12(SUS)	-35	-9747	-41	0	0	0
	13(OPE)	4513	1505	-899	0	0	0
	14(OPE)	-4026	1996	-888	0	0	0
	15(OPE)	783	3155	206	0	0	0
	16(OPE)	1161	724	263	0	0	0
	17(OPE)	455	2396	376	0	0	0
	18(OPE)	965	1940	228	0	0	0
	19(OPE)	964	1940	227	0	0	0
	20(OCC)	3548	-434	-1126	0	0	0
	21(OCC)	-4990	56	-1115	0	0	0
	22(OCC)	-181	1215	-21	0	0	0
	23(OCC)	196	-1215	36	0	0	0
	24(OCC)	-509	456	149	0	0	0
	25(OCC)	0	0	1	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-4990/L21	13958/L4	-1126/L20			
2180		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-10	-940	54	0	0	0
	4(OPE)	248	-798	132	0	0	0
	7(OPE)	232	-812	108	0	0	0
	9(OPE)	226	-805	99	0	0	0
	11(SUS)	-9	-837	50	0	0	0
	12(SUS)	-9	-832	49	0	0	0
	13(OPE)	260	-810	124	0	0	0
	14(OPE)	-12	-810	123	0	0	0
	15(OPE)	200	-711	88	0	0	0
	16(OPE)	257	-912	112	0	0	0
	17(OPE)	242	-835	283	0	0	0
	18(OPE)	247	-812	119	0	0	0
	19(OPE)	232	-812	112	0	0	0
	20(OCC)	28	2	16	0	0	0
	21(OCC)	-244	1	15	0	0	0
	22(OCC)	-32	100	-20	0	0	0
	23(OCC)	24	-100	4	0	0	0
	24(OCC)	10	-23	175	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	25(OCC)	14	0	11	0	0	0
	26(OCC)	-0	-1	4	0	0	0
	MAX	260/L13	-940/L3	283/L17			
2200		TYPE=Rigid +Y;					
	3(HYD)	-2	-448	-18	0	0	0
	4(OPE)	119	-401	16	0	0	0
	7(OPE)	118	-392	3	0	0	0
	9(OPE)	-97	-411	-13	0	0	0
	11(SUS)	-2	-398	-19	0	0	0
	12(SUS)	-2	-396	-19	0	0	0
	13(OPE)	115	-385	-3	0	0	0
	14(OPE)	-121	-403	-11	0	0	0
	15(OPE)	103	-344	4	0	0	0
	16(OPE)	132	-441	3	0	0	0
	17(OPE)	-98	-379	58	0	0	0
	18(OPE)	117	-389	3	0	0	0
	19(OPE)	117	-389	-5	0	0	0
	20(OCC)	-2	7	-6	0	0	0
	21(OCC)	-238	-11	-15	0	0	0
	22(OCC)	-15	49	0	0	0	0
	23(OCC)	15	-49	-1	0	0	0
	24(OCC)	-216	13	54	0	0	0
	25(OCC)	-1	4	0	0	0	0
	26(OCC)	-1	3	-8	0	0	0
	MAX	-238/L21	-448/L3	58/L17			
2220		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	1	-554	-50	0	0	0
	4(OPE)	-396	-552	-851	0	0	0
	7(OPE)	-326	-568	-635	0	0	0
	9(OPE)	-218	-471	-346	0	0	0
	11(SUS)	0	-493	-23	0	0	0
	12(SUS)	0	-491	-23	0	0	0
	13(OPE)	98	-576	-639	0	0	0
	14(OPE)	-337	-552	-615	0	0	0
	15(OPE)	-311	-512	-627	0	0	0
	16(OPE)	-342	-624	-639	0	0	0
	17(OPE)	-172	-576	-17	0	0	0
	18(OPE)	-310	-580	-632	0	0	0
	19(OPE)	-315	-575	-588	0	0	0
	20(OCC)	424	-8	-3	0	0	0
	21(OCC)	-10	17	20	0	0	0
	22(OCC)	15	56	9	0	0	0
	23(OCC)	-16	-56	-4	0	0	0
	24(OCC)	154	-7	619	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	16	-12	3	0	0	0
	26(OCC)	11	-7	47	0	0	0
	MAX	424/L20	-624/L16	-851/L4			
2270		TYPE=Rigid +Y;					
	3(HYD)	0	-502	0	0	0	0
	4(OPE)	0	-203	0	0	0	0
	7(OPE)	0	-90	0	0	0	0
	9(OPE)	0	-609	0	0	0	0
	11(SUS)	0	-447	0	0	0	0
	12(SUS)	0	-444	0	0	0	0
	13(OPE)	0	-72	0	0	0	0
	14(OPE)	0	-146	0	0	0	0
	15(OPE)	0	-22	0	0	0	0
	16(OPE)	0	-159	0	0	0	0
	17(OPE)	0	-4	0	0	0	0
	18(OPE)	0	-4	0	0	0	0
	19(OPE)	0	-85	0	0	0	0
	20(OCC)	0	17	0	0	0	0
	21(OCC)	0	-57	0	0	0	0
	22(OCC)	0	67	0	0	0	0
	23(OCC)	0	-69	0	0	0	0
	24(OCC)	0	86	0	0	0	0
	25(OCC)	0	85	0	0	0	0
	26(OCC)	0	5	0	0	0	0
	MAX		-609/L9				
2320		TYPE=Rigid +Y;					
	3(HYD)	0	-126	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	-3588	0	0	0	0
	11(SUS)	0	-189	0	0	0	0
	12(SUS)	0	-188	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0

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Various Load Cases

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	26(OCC)	0	0	0	0	0	0
	MAX		-3588/L9				
2500		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	3(HYD)	-5	-2887	-108	0	0	0
	4(OPE)	3993	1126	-407	0	0	0
	7(OPE)	3912	1097	-485	0	0	0
	9(OPE)	-1012	141	269	0	0	0
	11(SUS)	23	-2306	-58	0	0	0
	12(SUS)	23	-2305	-58	0	0	0
	13(OPE)	4739	1342	-469	0	0	0
	14(OPE)	2955	818	-465	0	0	0
	15(OPE)	3820	1073	-480	0	0	0
	16(OPE)	4001	1120	-486	0	0	0
	17(OPE)	4049	1189	246	0	0	0
	18(OPE)	5668	1611	-544	0	0	0
	19(OPE)	3808	1074	-502	0	0	0
	20(OCC)	827	245	16	0	0	0
	21(OCC)	-957	-279	20	0	0	0
	22(OCC)	-91	-24	5	0	0	0
	23(OCC)	89	23	-0	0	0	0
	24(OCC)	137	92	732	0	0	0
	25(OCC)	1756	514	-59	0	0	0
	26(OCC)	-104	-24	-17	0	0	0
	MAX	5668/L18	-2887/L3	732/L24			
2620		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	-3036	0	0	0	0
	11(SUS)	0	-121	0	0	0	0
	12(SUS)	0	-120	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0

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Various Load Cases

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	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX		-3036/L9				
2800		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	3(HYD)	0	-3237	0	0	0	0
	4(OPE)	2080	0	-13	0	0	0
	7(OPE)	2193	0	-117	0	0	0
	9(OPE)	-1122	0	0	0	0	0
	11(SUS)	0	-2618	0	0	0	0
	12(SUS)	0	-2617	0	0	0	0
	13(OPE)	2820	0	-68	0	0	0
	14(OPE)	1401	0	-99	0	0	0
	15(OPE)	2069	0	-112	0	0	0
	16(OPE)	2308	0	-118	0	0	0
	17(OPE)	2087	0	390	0	0	0
	18(OPE)	2061	0	-68	0	0	0
	19(OPE)	3760	0	-140	0	0	0
	20(OCC)	628	0	49	0	0	0
	21(OCC)	-792	0	18	0	0	0
	22(OCC)	-123	0	5	0	0	0
	23(OCC)	115	0	-1	0	0	0
	24(OCC)	-106	0	507	0	0	0
	25(OCC)	-132	0	49	0	0	0
	26(OCC)	1568	0	-22	0	0	0
	MAX	3760/L19	-3237/L3	507/L24			
4220		TYPE=Rigid ANC;					
	3(HYD)	0	0	0	-0	0	0
	4(OPE)	0	0	0	-0	0	-0
	7(OPE)	0	0	0	0	0	-0
	9(OPE)	0	0	0	-0	0	-0
	11(SUS)	0	0	0	-0	0	0
	12(SUS)	0	0	0	0	0	0
	13(OPE)	0	0	0	-0	0	0
	14(OPE)	0	0	0	-0	0	-0
	15(OPE)	0	0	0	0	0	-0
	16(OPE)	0	0	0	0	0	-0
	17(OPE)	0	0	0	-0	0	-0
	18(OPE)	0	0	0	-0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	-0	0	0
	21(OCC)	0	0	0	-0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0

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Various Load Cases

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	24(OCC)	0	0	0	-0	0	0
	25(OCC)	0	0	0	-0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX		0/L17		-0/L4	0/L4	-0/L4
4260		TYPE=Rigid ANC;					
	3(HYD)	55	-2042	-15	249	-12	1206
	4(OPE)	9507	-3646	-954	357	-1708	5881
	7(OPE)	3739	-2205	-360	205	-992	2404
	9(OPE)	3396	-2206	-367	218	-995	2405
	11(SUS)	144	-1477	-8	174	-2	808
	12(SUS)	145	-1474	-8	174	-2	805
	13(OPE)	8575	-2211	-554	192	-1663	2422
	14(OPE)	-2261	-2199	-82	160	-239	2384
	15(OPE)	3406	-2027	-333	178	-912	2306
	16(OPE)	3746	-2383	-364	236	-1011	2502
	17(OPE)	2198	-2200	1498	307	3756	2394
	18(OPE)	3740	-2205	-360	205	-992	2404
	19(OPE)	3741	-2205	-360	205	-991	2404
	20(OCC)	4836	-6	-194	-13	-671	18
	21(OCC)	-6000	5	278	-45	753	-20
	22(OCC)	-334	177	27	-27	80	-98
	23(OCC)	7	-178	-3	31	-19	98
	24(OCC)	-1541	5	1858	102	4748	-10
	25(OCC)	1	0	0	0	0	-0
	26(OCC)	2	0	0	0	0	-0
	MAX	9507/L4	-3646/L4	1858/L24	357/L4	4748/L24	5881/L4
4320		TYPE=Rigid ANC;					
	3(HYD)	55	-2042	-15	211	-19	2001
	4(OPE)	9507	-3646	-954	-2125	-2147	-17159
	7(OPE)	3739	-2205	-360	-731	-1158	-6304
	9(OPE)	3396	-2206	-367	-736	-1163	-5409
	11(SUS)	144	-1477	-8	154	-5	1114
	12(SUS)	145	-1474	-8	154	-5	1106
	13(OPE)	8575	-2211	-554	-1249	-1917	-18856
	14(OPE)	-2261	-2199	-82	-54	-277	9273
	15(OPE)	3406	-2027	-333	-689	-1065	-5616
	16(OPE)	3746	-2383	-364	-709	-1178	-6143
	17(OPE)	2198	-2200	1498	4202	4445	-2309
	18(OPE)	3740	-2205	-360	-731	-1157	-6307
	19(OPE)	3741	-2205	-360	-731	-1157	-6310
	20(OCC)	4836	-6	-194	-517	-760	-12552
	21(OCC)	-6000	5	278	678	881	15578
	22(OCC)	-334	177	27	42	92	688
	23(OCC)	7	-178	-3	22	-20	162
	24(OCC)	-1541	5	1858	4933	5603	3995

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	1	0	0	0	0	-3
	26(OCC)	2	0	0	0	1	-5
	MAX	9507/L4	-3646/L4	1858/L24	4933/L24	5603/L24	-18856/L13
5370		TYPE=Rigid +Y; Rigid Z w/gap;					
	3(HYD)	288	-961	5	0	0	0
	4(OPE)	422	-1057	-473	0	0	0
	7(OPE)	436	-1112	-486	0	0	0
	9(OPE)	-134	-511	76	0	0	0
	11(SUS)	255	-851	-6	0	0	0
	12(SUS)	255	-850	-6	0	0	0
	13(OPE)	489	-1182	-528	0	0	0
	14(OPE)	381	-1080	-441	0	0	0
	15(OPE)	411	-1016	-487	0	0	0
	16(OPE)	474	-1234	-499	0	0	0
	17(OPE)	394	-1163	-250	0	0	0
	18(OPE)	437	-1116	-485	0	0	0
	19(OPE)	438	-1118	-486	0	0	0
	20(OCC)	53	-70	-43	0	0	0
	21(OCC)	-55	32	44	0	0	0
	22(OCC)	-25	96	-2	0	0	0
	23(OCC)	38	-122	-13	0	0	0
	24(OCC)	-42	-50	236	0	0	0
	25(OCC)	1	-4	1	0	0	0
	26(OCC)	2	-6	-1	0	0	0
	MAX	489/L13	-1234/L16	-528/L13			
5375		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	-1781	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(SUS)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX		-1781/L9				
5805		TYPE=Rigid +Y;					
	3(HYD)	358	-4965	938	0	0	0
	4(OPE)	0	0	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	1001	-4056	691	0	0	0
	11(SUS)	108	-2935	489	0	0	0
	12(SUS)	108	-2932	488	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	1001/L9	-4965/L3	938/L3			
6220		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-235	-3336	-43	0	0	0
	4(OPE)	-568	-1904	-65	0	0	0
	7(OPE)	-622	-2080	-45	0	0	0
	9(OPE)	-603	-2014	-39	0	0	0
	11(SUS)	-140	-2097	-30	0	0	0
	12(SUS)	-125	-2071	-48	0	0	0
	13(OPE)	-592	-1984	-60	0	0	0
	14(OPE)	-655	-2186	-38	0	0	0
	15(OPE)	-547	-1830	-42	0	0	0
	16(OPE)	-697	-2329	-49	0	0	0
	17(OPE)	-602	-2087	172	0	0	0
	18(OPE)	-622	-2080	-45	0	0	0
	19(OPE)	-622	-2080	-45	0	0	0
	20(OCC)	30	96	-15	0	0	0
	21(OCC)	-32	-106	7	0	0	0
	22(OCC)	75	250	3	0	0	0
	23(OCC)	-75	-249	-4	0	0	0

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	24(OCC)	20	-7	218	0	0	0
	25(OCC)	-0	-0	-0	0	0	0
	26(OCC)	-0	-0	-0	0	0	0
	MAX	-697/L16	-3336/L3	218/L24			
6240		TYPE=Rigid +Y;					
	3(HYD)	0	-157	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	-154	0	0	0	0
	11(SUS)	0	-172	0	0	0	0
	12(SUS)	0	-172	0	0	0	0
	13(OPE)	0	-19	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	-19	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX		-172/L11				
6270		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-171	-590	-47	0	0	0
	4(OPE)	0	0	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	-183	-1078	31	0	0	0
	11(SUS)	-174	-593	-38	0	0	0
	12(SUS)	-174	-592	-38	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0

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Various Load Cases

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	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-183/L9	-1078/L9	-47/L3			
6290		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	217	-804	25	0	0	0
	4(OPE)	346	-1153	462	0	0	0
	7(OPE)	334	-1113	494	0	0	0
	9(OPE)	-152	-508	-67	0	0	0
	11(SUS)	174	-728	25	0	0	0
	12(SUS)	173	-728	25	0	0	0
	13(OPE)	332	-1105	704	0	0	0
	14(OPE)	323	-1078	312	0	0	0
	15(OPE)	284	-946	492	0	0	0
	16(OPE)	379	-1263	487	0	0	0
	17(OPE)	329	-1096	832	0	0	0
	18(OPE)	333	-1111	495	0	0	0
	19(OPE)	333	-1111	495	0	0	0
	20(OCC)	-2	7	210	0	0	0
	21(OCC)	-10	35	-182	0	0	0
	22(OCC)	-50	167	-3	0	0	0
	23(OCC)	45	-150	-8	0	0	0
	24(OCC)	-5	16	338	0	0	0
	25(OCC)	-0	1	1	0	0	0
	26(OCC)	-1	2	1	0	0	0
	MAX	379/L16	-1263/L16	832/L17			
6310		TYPE=Rigid +Y;					
	3(HYD)	-6	-900	6	0	0	0
	4(OPE)	-92	-716	-194	0	0	0
	7(OPE)	-57	-796	-232	0	0	0
	9(OPE)	-57	-796	-232	0	0	0
	11(SUS)	-5	-909	2	0	0	0
	12(SUS)	-40	-912	-18	0	0	0
	13(OPE)	-42	-691	-203	0	0	0
	14(OPE)	-100	-943	-265	0	0	0
	15(OPE)	-48	-612	-177	0	0	0
	16(OPE)	-64	-923	-269	0	0	0
	17(OPE)	-113	-598	-139	0	0	0
	18(OPE)	-57	-799	-233	0	0	0
	19(OPE)	-57	-796	-232	0	0	0
	20(OCC)	15	105	29	0	0	0
	21(OCC)	-43	-147	-33	0	0	0
	22(OCC)	9	184	55	0	0	0
	23(OCC)	-7	-127	-37	0	0	0
	24(OCC)	-56	198	93	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	-0	-3	-1	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-113/L17	-943/L14	-269/L16			
6410		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	1154	-4125	446	0	0	0
	4(OPE)	-1278	-1341	-3007	0	0	0
	7(OPE)	-1175	-1740	-2324	0	0	0
	9(OPE)	-1174	-1739	-2322	0	0	0
	11(SUS)	917	-3266	345	0	0	0
	12(SUS)	909	-3239	343	0	0	0
	13(OPE)	-1093	-1478	-2294	0	0	0
	14(OPE)	-1206	-1785	-2384	0	0	0
	15(OPE)	-1060	-1337	-2310	0	0	0
	16(OPE)	-1282	-2143	-2314	0	0	0
	17(OPE)	-877	-1700	-1368	0	0	0
	18(OPE)	-1175	-1741	-2323	0	0	0
	19(OPE)	-1175	-1740	-2324	0	0	0
	20(OCC)	82	262	30	0	0	0
	21(OCC)	-31	-44	-60	0	0	0
	22(OCC)	115	404	14	0	0	0
	23(OCC)	-107	-403	10	0	0	0
	24(OCC)	298	40	956	0	0	0
	25(OCC)	0	-1	1	0	0	0
	26(OCC)	-0	0	-0	0	0	0
	MAX	-1282/L16	-4125/L3	-3007/L4			
6430		TYPE=Rigid +Y;					
	3(HYD)	-9	-5844	-183	0	0	0
	4(OPE)	221	-2942	855	0	0	0
	7(OPE)	457	-3786	-507	0	0	0
	9(OPE)	229	-4111	1212	0	0	0
	11(SUS)	-117	-4775	-110	0	0	0
	12(SUS)	-116	-4731	-109	0	0	0
	13(OPE)	1207	-4023	7	0	0	0
	14(OPE)	-1469	-4951	-222	0	0	0
	15(OPE)	408	-3274	-523	0	0	0
	16(OPE)	559	-4228	-500	0	0	0
	17(OPE)	216	-4627	1371	0	0	0
	18(OPE)	463	-3780	-507	0	0	0
	19(OPE)	462	-3778	-507	0	0	0
	20(OCC)	750	-237	514	0	0	0
	21(OCC)	-1925	-1165	285	0	0	0
	22(OCC)	-49	511	-16	0	0	0
	23(OCC)	102	-443	7	0	0	0
	24(OCC)	-241	-841	1878	0	0	0

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Various Load Cases

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	25(OCC)	6	5	0	0	0	0
	26(OCC)	5	8	-0	0	0	0
	MAX	-1925/L21	-5844/L3	1878/L24			
6450		TYPE=Rigid +Y;					
	3(HYD)	0	-527	0	0	0	0
	4(OPE)	0	-2367	0	0	0	0
	7(OPE)	0	-1960	0	0	0	0
	9(OPE)	0	-152	0	0	0	0
	11(SUS)	0	-689	0	0	0	0
	12(SUS)	0	-689	0	0	0	0
	13(OPE)	0	-2543	0	0	0	0
	14(OPE)	0	-1819	0	0	0	0
	15(OPE)	0	-1586	0	0	0	0
	16(OPE)	0	-2375	0	0	0	0
	17(OPE)	0	-2318	0	0	0	0
	18(OPE)	0	-1776	0	0	0	0
	19(OPE)	0	-1703	0	0	0	0
	20(OCC)	0	-582	0	0	0	0
	21(OCC)	0	142	0	0	0	0
	22(OCC)	0	374	0	0	0	0
	23(OCC)	0	-414	0	0	0	0
	24(OCC)	0	-358	0	0	0	0
	25(OCC)	0	184	0	0	0	0
	26(OCC)	0	257	0	0	0	0
	MAX		-2543/L13				
6470		TYPE=Rigid +Y;					
	3(HYD)	0	-1101	0	0	0	0
	4(OPE)	0	-1248	0	0	0	0
	7(OPE)	0	-1761	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	11(SUS)	0	-937	0	0	0	0
	12(SUS)	0	-937	0	0	0	0
	13(OPE)	0	-1652	0	0	0	0
	14(OPE)	0	-1487	0	0	0	0
	15(OPE)	0	-1201	0	0	0	0
	16(OPE)	0	-2291	0	0	0	0
	17(OPE)	0	-1538	0	0	0	0
	18(OPE)	0	-1492	0	0	0	0
	19(OPE)	0	-1113	0	0	0	0
	20(OCC)	0	109	0	0	0	0
	21(OCC)	0	274	0	0	0	0
	22(OCC)	0	560	0	0	0	0
	23(OCC)	0	-530	0	0	0	0
	24(OCC)	0	223	0	0	0	0
	25(OCC)	0	269	0	0	0	0

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Various Load Cases

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	26(OCC)	0	648	0	0	0	0
	MAX		-2291/L16				
6490		TYPE=Rigid +Y;					
	3(HYD)	-167	-5132	312	0	0	0
	4(OPE)	730	-5811	1583	0	0	0
	7(OPE)	681	-5200	1404	0	0	0
	9(OPE)	-160	-5220	1558	0	0	0
	11(SUS)	-151	-4797	235	0	0	0
	12(SUS)	-152	-4777	230	0	0	0
	13(OPE)	1619	-5406	95	0	0	0
	14(OPE)	-1400	-4949	495	0	0	0
	15(OPE)	712	-4627	1192	0	0	0
	16(OPE)	646	-5782	1610	0	0	0
	17(OPE)	335	-5478	1609	0	0	0
	18(OPE)	681	-5199	1403	0	0	0
	19(OPE)	682	-5197	1402	0	0	0
	20(OCC)	938	-205	-1309	0	0	0
	21(OCC)	-2081	251	-909	0	0	0
	22(OCC)	31	573	-212	0	0	0
	23(OCC)	-35	-581	206	0	0	0
	24(OCC)	-346	-278	205	0	0	0
	25(OCC)	-1	1	-0	0	0	0
	26(OCC)	0	3	-1	0	0	0
	MAX	-2081/L21	-5811/L4	1610/L16			
6520		TYPE=Rigid +Y;					
	3(HYD)	59	-3413	-254	0	0	0
	4(OPE)	87	-4640	1389	0	0	0
	7(OPE)	-721	-4143	-1012	0	0	0
	9(OPE)	284	-3298	337	0	0	0
	11(SUS)	36	-3159	-255	0	0	0
	12(SUS)	35	-3141	-256	0	0	0
	13(OPE)	962	-3410	-348	0	0	0
	14(OPE)	-1043	-3734	-408	0	0	0
	15(OPE)	-686	-3716	-879	0	0	0
	16(OPE)	-736	-4603	-1169	0	0	0
	17(OPE)	-156	-3533	1048	0	0	0
	18(OPE)	-721	-4146	-1014	0	0	0
	19(OPE)	-722	-4147	-1013	0	0	0
	20(OCC)	1683	733	664	0	0	0
	21(OCC)	-322	410	604	0	0	0
	22(OCC)	35	427	134	0	0	0
	23(OCC)	-15	-460	-156	0	0	0
	24(OCC)	565	610	2061	0	0	0
	25(OCC)	1	-2	-1	0	0	0
	26(OCC)	-0	-3	-1	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	1683/L20	-4640/L4	2061/L24			
6540		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	20	-1764	28	0	0	0
	4(OPE)	-65	-362	87	0	0	0
	7(OPE)	-118	-801	-209	0	0	0
	9(OPE)	-58	-664	-191	0	0	0
	11(SUS)	15	-1672	60	0	0	0
	12(SUS)	14	-1659	58	0	0	0
	13(OPE)	120	-942	-256	0	0	0
	14(OPE)	-821	-956	-339	0	0	0
	15(OPE)	-122	-754	-191	0	0	0
	16(OPE)	-132	-970	-259	0	0	0
	17(OPE)	-176	-798	162	0	0	0
	18(OPE)	-118	-801	-209	0	0	0
	19(OPE)	-118	-800	-209	0	0	0
	20(OCC)	238	-141	-46	0	0	0
	21(OCC)	-703	-155	-130	0	0	0
	22(OCC)	-4	47	19	0	0	0
	23(OCC)	-14	-168	-50	0	0	0
	24(OCC)	-58	3	372	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	1	0	0	0	0
	MAX	-821/L14	-1764/L3	372/L24			
6560		TYPE=Rigid +Y; Rigid Z w/gap;					
	3(HYD)	-310	-1955	498	0	0	0
	4(OPE)	-2253	-1384	-6384	0	0	0
	7(OPE)	-606	-1487	-1594	0	0	0
	9(OPE)	-293	-1466	-328	0	0	0
	11(SUS)	-199	-1397	369	0	0	0
	12(SUS)	-200	-1394	367	0	0	0
	13(OPE)	-467	-1260	-1213	0	0	0
	14(OPE)	-700	-1661	-1822	0	0	0
	15(OPE)	-612	-1306	-1665	0	0	0
	16(OPE)	-594	-1675	-1495	0	0	0
	17(OPE)	-433	-1535	-158	0	0	0
	18(OPE)	-607	-1487	-1597	0	0	0
	19(OPE)	-608	-1487	-1600	0	0	0
	20(OCC)	139	227	381	0	0	0
	21(OCC)	-94	-174	-228	0	0	0
	22(OCC)	-7	181	-72	0	0	0
	23(OCC)	11	-188	99	0	0	0
	24(OCC)	173	-48	1436	0	0	0
	25(OCC)	-1	0	-3	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	26(OCC)	-2	-0	-6	0	0	0
	MAX	-2253/L4	-1955/L3	-6384/L4			
6590		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-38	-4054	159	0	0	0
	4(OPE)	-1973	-3796	-468	0	0	0
	7(OPE)	-586	-4061	-1068	0	0	0
	9(OPE)	-502	-4117	-1128	0	0	0
	11(SUS)	-34	-3326	121	0	0	0
	12(SUS)	-34	-3321	119	0	0	0
	13(OPE)	-46	-3945	-1183	0	0	0
	14(OPE)	-880	-3939	-788	0	0	0
	15(OPE)	-550	-3512	-899	0	0	0
	16(OPE)	-620	-4526	-1208	0	0	0
	17(OPE)	-981	-3777	-567	0	0	0
	18(OPE)	-586	-4062	-1068	0	0	0
	19(OPE)	-586	-4062	-1068	0	0	0
	20(OCC)	540	116	-114	0	0	0
	21(OCC)	-294	123	280	0	0	0
	22(OCC)	36	549	169	0	0	0
	23(OCC)	-33	-465	-140	0	0	0
	24(OCC)	-395	284	501	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	26(OCC)	-0	-0	-0	0	0	0
	MAX	-1973/L4	-4526/L16	-1208/L16			
6610		TYPE=Rigid +Y;					
	3(HYD)	0	-3981	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	7(OPE)	0	-1816	0	0	0	0
	9(OPE)	0	-1802	0	0	0	0
	11(SUS)	0	-3043	0	0	0	0
	12(SUS)	0	-3038	0	0	0	0
	13(OPE)	0	-1796	0	0	0	0
	14(OPE)	0	-1821	0	0	0	0
	15(OPE)	0	-1449	0	0	0	0
	16(OPE)	0	-2174	0	0	0	0
	17(OPE)	0	-1839	0	0	0	0
	18(OPE)	0	-1816	0	0	0	0
	19(OPE)	0	-1816	0	0	0	0
	20(OCC)	0	21	0	0	0	0
	21(OCC)	0	-4	0	0	0	0
	22(OCC)	0	367	0	0	0	0
	23(OCC)	0	-358	0	0	0	0
	24(OCC)	0	-23	0	0	0	0
	25(OCC)	0	-0	0	0	0	0

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	26(OCC)	0	-0	0	0	0	0
	MAX		-3981/L3				
6640		TYPE=Rigid Y;					
	3(HYD)	0	-6238	0	0	0	0
	4(OPE)	0	-6820	0	0	0	0
	7(OPE)	0	-6103	0	0	0	0
	9(OPE)	0	-6039	0	0	0	0
	11(SUS)	0	-5194	0	0	0	0
	12(SUS)	0	-5188	0	0	0	0
	13(OPE)	0	-6400	0	0	0	0
	14(OPE)	0	-5750	0	0	0	0
	15(OPE)	0	-5464	0	0	0	0
	16(OPE)	0	-6663	0	0	0	0
	17(OPE)	0	-6047	0	0	0	0
	18(OPE)	0	-6104	0	0	0	0
	19(OPE)	0	-6104	0	0	0	0
	20(OCC)	0	-297	0	0	0	0
	21(OCC)	0	354	0	0	0	0
	22(OCC)	0	640	0	0	0	0
	23(OCC)	0	-560	0	0	0	0
	24(OCC)	0	57	0	0	0	0
	25(OCC)	0	-0	0	0	0	0
	26(OCC)	0	-0	0	0	0	0
	MAX		-6820/L4				
6670		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	0	-2853	0	0	0	0
	4(OPE)	0	-1233	0	0	0	0
	7(OPE)	0	-1408	0	0	0	0
	9(OPE)	0	-1523	0	0	0	0
	11(SUS)	0	-2382	0	0	0	0
	12(SUS)	0	-2380	0	0	0	0
	13(OPE)	0	-1411	0	0	0	0
	14(OPE)	0	-1539	0	0	0	0
	15(OPE)	0	-1204	0	0	0	0
	16(OPE)	0	-1701	0	0	0	0
	17(OPE)	0	-1734	641	0	0	0
	18(OPE)	0	-1408	0	0	0	0
	19(OPE)	0	-1408	0	0	0	0
	20(OCC)	0	-3	0	0	0	0
	21(OCC)	0	-131	0	0	0	0
	22(OCC)	0	204	0	0	0	0
	23(OCC)	0	-292	0	0	0	0
	24(OCC)	0	-326	641	0	0	0
	25(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	26(OCC)	0	1	0	0	0	0
	MAX		-2853/L3	641/L17			
6690		TYPE=Rigid +Y;					
	3(HYD)	491	-4823	-723	0	0	0
	4(OPE)	-1166	-4510	686	0	0	0
	7(OPE)	-1220	-4087	123	0	0	0
	9(OPE)	-1211	-4064	144	0	0	0
	11(SUS)	199	-3488	-506	0	0	0
	12(SUS)	198	-3481	-505	0	0	0
	13(OPE)	-1228	-4173	-241	0	0	0
	14(OPE)	-1197	-3992	44	0	0	0
	15(OPE)	-1077	-3615	131	0	0	0
	16(OPE)	-1360	-4547	111	0	0	0
	17(OPE)	-488	-3562	950	0	0	0
	18(OPE)	-1220	-4086	123	0	0	0
	19(OPE)	-1220	-4087	123	0	0	0
	20(OCC)	-9	-86	-364	0	0	0
	21(OCC)	23	95	-79	0	0	0
	22(OCC)	143	471	8	0	0	0
	23(OCC)	-140	-460	-13	0	0	0
	24(OCC)	731	525	827	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-1360/L16	-4823/L3	950/L17			
6710		TYPE=Rigid +Y;					
	3(HYD)	0	-1205	0	0	0	0
	4(OPE)	0	-2645	0	0	0	0
	7(OPE)	0	-2130	0	0	0	0
	9(OPE)	0	-1003	0	0	0	0
	11(SUS)	0	-1037	0	0	0	0
	12(SUS)	0	-1035	0	0	0	0
	13(OPE)	0	-2687	0	0	0	0
	14(OPE)	0	-1355	0	0	0	0
	15(OPE)	0	-1944	0	0	0	0
	16(OPE)	0	-2315	0	0	0	0
	17(OPE)	0	-2148	0	0	0	0
	18(OPE)	0	-2139	0	0	0	0
	19(OPE)	0	-2144	0	0	0	0
	20(OCC)	0	-557	0	0	0	0
	21(OCC)	0	774	0	0	0	0
	22(OCC)	0	186	0	0	0	0
	23(OCC)	0	-185	0	0	0	0
	24(OCC)	0	-18	0	0	0	0
	25(OCC)	0	-9	0	0	0	0
	26(OCC)	0	-15	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX		-2687/L13				
6730		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	388	-1305	50	0	0	0
	4(OPE)	71	0	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	424	-1419	35	0	0	0
	11(SUS)	457	-1543	70	0	0	0
	12(SUS)	457	-1542	70	0	0	0
	13(OPE)	1416	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	25	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	1416	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	25	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	1416/L13	-1543/L11	70/L11			
6750		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	-1108	0	0	0	0
	11(SUS)	0	-11	0	0	0	0
	12(SUS)	0	-12	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX		-1108/L9				
6770		TYPE=Rigid +Y;					
	3(HYD)	-360	-2269	-317	0	0	0
	4(OPE)	172	-1267	339	0	0	0
	7(OPE)	-99	-1537	450	0	0	0
	9(OPE)	-107	-1687	495	0	0	0
	11(SUS)	-272	-1641	-261	0	0	0
	12(SUS)	-268	-1604	-253	0	0	0
	13(OPE)	344	-1162	54	0	0	0
	14(OPE)	-490	-1764	199	0	0	0
	15(OPE)	-57	-1310	389	0	0	0
	16(OPE)	-143	-1760	509	0	0	0
	17(OPE)	-3	-1551	465	0	0	0
	18(OPE)	-99	-1537	450	0	0	0
	19(OPE)	-99	-1537	450	0	0	0
	20(OCC)	443	375	-396	0	0	0
	21(OCC)	-391	-228	-251	0	0	0
	22(OCC)	43	226	-61	0	0	0
	23(OCC)	-43	-224	58	0	0	0
	24(OCC)	96	-14	15	0	0	0
	25(OCC)	-0	-1	0	0	0	0
	26(OCC)	-0	-1	0	0	0	0
	MAX	-490/L14	-2269/L3	509/L16			
7010		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	866	-2958	-191	0	0	0
	4(OPE)	695	-2340	1506	0	0	0
	7(OPE)	520	-2321	463	0	0	0
	9(OPE)	352	-2237	572	0	0	0
	11(SUS)	641	-2177	-125	0	0	0
	12(SUS)	627	-2128	-120	0	0	0
	13(OPE)	701	-2373	-152	0	0	0
	14(OPE)	-400	-2143	795	0	0	0
	15(OPE)	465	-2053	404	0	0	0
	16(OPE)	578	-2589	519	0	0	0
	17(OPE)	353	-2291	965	0	0	0
	18(OPE)	520	-2321	463	0	0	0
	19(OPE)	520	-2321	463	0	0	0
	20(OCC)	181	-52	-616	0	0	0
	21(OCC)	-920	178	332	0	0	0
	22(OCC)	-55	268	-59	0	0	0
	23(OCC)	58	-267	56	0	0	0
	24(OCC)	-167	30	502	0	0	0
	25(OCC)	-0	0	0	0	0	0
	26(OCC)	-0	0	0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-920/L21	-2958/L3	1506/L4			
7130		TYPE=Rigid ANC;					
	3(HYD)	32	-728	33	147	-16	-83
	4(OPE)	946	489	579	-521	570	953
	7(OPE)	747	348	551	-455	389	811
	9(OPE)	746	346	550	-453	388	809
	11(SUS)	31	-654	29	128	-12	-78
	12(SUS)	31	-652	28	128	-12	-78
	13(OPE)	1157	-126	453	-112	507	228
	14(OPE)	483	13	406	-228	460	654
	15(OPE)	724	454	520	-475	397	842
	16(OPE)	759	248	583	-437	370	784
	17(OPE)	652	685	1114	-581	-20	1109
	18(OPE)	747	350	551	-456	389	813
	19(OPE)	747	348	551	-455	389	811
	20(OCC)	410	-474	-98	342	118	-583
	21(OCC)	-264	-335	-145	227	71	-157
	22(OCC)	-23	106	-31	-20	8	30
	23(OCC)	12	-101	32	18	-19	-27
	24(OCC)	-95	337	563	-126	-409	298
	25(OCC)	-0	1	0	-1	-0	1
	26(OCC)	0	-0	-0	0	0	-0
	MAX	1157/L13	-728/L3	1114/L17	-581/L17	570/L4	1109/L17
7170		TYPE=Rigid ANC;					
	3(HYD)	32	-1015	33	158	-16	-93
	4(OPE)	946	206	579	-341	570	659
	7(OPE)	747	65	551	-284	389	579
	9(OPE)	746	63	550	-282	388	577
	11(SUS)	31	-937	29	137	-12	-88
	12(SUS)	31	-934	28	136	-12	-88
	13(OPE)	1231	-409	453	28	507	-147
	14(OPE)	409	-270	406	-102	460	519
	15(OPE)	724	205	520	-313	397	617
	16(OPE)	759	-70	583	-255	370	548
	17(OPE)	652	402	1188	-219	-20	907
	18(OPE)	747	66	551	-284	389	580
	19(OPE)	747	65	551	-284	389	579
	20(OCC)	484	-474	-98	312	118	-726
	21(OCC)	-338	-335	-145	182	71	-60
	22(OCC)	-23	140	-31	-29	8	38
	23(OCC)	12	-135	32	28	-19	-31
	24(OCC)	-95	337	637	64	-409	328
	25(OCC)	-0	1	0	-1	-0	1
	26(OCC)	0	-0	-0	0	0	-0
	MAX	1231/L13	-1015/L3	1188/L17	-341/L4	570/L4	907/L17

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Various Load Cases

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7180		TYPE=Rigid ANC;					
	3(HYD)	120	771	-93	-34	28	225
	4(OPE)	438	-10701	8705	-4689	443	71
	7(OPE)	175	-3974	5214	-3246	160	52
	9(OPE)	182	-4020	5232	-3245	167	47
	11(SUS)	108	844	-99	-38	22	214
	12(SUS)	108	837	-97	-38	22	213
	13(OPE)	-615	-4852	4903	-2735	-243	-266
	14(OPE)	807	-4355	5141	-3072	379	514
	15(OPE)	163	-4079	5227	-3241	158	26
	16(OPE)	186	-3867	5202	-3251	161	78
	17(OPE)	299	-2967	5249	-3671	149	403
	18(OPE)	175	-3974	5214	-3246	160	52
	19(OPE)	175	-3974	5214	-3246	160	52
	20(OCC)	-790	-878	-311	511	-403	-318
	21(OCC)	632	-381	-74	174	219	462
	22(OCC)	-12	-105	12	5	-2	-25
	23(OCC)	12	107	-12	-6	1	26
	24(OCC)	124	1006	34	-425	-11	351
	25(OCC)	-0	0	0	-0	-0	0
	26(OCC)	-0	-0	0	0	-0	-0
	MAX	807/L14	-10701/L4	8705/L4	-4689/L4	443/L4	514/L14
7200		TYPE=Rigid ANC;					
	3(HYD)	120	484	-93	-63	28	188
	4(OPE)	438	-10985	8705	-1981	443	-66
	7(OPE)	175	-4257	5214	-1623	160	-3
	9(OPE)	182	-4303	5232	-1618	167	-9
	11(SUS)	108	560	-99	-69	22	180
	12(SUS)	108	554	-97	-68	22	180
	13(OPE)	-541	-5135	4903	-1209	-243	-82
	14(OPE)	733	-4638	5141	-1472	379	270
	15(OPE)	163	-4328	5227	-1615	158	-24
	16(OPE)	186	-4185	5202	-1633	161	20
	17(OPE)	299	-3251	5322	-2030	149	310
	18(OPE)	175	-4257	5214	-1623	160	-2
	19(OPE)	175	-4257	5214	-1623	160	-3
	20(OCC)	-716	-878	-311	415	-403	-80
	21(OCC)	559	-381	-74	151	219	273
	22(OCC)	-12	-71	12	9	-2	-22
	23(OCC)	12	73	-12	-9	1	23
	24(OCC)	124	1006	108	-407	-11	312
	25(OCC)	-0	0	0	-0	-0	0
	26(OCC)	-0	-0	0	0	-0	-0
	MAX	733/L14	-10985/L4	8705/L4	-2030/L17	443/L4	312/L24

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
7370		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	-20486	0	0	0	0
	7(OPE)	0	-10330	0	0	0	0
	9(OPE)	0	-10101	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(SUS)	0	0	0	0	0	0
	13(OPE)	0	-12136	0	0	0	0
	14(OPE)	0	-10538	0	0	0	0
	15(OPE)	0	-10337	0	0	0	0
	16(OPE)	0	-10324	0	0	0	0
	17(OPE)	0	-8569	0	0	0	0
	18(OPE)	0	-10330	0	0	0	0
	19(OPE)	0	-10329	0	0	0	0
	20(OCC)	0	-1806	0	0	0	0
	21(OCC)	0	-208	0	0	0	0
	22(OCC)	0	-7	0	0	0	0
	23(OCC)	0	6	0	0	0	0
	24(OCC)	0	1761	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	1	0	0	0	0
	MAX		-20486/L4				
7380		TYPE=Rigid +Y;					
	3(HYD)	-51	-1376	42	0	0	0
	4(OPE)	0	0	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	11(SUS)	-47	-1130	33	0	0	0
	12(SUS)	-47	-1124	33	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-51/L3	-1376/L3	42/L3			

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
7390		TYPE=Rigid +Y;					
	3(HYD)	-137	-1568	46	0	0	0
	4(OPE)	0	0	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	11(SUS)	-119	-1279	36	0	0	0
	12(SUS)	-118	-1272	36	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OPE)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	-137/L3	-1568/L3	46/L3			
7400		TYPE=Rigid +Y; Rigid X w/gap;					
	3(HYD)	239	-3751	105	0	0	0
	4(OPE)	-2090	-10857	2498	0	0	0
	7(OPE)	-764	-5031	602	0	0	0
	9(OPE)	-848	-5339	270	0	0	0
	11(SUS)	240	-2515	83	0	0	0
	12(SUS)	239	-2486	81	0	0	0
	13(OPE)	1149	-4182	504	0	0	0
	14(OPE)	-1598	-5383	231	0	0	0
	15(OPE)	-795	-4731	594	0	0	0
	16(OPE)	-728	-5328	610	0	0	0
	17(OPE)	-269	-5574	1650	0	0	0
	18(OPE)	-763	-5031	602	0	0	0
	19(OPE)	-764	-5032	602	0	0	0
	20(OCC)	1912	849	-98	0	0	0
	21(OCC)	-835	-352	-371	0	0	0
	22(OCC)	-31	300	-8	0	0	0
	23(OCC)	35	-297	8	0	0	0
	24(OCC)	494	-543	1048	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	26(OCC)	-0	-1	-0	0	0	0
	MAX	-2090/L4	-10857/L4	2498/L4			

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8270		TYPE=Rigid +Y; Rigid X w/gap;					
	3(HYD)	-294	-993	-50	0	0	0
	4(OPE)	16155	0	0	0	0	0
	7(OPE)	12784	-49	12	0	0	0
	9(OPE)	12789	-49	12	0	0	0
	11(SUS)	-257	-864	-37	0	0	0
	12(SUS)	-254	-857	-37	0	0	0
	13(OPE)	16309	0	0	0	0	0
	14(OPE)	10311	-161	39	0	0	0
	15(OPE)	12751	0	0	0	0	0
	16(OPE)	13046	-144	35	0	0	0
	17(OPE)	12870	-126	31	0	0	0
	18(OPE)	12787	-47	11	0	0	0
	19(OPE)	12783	-49	12	0	0	0
	20(OCC)	3525	49	-12	0	0	0
	21(OCC)	-2474	-112	27	0	0	0
	22(OCC)	-33	49	-12	0	0	0
	23(OCC)	262	-96	23	0	0	0
	24(OCC)	86	-77	20	0	0	0
	25(OCC)	3	2	-1	0	0	0
	26(OCC)	-1	0	-0	0	0	0
	MAX	16309/L13	-993/L3	-50/L3			
8280		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	46	-2339	-26	0	0	0
	4(OPE)	232	-3623	1062	0	0	0
	7(OPE)	570	-3717	959	0	0	0
	9(OPE)	570	-3717	958	0	0	0
	11(SUS)	52	-2019	17	0	0	0
	12(SUS)	53	-2000	10	0	0	0
	13(OPE)	691	-3855	927	0	0	0
	14(OPE)	370	-3379	944	0	0	0
	15(OPE)	455	-3260	866	0	0	0
	16(OPE)	616	-3962	1017	0	0	0
	17(OPE)	285	-3483	1728	0	0	0
	18(OPE)	574	-3730	961	0	0	0
	19(OPE)	569	-3716	958	0	0	0
	20(OCC)	121	-138	-31	0	0	0
	21(OCC)	-199	338	-15	0	0	0
	22(OCC)	-115	457	-93	0	0	0
	23(OCC)	46	-245	58	0	0	0
	24(OCC)	-285	234	769	0	0	0
	25(OCC)	4	-13	2	0	0	0
	26(OCC)	-0	2	-0	0	0	0
	MAX	691/L13	-3962/L16	1728/L17			

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
8510		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-2572	0	0	0	0
	4(OPE)	0	-1406	0	0	0	0
	7(OPE)	0	-1402	0	0	0	0
	9(OPE)	0	-1402	0	0	0	0
	11(SUS)	0	-1401	0	0	0	0
	12(SUS)	0	-1394	0	0	0	0
	13(OPE)	483	-1403	0	0	0	0
	14(OPE)	-418	-1402	0	0	0	0
	15(OPE)	0	-1234	0	0	0	0
	16(OPE)	0	-1570	0	0	0	0
	17(OPE)	0	-1402	0	0	0	0
	18(OPE)	0	-1402	0	0	0	0
	19(OPE)	0	-1402	0	0	0	0
	20(OCC)	483	-0	0	0	0	0
	21(OCC)	-418	1	0	0	0	0
	22(OCC)	0	168	0	0	0	0
	23(OCC)	0	-168	0	0	0	0
	24(OCC)	0	1	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0
	MAX	483/L13	-2572/L3				
8520		TYPE=Rigid LIM w/gap; Rigid +Y;					
	3(HYD)	1	-7442	52	0	0	0
	4(OPE)	225	-4023	-3323	0	0	0
	7(OPE)	22	-4046	-1213	0	0	0
	9(OPE)	21	-4046	-1214	0	0	0
	11(SUS)	1	-4053	36	0	0	0
	12(SUS)	1	-4033	36	0	0	0
	13(OPE)	1008	-4044	-676	0	0	0
	14(OPE)	-1006	-4050	-682	0	0	0
	15(OPE)	28	-3559	-1067	0	0	0
	16(OPE)	16	-4532	-1359	0	0	0
	17(OPE)	48	-4049	1214	0	0	0
	18(OPE)	22	-4046	-1213	0	0	0
	19(OPE)	22	-4046	-1213	0	0	0
	20(OCC)	986	1	538	0	0	0
	21(OCC)	-1027	-5	532	0	0	0
	22(OCC)	6	486	146	0	0	0
	23(OCC)	-6	-486	-146	0	0	0
	24(OCC)	26	-3	2427	0	0	0
	25(OCC)	-0	0	0	0	0	0
	26(OCC)	-0	0	0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-1027/L21	-7442/L3	-3323/L4			
8530		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-7	-6146	86	0	0	0
	4(OPE)	-823	-3472	639	0	0	0
	7(OPE)	101	-3382	-1010	0	0	0
	9(OPE)	102	-3382	-1009	0	0	0
	11(SUS)	-8	-3350	60	0	0	0
	12(SUS)	-8	-3334	60	0	0	0
	13(OPE)	907	-3387	-459	0	0	0
	14(OPE)	-1023	-3364	-352	0	0	0
	15(OPE)	79	-2979	-890	0	0	0
	16(OPE)	121	-3785	-1129	0	0	0
	17(OPE)	-73	-3370	1008	0	0	0
	18(OPE)	101	-3382	-1010	0	0	0
	19(OPE)	101	-3382	-1010	0	0	0
	20(OCC)	806	-5	550	0	0	0
	21(OCC)	-1124	18	658	0	0	0
	22(OCC)	-22	403	119	0	0	0
	23(OCC)	20	-403	-119	0	0	0
	24(OCC)	-173	13	2018	0	0	0
	25(OCC)	0	-0	0	0	0	0
	26(OCC)	0	-0	0	0	0	0
	MAX	-1124/L21	-6146/L3	2018/L24			
8540		TYPE=Rigid +Y;					
	3(HYD)	41	-7167	179	0	0	0
	4(OPE)	-720	-3400	722	0	0	0
	7(OPE)	-839	-3764	756	0	0	0
	9(OPE)	-816	-3765	781	0	0	0
	11(SUS)	39	-3895	124	0	0	0
	12(SUS)	39	-3875	124	0	0	0
	13(OPE)	418	-3746	200	0	0	0
	14(OPE)	-1151	-3837	-2	0	0	0
	15(OPE)	-780	-3301	610	0	0	0
	16(OPE)	-890	-4227	904	0	0	0
	17(OPE)	-288	-3812	1107	0	0	0
	18(OPE)	-839	-3764	756	0	0	0
	19(OPE)	-839	-3764	756	0	0	0
	20(OCC)	1257	18	-556	0	0	0
	21(OCC)	-312	-74	-757	0	0	0
	22(OCC)	59	463	-145	0	0	0
	23(OCC)	-50	-463	148	0	0	0
	24(OCC)	551	-49	351	0	0	0
	25(OCC)	0	0	0	0	0	0
	26(OCC)	0	0	0	0	0	0

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	1257/L20	-7167/L3	1107/L17			
8560		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-285	-4863	302	0	0	0
	4(OPE)	-3185	-2901	838	0	0	0
	7(OPE)	-554	-3136	760	0	0	0
	9(OPE)	-558	-3145	761	0	0	0
	11(SUS)	-183	-3125	209	0	0	0
	12(SUS)	-182	-3115	208	0	0	0
	13(OPE)	-477	-3021	770	0	0	0
	14(OPE)	-781	-3202	559	0	0	0
	15(OPE)	-508	-2755	652	0	0	0
	16(OPE)	-598	-3518	869	0	0	0
	17(OPE)	-286	-3262	936	0	0	0
	18(OPE)	-554	-3136	760	0	0	0
	19(OPE)	-554	-3136	760	0	0	0
	20(OCC)	77	115	10	0	0	0
	21(OCC)	-228	-66	-202	0	0	0
	22(OCC)	46	381	-109	0	0	0
	23(OCC)	-44	-382	109	0	0	0
	24(OCC)	268	-126	175	0	0	0
	25(OCC)	-0	-0	-0	0	0	0
	26(OCC)	-0	-0	-0	0	0	0
	MAX	-3185/L4	-4863/L3	936/L17			
8700		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	3(HYD)	-0	-1084	0	0	0	0
	4(OPE)	11	-774	-5796	0	0	0
	7(OPE)	-2	-774	-4082	0	0	0
	9(OPE)	-2	-774	-4124	0	0	0
	11(SUS)	-0	-774	0	0	0	0
	12(SUS)	-0	-749	0	0	0	0
	13(OPE)	198	-774	-2776	0	0	0
	14(OPE)	-195	-774	-3748	0	0	0
	15(OPE)	-2	-681	-3643	0	0	0
	16(OPE)	-2	-867	-4540	0	0	0
	17(OPE)	-1	-774	-753	0	0	0
	18(OPE)	-2	-774	-4082	0	0	0
	19(OPE)	-2	-774	-4083	0	0	0
	20(OCC)	200	-0	1307	0	0	0
	21(OCC)	-193	0	334	0	0	0
	22(OCC)	0	93	440	0	0	0
	23(OCC)	-0	-93	-458	0	0	0
	24(OCC)	1	-0	3330	0	0	0

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Various Load Cases

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	25(OCC)	-0	0	1	0	0	0
	26(OCC)	-0	0	-0	0	0	0
	MAX	200/L20	-1084/L3	-5796/L4			
8720		TYPE=Rigid +Y;					
	3(HYD)	1	-3151	1	0	0	0
	4(OPE)	-10	-2248	674	0	0	0
	7(OPE)	13	-2249	675	0	0	0
	9(OPE)	13	-2249	675	0	0	0
	11(SUS)	0	-2249	0	0	0	0
	12(SUS)	0	-2176	0	0	0	0
	13(OPE)	660	-2249	139	0	0	0
	14(OPE)	-659	-2249	144	0	0	0
	15(OPE)	13	-1979	594	0	0	0
	16(OPE)	12	-2519	756	0	0	0
	17(OPE)	9	-2249	675	0	0	0
	18(OPE)	13	-2249	675	0	0	0
	19(OPE)	13	-2249	675	0	0	0
	20(OCC)	647	0	-536	0	0	0
	21(OCC)	-672	-0	-530	0	0	0
	22(OCC)	0	270	-81	0	0	0
	23(OCC)	-1	-270	81	0	0	0
	24(OCC)	-4	0	0	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	26(OCC)	-0	-0	0	0	0	0
	MAX	-672/L21	-3151/L3	756/L16			
8740		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-2	-2676	2	0	0	0
	4(OPE)	-28	-1917	574	0	0	0
	7(OPE)	4	-1914	574	0	0	0
	9(OPE)	4	-1914	574	0	0	0
	11(SUS)	-2	-1912	1	0	0	0
	12(SUS)	-2	-1850	1	0	0	0
	13(OPE)	561	-1914	538	0	0	0
	14(OPE)	-577	-1914	542	0	0	0
	15(OPE)	1	-1685	505	0	0	0
	16(OPE)	8	-2144	643	0	0	0
	17(OPE)	0	-1915	574	0	0	0
	18(OPE)	4	-1914	574	0	0	0
	19(OPE)	4	-1914	574	0	0	0
	20(OCC)	557	-0	-36	0	0	0
	21(OCC)	-582	0	-32	0	0	0
	22(OCC)	-3	230	-69	0	0	0
	23(OCC)	3	-230	69	0	0	0
	24(OCC)	-4	-1	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	0	0	-0	0	0	0
	MAX	-582/L21	-2676/L3	643/L16			
8750		TYPE=Rigid +Y;					
	3(HYD)	8	-2934	6	0	0	0
	4(OPE)	-47	-2071	619	0	0	0
	7(OPE)	-68	-2082	621	0	0	0
	9(OPE)	-67	-2085	622	0	0	0
	11(SUS)	6	-2089	4	0	0	0
	12(SUS)	6	-2021	4	0	0	0
	13(OPE)	219	-2082	585	0	0	0
	14(OPE)	-257	-2083	570	0	0	0
	15(OPE)	-65	-1832	546	0	0	0
	16(OPE)	-69	-2333	696	0	0	0
	17(OPE)	-52	-2079	622	0	0	0
	18(OPE)	-68	-2082	621	0	0	0
	19(OPE)	-68	-2082	621	0	0	0
	20(OCC)	287	0	-36	0	0	0
	21(OCC)	-189	-1	-51	0	0	0
	22(OCC)	4	251	-75	0	0	0
	23(OCC)	-1	-251	76	0	0	0
	24(OCC)	16	3	1	0	0	0
	25(OCC)	0	-0	0	0	0	0
	26(OCC)	0	-0	0	0	0	0
	MAX	287/L20	-2934/L3	696/L16			
8760		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-31	-2366	18	0	0	0
	4(OPE)	-828	-1781	534	0	0	0
	7(OPE)	-138	-1737	504	0	0	0
	9(OPE)	-127	-1729	503	0	0	0
	11(SUS)	-23	-1711	13	0	0	0
	12(SUS)	-22	-1656	12	0	0	0
	13(OPE)	829	-1739	505	0	0	0
	14(OPE)	-1133	-1734	503	0	0	0
	15(OPE)	-137	-1532	445	0	0	0
	16(OPE)	-144	-1943	565	0	0	0
	17(OPE)	-90	-1749	517	0	0	0
	18(OPE)	-138	-1737	504	0	0	0
	19(OPE)	-138	-1737	504	0	0	0
	20(OCC)	967	-2	1	0	0	0
	21(OCC)	-995	4	-1	0	0	0
	22(OCC)	1	206	-60	0	0	0
	23(OCC)	-6	-206	60	0	0	0
	24(OCC)	47	-11	12	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	0	0	-0	0	0	0
	26(OCC)	-0	0	-0	0	0	0
	MAX	-1133/L14	-2366/L3	565/L16			
8770		TYPE=Rigid +Y;					
	3(HYD)	-2	-5054	56	0	0	0
	4(OPE)	251	-3430	998	0	0	0
	7(OPE)	-14	-3443	1033	0	0	0
	9(OPE)	-19	-3442	1032	0	0	0
	11(SUS)	14	-3513	40	0	0	0
	12(SUS)	15	-3395	39	0	0	0
	13(OPE)	758	-3489	722	0	0	0
	14(OPE)	-301	-3373	966	0	0	0
	15(OPE)	-5	-3029	909	0	0	0
	16(OPE)	-23	-3856	1157	0	0	0
	17(OPE)	34	-3433	1029	0	0	0
	18(OPE)	-14	-3443	1033	0	0	0
	19(OPE)	-14	-3443	1033	0	0	0
	20(OCC)	773	-47	-311	0	0	0
	21(OCC)	-287	70	-67	0	0	0
	22(OCC)	9	413	-124	0	0	0
	23(OCC)	-9	-413	124	0	0	0
	24(OCC)	48	10	-3	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	26(OCC)	-0	0	-0	0	0	0
	MAX	773/L20	-5054/L3	1157/L16			
8810		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-466	-1554	-16	0	0	0
	4(OPE)	337	-1127	31	0	0	0
	7(OPE)	337	-1125	20	0	0	0
	9(OPE)	337	-1127	25	0	0	0
	11(SUS)	-331	-1105	-11	0	0	0
	12(SUS)	-320	-1069	-11	0	0	0
	13(OPE)	331	-1110	-55	0	0	0
	14(OPE)	337	-1144	66	0	0	0
	15(OPE)	296	-990	19	0	0	0
	16(OPE)	377	-1260	22	0	0	0
	17(OPE)	302	-1125	303	0	0	0
	18(OPE)	337	-1125	20	0	0	0
	19(OPE)	337	-1125	20	0	0	0
	20(OCC)	-6	14	-75	0	0	0
	21(OCC)	0	-19	45	0	0	0
	22(OCC)	-41	135	-1	0	0	0
	23(OCC)	41	-135	1	0	0	0
	24(OCC)	-35	-0	283	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	-0	0	0	0	0	0
	26(OCC)	0	-0	-0	0	0	0
	MAX	-466/L3	-1554/L3	303/L17			
8920		TYPE=Rigid +Y;					
	3(HYD)	2	-2849	-1	0	0	0
	4(OPE)	180	-1532	423	0	0	0
	7(OPE)	183	-1532	422	0	0	0
	9(OPE)	165	-1514	-423	0	0	0
	11(SUS)	2	-1553	-1	0	0	0
	12(SUS)	2	-1551	-1	0	0	0
	13(OPE)	152	-1536	435	0	0	0
	14(OPE)	178	-1527	422	0	0	0
	15(OPE)	165	-1345	368	0	0	0
	16(OPE)	199	-1719	476	0	0	0
	17(OPE)	174	-1532	425	0	0	0
	18(OPE)	183	-1533	422	0	0	0
	19(OPE)	184	-1534	422	0	0	0
	20(OCC)	-30	-4	13	0	0	0
	21(OCC)	-5	5	0	0	0	0
	22(OCC)	-18	187	-53	0	0	0
	23(OCC)	16	-187	54	0	0	0
	24(OCC)	-9	0	4	0	0	0
	25(OCC)	1	-1	0	0	0	0
	26(OCC)	1	-2	0	0	0	0
	MAX	199/L16	-2849/L3	476/L16			
8930		TYPE=Rigid +Y; Rigid X;					
	3(HYD)	-4	-15191	-2	0	0	0
	4(OPE)	-114	-8213	2464	0	0	0
	7(OPE)	-182	-8207	2462	0	0	0
	9(OPE)	-970	-8329	-2499	0	0	0
	11(SUS)	-4	-8228	-2	0	0	0
	12(SUS)	-4	-8218	-2	0	0	0
	13(OPE)	3702	-8217	2465	0	0	0
	14(OPE)	-3688	-8174	2452	0	0	0
	15(OPE)	-312	-7223	2167	0	0	0
	16(OPE)	-40	-9192	2758	0	0	0
	17(OPE)	-510	-8207	2462	0	0	0
	18(OPE)	-191	-8211	2463	0	0	0
	19(OPE)	-202	-8212	2464	0	0	0
	20(OCC)	3884	-10	3	0	0	0
	21(OCC)	-3506	33	-10	0	0	0
	22(OCC)	-130	985	-295	0	0	0
	23(OCC)	142	-985	296	0	0	0
	24(OCC)	-328	-0	0	0	0	0
	25(OCC)	-9	-3	1	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	26(OCC)	-20	-5	2	0	0	0
	MAX	3884/L20	-15191/L3	2758/L16			
8970		TYPE=Rigid +Y;					
	3(HYD)	72	-8675	18	0	0	0
	4(OPE)	-1474	-4949	-182	0	0	0
	7(OPE)	-1477	-4967	-198	0	0	0
	9(OPE)	1393	-4649	-69	0	0	0
	11(SUS)	60	-4713	16	0	0	0
	12(SUS)	60	-4707	16	0	0	0
	13(OPE)	-1468	-4895	22	0	0	0
	14(OPE)	-1529	-5136	-191	0	0	0
	15(OPE)	-1306	-4395	-180	0	0	0
	16(OPE)	-1647	-5536	-212	0	0	0
	17(OPE)	-1484	-4970	144	0	0	0
	18(OPE)	-1470	-4945	-200	0	0	0
	19(OPE)	-1466	-4934	-203	0	0	0
	20(OCC)	8	71	220	0	0	0
	21(OCC)	-52	-169	7	0	0	0
	22(OCC)	171	572	18	0	0	0
	23(OCC)	-171	-570	-13	0	0	0
	24(OCC)	-7	-3	343	0	0	0
	25(OCC)	7	22	-2	0	0	0
	26(OCC)	11	33	-5	0	0	0
	MAX	-1647/L16	-8675/L3	343/L24			
9000		TYPE=Rigid +Y; Rigid X w/gap;					
	3(HYD)	-647	-17901	-167	0	0	0
	4(OPE)	-118	-7898	-2366	0	0	0
	7(OPE)	-164	-8184	-2450	0	0	0
	9(OPE)	-459	-8274	2440	0	0	0
	11(SUS)	-540	-10190	-79	0	0	0
	12(SUS)	-539	-10178	-79	0	0	0
	13(OPE)	1187	-8427	-2520	0	0	0
	14(OPE)	-3096	-8105	-2424	0	0	0
	15(OPE)	-152	-6905	-2066	0	0	0
	16(OPE)	-160	-9463	-2834	0	0	0
	17(OPE)	121	-7868	-2357	0	0	0
	18(OPE)	-172	-8219	-2460	0	0	0
	19(OPE)	-183	-8232	-2463	0	0	0
	20(OCC)	1351	-243	-71	0	0	0
	21(OCC)	-2932	79	26	0	0	0
	22(OCC)	12	1279	384	0	0	0
	23(OCC)	4	-1279	-385	0	0	0
	24(OCC)	285	316	92	0	0	0
	25(OCC)	-8	-36	-10	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	26(OCC)	-19	-49	-13	0	0	0
	MAX	-3096/L14	-17901/L3	-2834/L16			
9010		TYPE=Rigid +Y; Rigid X;					
	3(HYD)	-606	-2301	-303	0	0	0
	4(OPE)	-5764	-10531	-3159	0	0	0
	7(OPE)	-5872	-10418	-3125	0	0	0
	9(OPE)	1139	0	0	0	0	0
	11(SUS)	-311	-1582	-152	0	0	0
	12(SUS)	-310	-1581	-152	0	0	0
	13(OPE)	-2951	-10067	-3020	0	0	0
	14(OPE)	-8005	-10670	-3201	0	0	0
	15(OPE)	-5683	-9949	-2985	0	0	0
	16(OPE)	-6082	-10871	-3261	0	0	0
	17(OPE)	-5675	-10467	-3140	0	0	0
	18(OPE)	-5533	-10325	-3097	0	0	0
	19(OPE)	-5339	-10285	-3085	0	0	0
	20(OCC)	2921	351	105	0	0	0
	21(OCC)	-2133	-251	-75	0	0	0
	22(OCC)	189	470	141	0	0	0
	23(OCC)	-210	-453	-136	0	0	0
	24(OCC)	197	-49	-15	0	0	0
	25(OCC)	340	93	28	0	0	0
	26(OCC)	533	133	40	0	0	0
	MAX	-8005/L14	-10871/L16	-3261/L16			
9020		TYPE=Rigid +Y; Rigid Z w/gap;					
	3(HYD)	70	-3023	-274	0	0	0
	4(OPE)	-576	-2309	16952	0	0	0
	7(OPE)	-548	-2330	16424	0	0	0
	9(OPE)	64	-1517	-4639	0	0	0
	11(SUS)	50	-1636	-139	0	0	0
	12(SUS)	50	-1634	-139	0	0	0
	13(OPE)	-546	-2310	16317	0	0	0
	14(OPE)	-639	-2294	16026	0	0	0
	15(OPE)	-503	-2107	15851	0	0	0
	16(OPE)	-612	-2550	17021	0	0	0
	17(OPE)	-685	-2417	21845	0	0	0
	18(OPE)	-543	-2319	16387	0	0	0
	19(OPE)	-518	-2324	16386	0	0	0
	20(OCC)	1	20	-107	0	0	0
	21(OCC)	-92	36	-399	0	0	0
	22(OCC)	45	223	-574	0	0	0
	23(OCC)	-64	-220	597	0	0	0
	24(OCC)	-137	-87	5421	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	4	11	-37	0	0	0
	26(OCC)	30	6	-38	0	0	0
	MAX	-685/L17	-3023/L3	21845/L17			
9040		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	3(HYD)	-0	-3332	-1	0	0	0
	4(OPE)	675	-1810	-8358	0	0	0
	7(OPE)	699	-1810	-8379	0	0	0
	9(OPE)	-9	-1813	3875	0	0	0
	11(SUS)	-0	-1807	-0	0	0	0
	12(SUS)	-0	-1805	-0	0	0	0
	13(OPE)	1064	-1810	-8969	0	0	0
	14(OPE)	242	-1811	-7805	0	0	0
	15(OPE)	733	-1594	-7983	0	0	0
	16(OPE)	663	-2027	-8776	0	0	0
	17(OPE)	647	-1810	-4931	0	0	0
	18(OPE)	701	-1810	-8378	0	0	0
	19(OPE)	704	-1810	-8377	0	0	0
	20(OCC)	365	1	-591	0	0	0
	21(OCC)	-457	-1	573	0	0	0
	22(OCC)	34	217	396	0	0	0
	23(OCC)	-36	-217	-397	0	0	0
	24(OCC)	-52	-0	3448	0	0	0
	25(OCC)	2	0	1	0	0	0
	26(OCC)	5	0	2	0	0	0
	MAX	1064/L13	-3332/L3	-8969/L13			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (OPE) W+D1+T2+P2+H
6 (Alt-SUS) W+P1+H
7 (OPE) W+D1+T2+P1+H
8 (Alt-SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L7
21 (OCC) L21=L14-L7
22 (OCC) L22=L15-L7
23 (OCC) L23=L16-L7
24 (OCC) L24=L17-L7
25 (OCC) L25=L18-L7
26 (OCC) L26=L19-L7
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L7-L11
36 (EXP) L36=L4-L7
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L7-L9

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP
CASE 11 (SUS) W+P1+H
CASE 12 (SUS) WNC
CASE 27 (OCC) L27=L20+L11
CASE 28 (OCC) L28=L21+L11
CASE 29 (OCC) L29=L22+L11
CASE 30 (OCC) L30=L23+L11
CASE 31 (OCC) L31=L24+L11
CASE 32 (OCC) L32=L25+L11
CASE 33 (OCC) L33=L26+L11
CASE 34 (EXP) L34=L4-L11
CASE 35 (EXP) L35=L7-L11
CASE 36 (EXP) L36=L4-L7
CASE 37 (EXP) L37=L9-L11
CASE 38 (EXP) L38=L4-L9
CASE 39 (EXP) L39=L7-L9

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 3 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 3 (HYD) WW+HP

Ratio (%):	54.7	@Node	7000
Code Stress:	94312.4	Allowable Stress:	172368.9
Axial Stress:	48552.9	@Node	8780
Bending Stress:	125178.0	@Node	7000
Torsion Stress:	7951.9	@Node	5040
Hoop Stress:	100724.6	@Node	7250
Max Stress Intensity:	125607.0	@Node	7000

CODE STRESS CHECK PASSED : LOADCASE 11 (SUS) W+P1+H

Highest Stresses: (KPa) LOADCASE 11 (SUS) W+P1+H

Ratio (%):	64.7	@Node	9000
Code Stress:	83696.1	Allowable Stress:	129365.3
Axial Stress:	32389.1	@Node	8780
Bending Stress:	92280.0	@Node	7000
Torsion Stress:	8423.5	@Node	8980
Hoop Stress:	67149.7	@Node	7250
Max Stress Intensity:	92602.4	@Node	7000

CODE STRESS CHECK PASSED : LOADCASE 12 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 12 (SUS) WNC

Ratio (%):	59.0	@Node	7000
Code Stress:	67950.1	Allowable Stress:	115142.4
Axial Stress:	2332.8	@Node	6490
Bending Stress:	90179.0	@Node	7000
Torsion Stress:	8412.7	@Node	8980

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Hoop Stress:                  0.0       @Node     20
Max Stress Intensity:       90494.9     @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L20+L11

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L20+L11
Ratio (%):                   65.0       @Node   8930
Code Stress:               111839.9      Allowable Stress:     172055.9
Axial Stress:               32658.2      @Node   4100
Bending Stress:            122922.0      @Node   6130
Torsion Stress:             19717.8      @Node   5188
Hoop Stress:                67149.7      @Node   7250
Max Stress Intensity:      133466.9      @Node   6130

 CODE STRESS CHECK PASSED      : LOADCASE 28 (OCC) L28=L21+L11

Highest Stresses: (   KPa    ) LOADCASE 28 (OCC) L28=L21+L11
Ratio (%):                   62.4       @Node   6130
Code Stress:               107294.8      Allowable Stress:     172055.9
Axial Stress:               32508.1      @Node   4589
Bending Stress:            130090.9      @Node   6130
Torsion Stress:             17837.4      @Node   5188
Hoop Stress:                67149.7      @Node   7250
Max Stress Intensity:      139998.8      @Node   6130

 CODE STRESS CHECK PASSED      : LOADCASE 29 (OCC) L29=L22+L11

Highest Stresses: (   KPa    ) LOADCASE 29 (OCC) L29=L22+L11
Ratio (%):                   53.7       @Node   9000
Code Stress:                92364.6      Allowable Stress:     172055.9
Axial Stress:               32369.8      @Node   8780
Bending Stress:            103847.8      @Node   7000
Torsion Stress:              7430.2      @Node   8980
Hoop Stress:                67149.7      @Node   7250
Max Stress Intensity:      104192.7      @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 30 (OCC) L30=L23+L11

Highest Stresses: (   KPa    ) LOADCASE 30 (OCC) L30=L23+L11
Ratio (%):                   53.7       @Node   9000
Code Stress:                92386.5      Allowable Stress:     172055.9
Axial Stress:               32408.3      @Node   8780
Bending Stress:            103799.4      @Node   7000
Torsion Stress:              9420.2      @Node   8980
Hoop Stress:                67149.7      @Node   7250
Max Stress Intensity:      104146.8      @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 31 (OCC) L31=L24+L11

Highest Stresses: (   KPa    ) LOADCASE 31 (OCC) L31=L24+L11
Ratio (%):                   58.7       @Node   6510
Code Stress:                89829.5      Allowable Stress:     153139.4
Axial Stress:               33023.8      @Node   8700
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Bending Stress:            117381.5       @Node   6510
Torsion Stress:              8423.1       @Node   8980
Hoop Stress:                67149.7       @Node   7250
Max Stress Intensity:      119174.9       @Node   6510

 CODE STRESS CHECK PASSED      : LOADCASE 32 (OCC) L32=L25+L11

Highest Stresses: (   KPa    ) LOADCASE 32 (OCC) L32=L25+L11
Ratio (%):                   49.2       @Node   9000
Code Stress:                84592.2       Allowable Stress:     172055.9
Axial Stress:               32389.1       @Node   8780
Bending Stress:             92284.8       @Node   7000
Torsion Stress:              8452.3       @Node   8980
Hoop Stress:                67149.7       @Node   7250
Max Stress Intensity:       92607.2       @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 33 (OCC) L33=L26+L11

Highest Stresses: (   KPa    ) LOADCASE 33 (OCC) L33=L26+L11
Ratio (%):                   49.5       @Node   9000
Code Stress:                85082.1       Allowable Stress:     172055.9
Axial Stress:               32389.1       @Node   8780
Bending Stress:             92285.9       @Node   7000
Torsion Stress:              8467.7       @Node   8980
Hoop Stress:                67149.7       @Node   7250
Max Stress Intensity:       92608.2       @Node   7000

 CODE STRESS CHECK PASSED      : LOADCASE 34 (EXP) L34=L4-L11

Highest Stresses: (   KPa    ) LOADCASE 34 (EXP) L34=L4-L11
Ratio (%):                   73.3       @Node   3965
Code Stress:               197247.1       Allowable Stress:     269072.6
Axial Stress:               85720.0       @Node   8140
Bending Stress:            194526.3       @Node   3965
Torsion Stress:             15976.8       @Node   5670
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      555065.8       @Node   3965

 CODE STRESS CHECK PASSED      : LOADCASE 35 (EXP) L35=L7-L11

Highest Stresses: (   KPa    ) LOADCASE 35 (EXP) L35=L7-L11
Ratio (%):                   63.4       @Node   3965
Code Stress:               170682.1       Allowable Stress:     269413.8
Axial Stress:               19948.8       @Node   8140
Bending Stress:            168100.2       @Node   3965
Torsion Stress:             13785.5       @Node   5670
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      480049.4       @Node   3965

 CODE STRESS CHECK PASSED      : LOADCASE 36 (EXP) L36=L4-L7

Highest Stresses: (   KPa    ) LOADCASE 36 (EXP) L36=L4-L7
Ratio (%):                   48.3       @Node   6510
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Code Stress:	133452.3	Allowable Stress:	276170.9
Axial Stress:	65838.6	@Node	8140
Bending Stress:	132352.1	@Node	6510
Torsion Stress:	11570.6	@Node	6820
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	132594.4	@Node	6510

CODE STRESS CHECK PASSED : LOADCASE 37 (EXP) L37=L9-L11

Highest Stresses: (KPa)	LOADCASE 37 (EXP) L37=L9-L11		
Ratio (%):	37.6	@Node	8260
Code Stress:	123884.2	Allowable Stress:	329839.6
Axial Stress:	19932.4	@Node	8140
Bending Stress:	123861.4	@Node	8260
Torsion Stress:	9466.7	@Node	7100
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	228054.1	@Node	8260

CODE STRESS CHECK PASSED : LOADCASE 38 (EXP) L38=L4-L9

Highest Stresses: (KPa)	LOADCASE 38 (EXP) L38=L4-L9		
Ratio (%):	79.2	@Node	3965
Code Stress:	212982.6	Allowable Stress:	269072.6
Axial Stress:	65787.6	@Node	8140
Bending Stress:	209346.3	@Node	3965
Torsion Stress:	14918.6	@Node	5140
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	598219.4	@Node	3965

CODE STRESS CHECK PASSED : LOADCASE 39 (EXP) L39=L7-L9

Highest Stresses: (KPa)	LOADCASE 39 (EXP) L39=L7-L9		
Ratio (%):	69.3	@Node	3965
Code Stress:	186758.8	Allowable Stress:	269413.8
Axial Stress:	5048.4	@Node	5670
Bending Stress:	183271.0	@Node	3965
Torsion Stress:	14936.4	@Node	5160
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	524177.5	@Node	3965

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
HANGER REPORT ((TABLE DATA FROM DESIGN RUNS)) 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (OPE) W+D1+T2+P2+H
6 (Alt-SUS) W+P1+H
7 (OPE) W+D1+T2+P1+H
8 (Alt-SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L7
21 (OCC) L21=L14-L7
22 (OCC) L22=L15-L7
23 (OCC) L23=L16-L7
24 (OCC) L24=L17-L7
25 (OCC) L25=L18-L7
26 (OCC) L26=L19-L7
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L7-L11
36 (EXP) L36=L4-L7
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L7-L9

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HANGER REPORT
(TABLE DATA FROM DESIGN RUNS)

NODE	NUM RQD	FIG. NO.	SIZE	VERTICAL MOVEMENT (mm.)	HOT LOAD (N.)	THEORETICAL INSTALLED LOAD (N.)	ACTUAL INSTALLED LOAD (N.)	SPRING RATE (N./cm.)	HORIZONTAL MOVEMENT (mm.)
160	1	2921		-0.215	1652.	1645.	0.	333.	0.000
LISEGA					LOAD VARIATION =	0%			

** VARIABLE SUPPORT SPRING DESIGNED ..... SHORT RANGE
MINIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 831.818
MAXIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 2499.901
RECOMMENDED INSTALLATION CLEARANCE ..... (mm.) 196.850

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Flange Peq : 5 (OPE) W+D1+T2+P2+H 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (OPE) W+D1+T2+P2+H
6 (Alt-SUS) W+P1+H
7 (OPE) W+D1+T2+P1+H
8 (Alt-SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L7
21 (OCC) L21=L14-L7
22 (OCC) L22=L15-L7
23 (OCC) L23=L16-L7
24 (OCC) L24=L17-L7
25 (OCC) L25=L18-L7
26 (OCC) L26=L19-L7
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L7-L11
36 (EXP) L36=L4-L7
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L7-L9

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FLANGE PEQ REPORT: Flange (Equiv Pressure Method)
CASE 5 (OPE) W+D1+T2+P2+H

Node	Axial Force N.	Bending Moment N.m.	G/C mm.	P Equivalent KPa	Rating Temperature C	Allowable Pressure /Stress	Ratio %	
1060								
1080	15292	1003	192.15	6657.41	149.49	10028.53	66.38	
1080	15292	1003	192.15	6657.41	149.49	10028.53	66.38	
1100								
1220								
1240	2507	24	192.15	5513.63	149.49	10028.53	54.98	
1300								
1320	15517	1286	192.15	6868.46	149.49	10028.53	68.49	
1340	15517	937	192.15	6617.86	149.49	10028.53	65.99	
1360								
1640								
1660	520	1156	192.15	6257.99	149.49	10028.53	62.40	
7120								
7130	348	930	192.15	6089.92	149.49	10028.53	60.73	
7201	4257	1623	192.15	6722.34	59.99	10342.14	65.00	
7210								
1821	7583	960	192.15	6360.56	59.99	10342.14	61.50	
1920								
4400								
4410	1516	1909	192.15	6833.08	59.99	10342.14	66.07	
4420	1532	1243	192.15	6355.27	59.99	10342.14	61.45	
4430								
4450								
4460	219	689	192.15	5912.21	59.99	10342.14	57.17	
4470	222	255	192.15	5600.68	59.99	10342.14	54.15	
4480								
4490								
4500	589	2038	192.15	6893.31	59.99	10342.14	66.65	
4505	589	1995	192.15	6862.51	59.99	10342.14	66.35	
6790								

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FLANGE PEQ REPORT: Flange (Equiv Pressure Method)
CASE 5 (OPE) W+D1+T2+P2+H

Node	Axial Force N.	Bending Moment N.m.	G/C mm.	P Equivalent KPa	Rating Temperature C	Allowable Pressure /Stress	Ratio %	
4600								
4610	4635	1585	192.15	6707.51	59.99	10342.14	64.86	
4620	4635	963	192.15	6261.43	59.99	10342.14	60.54	
4630								
4660								
4670	3677	342	192.15	5782.58	59.99	10342.14	55.91	
4680	3677	218	192.15	5693.47	59.99	10342.14	55.05	
4690								
4720								
4730	3450	187	192.15	5663.27	59.99	10342.14	54.76	
4980								
4990	27	1419	192.15	6429.99	59.99	10342.14	62.17	
5000	27	951	192.15	6093.61	59.99	10342.14	58.92	
5010								
5040								
5060	3572	2276	192.15	7167.29	59.99	10342.14	69.30	
5070	3572	2812	192.15	7551.88	59.99	10342.14	73.02	
5080								
5100								
5110	3572	3562	192.15	8090.10	59.99	10342.14	78.22	

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (OPE) W+D1+T2+P2+H
6 (Alt-SUS) W+P1+H
7 (OPE) W+D1+T2+P1+H
8 (Alt-SUS) W+P1+H
9 (OPE) W+D1+T3+P1+H
10 (Alt-SUS) W+P1+H
11 (SUS) W+P1+H
12 (SUS) WNC
13 (OPE) W+D1+T2+P1+H+U1
14 (OPE) W+D1+T2+P1+H-U1
15 (OPE) W+D1+T2+P1+H+U2
16 (OPE) W+D1+T2+P1+H-U2
17 (OPE) W+D1+T2+P1+H+U3
18 (OPE) W+D1+T2+P1+H+F1
19 (OPE) W+D1+T2+P1+H+F2
20 (OCC) L20=L13-L7
21 (OCC) L21=L14-L7
22 (OCC) L22=L15-L7
23 (OCC) L23=L16-L7
24 (OCC) L24=L17-L7
25 (OCC) L25=L18-L7
26 (OCC) L26=L19-L7
27 (OCC) L27=L20+L11
28 (OCC) L28=L21+L11
29 (OCC) L29=L22+L11
30 (OCC) L30=L23+L11
31 (OCC) L31=L24+L11
32 (OCC) L32=L25+L11
33 (OCC) L33=L26+L11
34 (EXP) L34=L4-L11
35 (EXP) L35=L7-L11
36 (EXP) L36=L4-L7
37 (EXP) L37=L9-L11
38 (EXP) L38=L4-L9
39 (EXP) L39=L7-L9

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NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 4 (OPE) W+D1+T1+P1+H
CASE 7 (OPE) W+D1+T2+P1+H
CASE 9 (OPE) W+D1+T3+P1+H
CASE 11 (SUS) W+P1+H
CASE 12 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
25		Absolute Method								
	Limits	7000	7000	5000		4000	1200	2200		
	4(OPE)	-41	-256	341	0.068	-0	0	-10	0.005	
	7(OPE)	284	-767	-11	0.110	0	0	-10	0.005	
	9(OPE)	284	-767	-11	0.110	0	0	-10	0.005	
	11(SUS)	30	-540	59	0.077	-0	-0	-10	0.005	
	12(SUS)	-67	-724	-24	0.103	0	0	-10	0.005	
780		Absolute Method								
	Limits	9600	9600	7200		5760	3840	4990		
	4(OPE)	2396	399	-146	0.250	-1620	-393	-1258	0.281	
	7(OPE)	2507	317	-500	0.261	-1148	-410	-994	0.199	
	9(OPE)	3197	68	599	0.333	70	-249	-1649	0.330	
	11(SUS)	3092	24	-8	0.322	103	-319	-1230	0.247	
	12(SUS)	3078	35	-6	0.321	113	-307	-1236	0.248	
1240		Absolute Method								
	Limits	7000	7000	5000		4000	1200	2200		
	4(OPE)	3085	-1418	-1270	0.441	-0	0	24	0.011	
	7(OPE)	2507	-1384	-1157	0.358	-0	0	24	0.011	
	9(OPE)	2507	-1384	-1157	0.358	-0	0	24	0.011	

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NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
	11(SUS)	-192	-1497	236	0.214	0	0	24	0.011	
	12(SUS)	-191	-1483	234	0.212	0	0	24	0.011	
1700		Absolute Method								
	Limits	15091	15091	12001		9150	4890	6420		
	4(OPE)	-537	656	1155	0.096	-542	1827	-442	0.374	
	7(OPE)	-236	601	944	0.079	-390	1443	-317	0.295	
	9(OPE)	-236	600	943	0.079	-389	1441	-317	0.295	
	11(SUS)	938	-29	-32	0.062	-12	-89	138	0.021	
	12(SUS)	935	-29	-32	0.062	-12	-89	137	0.021	
7170		Absolute Method								
	Limits	15091	15091	12001		9150	4890	6420		
	4(OPE)	-206	579	-946	0.079	-570	659	341	0.135	
	7(OPE)	-65	551	-747	0.062	-389	579	284	0.118	
	9(OPE)	-63	550	-746	0.062	-388	577	282	0.118	
	11(SUS)	937	29	-31	0.062	12	-88	-137	0.021	
	12(SUS)	934	28	-31	0.062	12	-88	-136	0.021	
1780		Absolute Method								
	Limits	16201	15091	12001		9150	4890	6420		
	4(OPE)	-16131	6964	-1002	0.996	390	748	-828	0.153	
	7(OPE)	-7300	4666	-334	0.451	133	245	503	0.078	
	9(OPE)	-7280	4635	-350	0.449	139	259	489	0.076	
	11(SUS)	614	-160	51	0.038	-4	-90	-76	0.018	
	12(SUS)	609	-156	51	0.038	-4	-90	-75	0.018	

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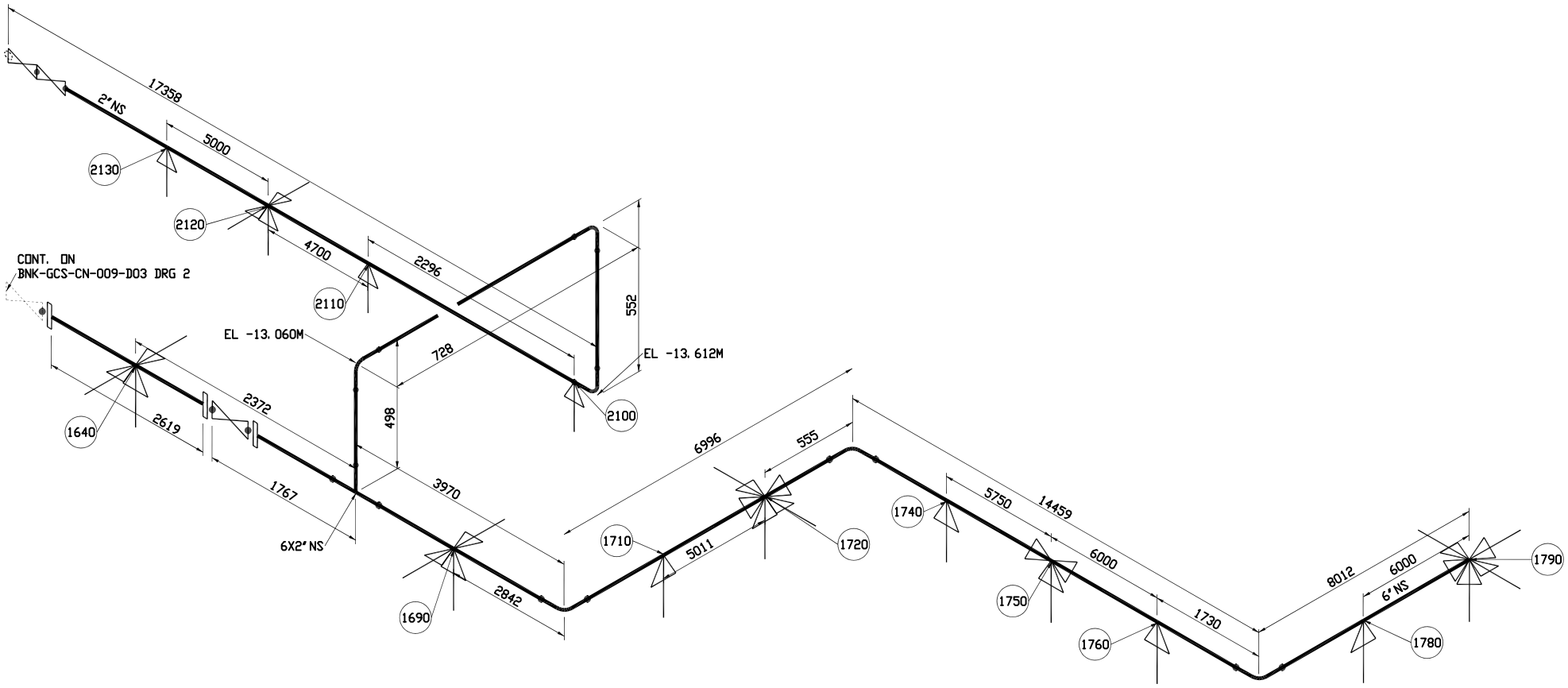
NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
7180		Absolute Method								
	Limits	16201	15091	12001		9150	4890	6420		
	4(OPE)	10701	8705	-438	0.661	-443	71	4689	0.730	
	7(OPE)	3974	5214	-175	0.346	-160	52	3246	0.506	
	9(OPE)	4020	5232	-182	0.347	-167	47	3245	0.505	
	11(SUS)	-844	-99	-108	0.052	-22	214	38	0.044	
	12(SUS)	-837	-97	-108	0.052	-22	213	38	0.044	
4260		Absolute Method								
	Limits	11201	11201	8400		6720	4400	5020		
	4(OPE)	9507	-3646	-954	0.849	357	-1708	5881	1.172	*
	7(OPE)	3739	-2205	-360	0.334	205	-992	2404	0.479	
	9(OPE)	3396	-2206	-367	0.303	218	-995	2405	0.479	
	11(SUS)	144	-1477	-8	0.132	174	-2	808	0.161	
	12(SUS)	145	-1474	-8	0.132	174	-2	805	0.160	

BNK-GCS-CN-009

1. GAS-111-0019-AN07-8"-PT
2. GAS-111-0017-AN07-8"-PT
3. GAS-111-0012-AN07-8"-PT
4. GAS-111-0005-AN07-10"-PT
5. GAS-111-0101-AN07-6"-PT
6. GAS-111-0001-AN07-6"-PT
7. GAS-111-0020-AN07-10"-PT
8. GAS-111-0025-AN07-10"-PT
9. GAS-111-0001-FN07-8"-PT
10. GAS-111-0080-AN07-2"-PT
11. FL-112-0102-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

1 OF 6

REV.	CHANGE	DATE
		20 MAY 2024

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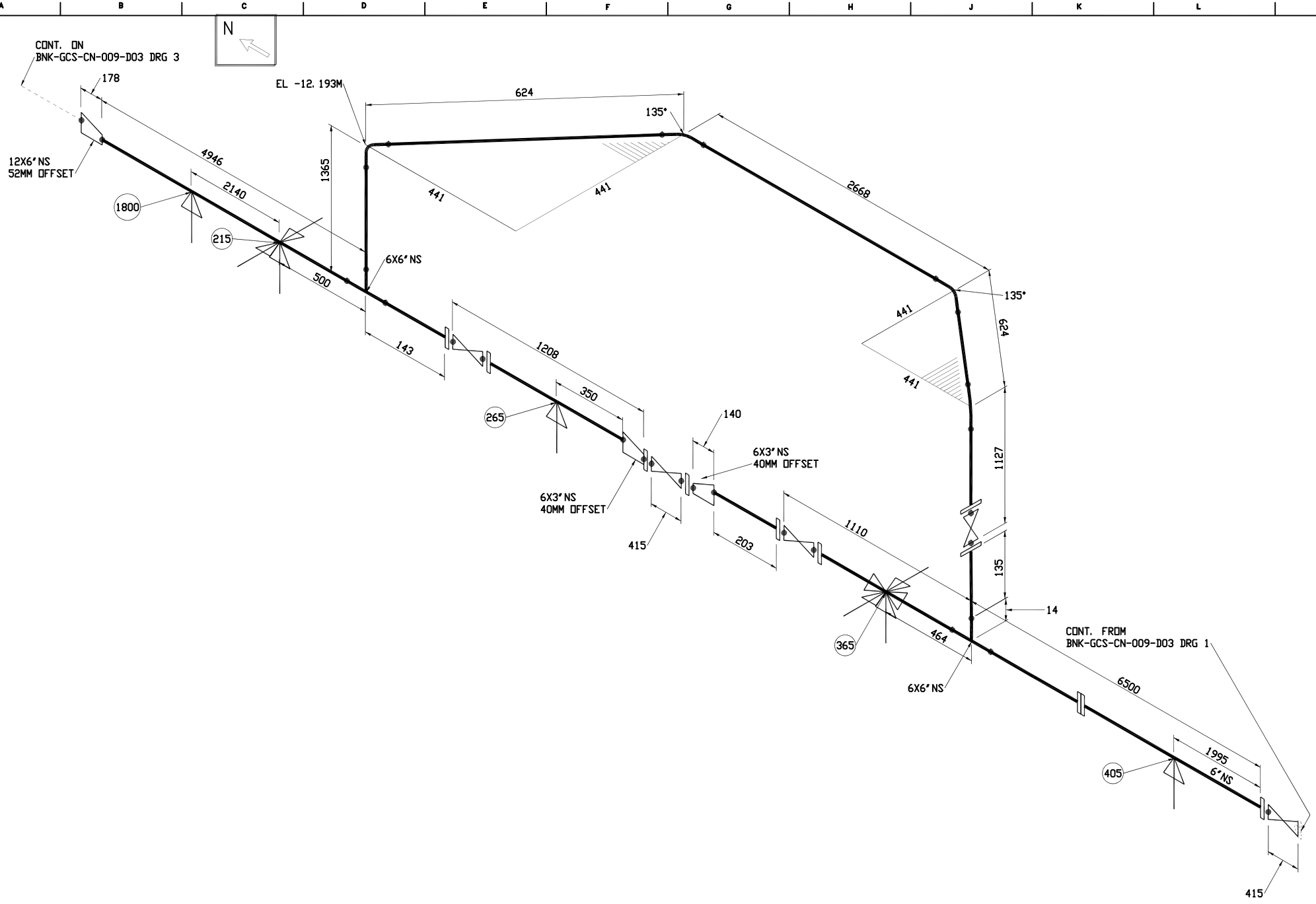

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

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2 OF 6

REV.	CHANGE	DATE
		20 MAY 2024

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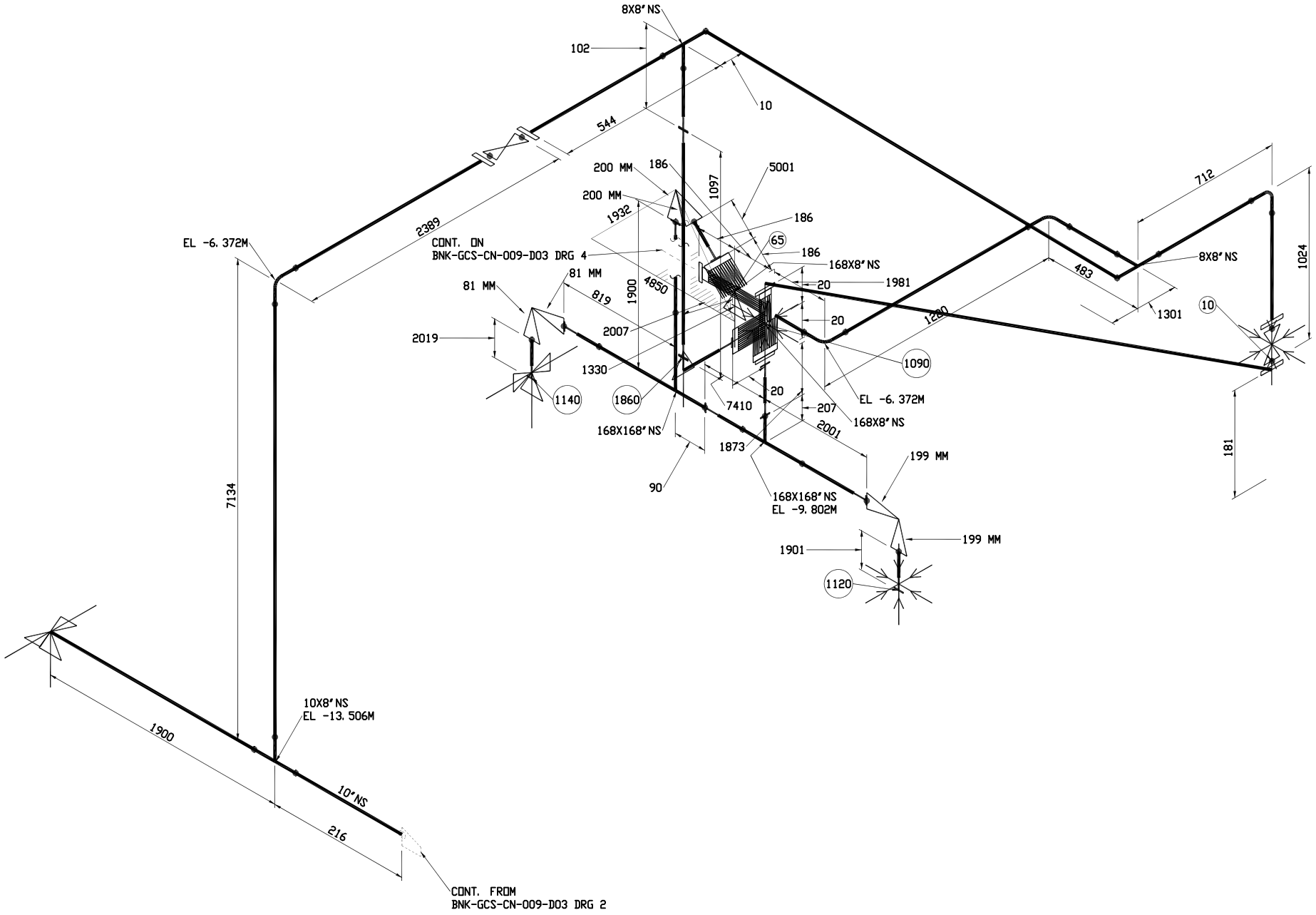

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

3 OF 6

REV.	CHANGE	DATE
		20 MAY 2024

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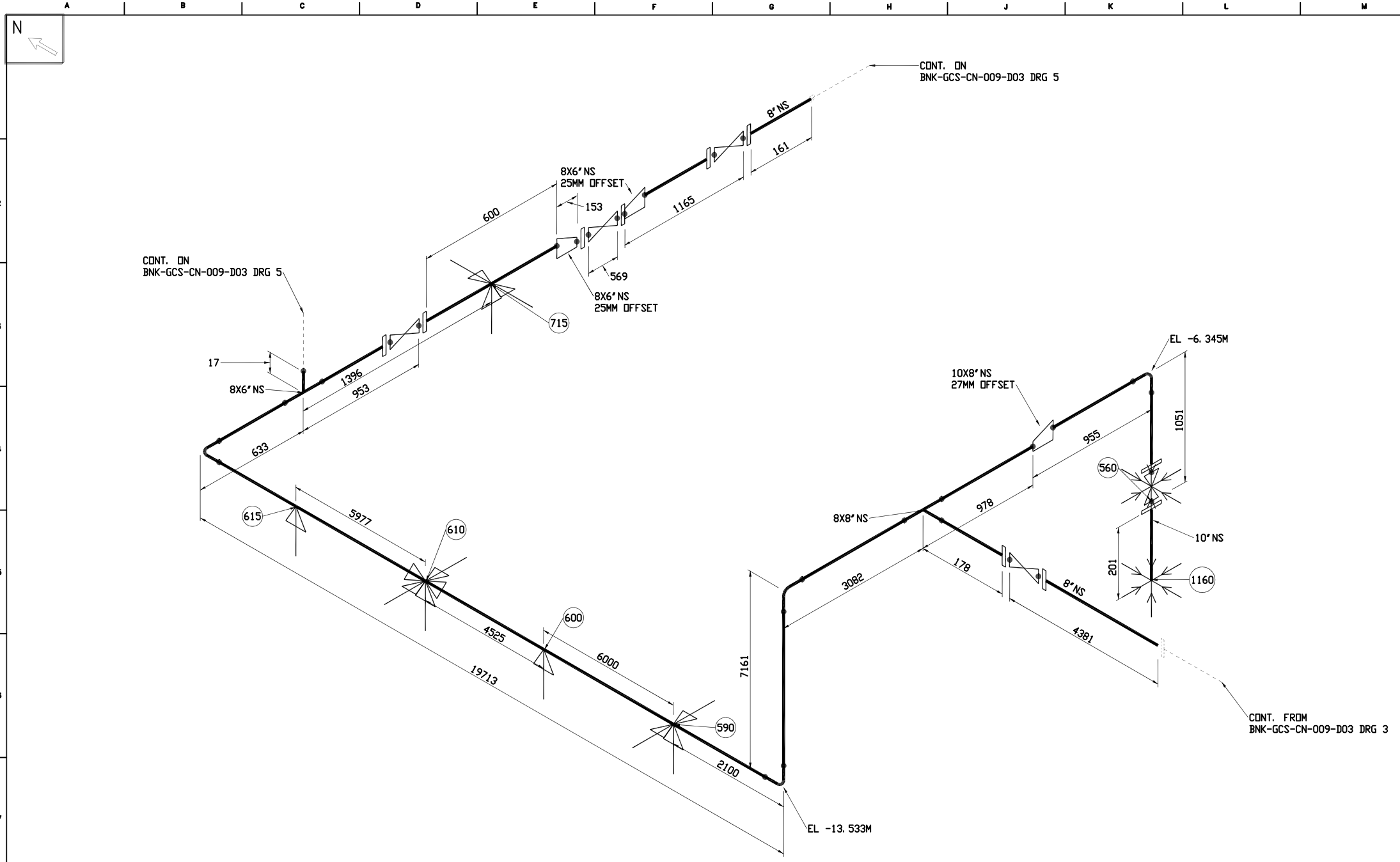

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

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REV.	CHANGE	DATE
		20 MAY 2024

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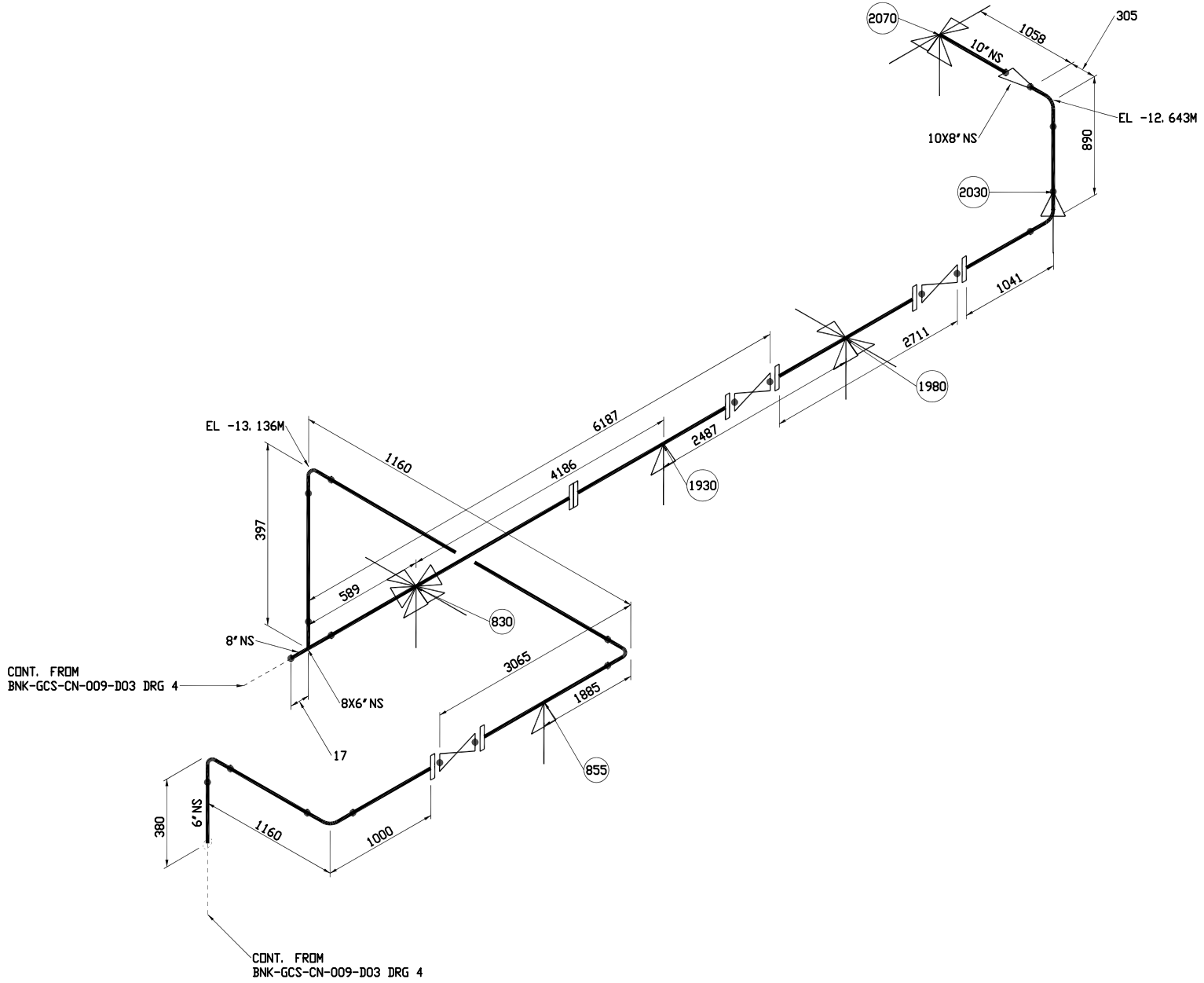

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

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REV.	CHANGE	DATE
		20 MAY 2024

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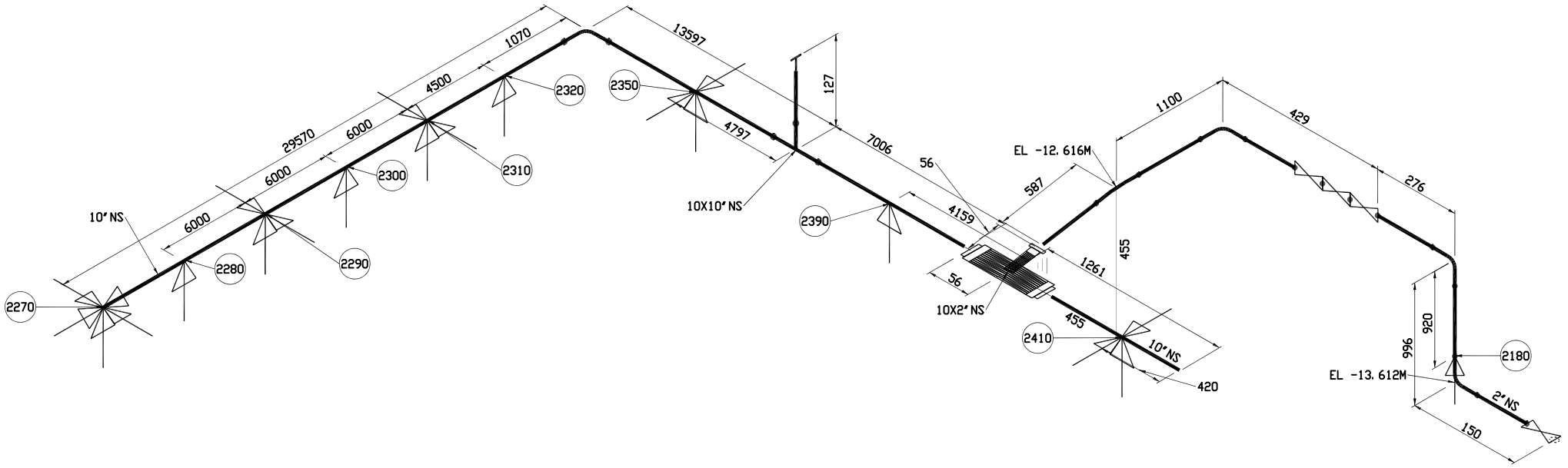

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 1

REV.	CHANGE	DATE
		20 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T2+P2
7 (OPE) W+T3+P1
8 (Alt-SUS) W+P1
9 (SUS) W+P1
10 (SUS) WNC
11 (OPE) W+T2+P1+U1
12 (OPE) W+T2+P1-U1
13 (OPE) W+T2+P1+U2
14 (OPE) W+T2+P1-U2
15 (OPE) W+T2+P1+U3
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15-L4
21 (OCC) L21=L16+L9
22 (OCC) L22=L17+L9
23 (OCC) L23=L18+L9
24 (OCC) L24=L19+L9
25 (OCC) L25=L20+L9
26 (EXP) L26=L2-L9
27 (EXP) L27=L4-L9
28 (EXP) L28=L2-L4

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 16:18
Job:: BNK-GCS-CN-009-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 16:18
Job:: BNK-GCS-CN-009-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 20,2024 16:18:46

PIPE DATA

From 10 To 20 DY= 482.000 mm.
PIPE
Dia= 219.075 mm. Wall= 10.312 mm. Cor= 6.0000 mm.
GENERAL
T1= 85 C T2= 32 C T3= 32 C P1= 900.0205 KPa P2= 530.0121 KPa
PHyd= 1,350.0308 KPa Mat= (106)A106 Grade B E= 203,401,232 KPa
EH1= 199,086,608 KPa EH2= 202,494,736 KPa EH3= 202,494,736 KPa
EH4= 203,401,232 KPa EH5= 203,401,232 KPa EH6= 203,401,232 KPa
EH7= 203,401,232 KPa EH8= 203,401,232 KPa EH9= 203,401,232 KPa
v = .292 Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000062 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RIGID Weight= 2,259.70 N.
RESTRAINTS
Node 10 ANC Cnode 11
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 20 To 30 DY= 104.775 mm.
RIGID Weight= 177.93 N.

From 30 To 40 DY= 437.000 mm.
BEND at "TO" end
Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 39

From 40 To 50 DZ= 512.000 mm.

From 50 To 60 DZ= 200.000 mm.
SIF's & TEE's
Node 60 Welding Tee

From 60 To 1840 DZ= 1,311.000 mm.

From 1840 To 1850 DY= -101.600 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 1850 Unreinforced Tee

INPUT LISTING

```
 From  1840  To  70 DZ= 544.000 mm.
 ------------------------------------------------------------------------------
 From  70  To  80 DZ= 104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  80  To  90 DZ= 504.000 mm.
 RIGID  Weight= 2,090.66 N.
 ------------------------------------------------------------------------------
 From  90  To  100 DZ= 104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  100  To  110 DZ= 1,780.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 109
    Angle/Node @2= .00 108
 ------------------------------------------------------------------------------
 From  110  To  120 DY= -7,134.000 mm.
 ------------------------------------------------------------------------------
 From  120  To  130  DX= 216.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.
 GENERAL
    T2= 38 C   T3= 38 C   P2= 530.0121 KPa   Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  120  To  125  DX= -1,900.000 mm.
 RESTRAINTS
    Node  125  +Y   Mu = .30
    Node  125  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  125  To  140  DX= -750.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 139
    Angle/Node @2= .00 138
 ------------------------------------------------------------------------------
 From  140  To  150 DY= 4,201.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 149
    Angle/Node @2= .00 148
 ------------------------------------------------------------------------------
 From  150  To  155 DZ= 3,600.000 mm.
 RESTRAINTS
    Node  155  +Y   Cnode  156   Mu = .30
 ------------------------------------------------------------------------------
 From  155  To  160 DZ= 1,345.000 mm.
 SIF's & TEE's
    Node  160   Welding Tee
 ------------------------------------------------------------------------------
 From  160  To  165 DY= -703.000 mm.
 ------------------------------------------------------------------------------
 From  165  To  170 DY= -203.000 mm.
 REDUCER
```

INPUT LISTING
```
    Diam2= 323.850 mm.   Wall2= 10.312 mm.
 ------------------------------------------------------------------------------
 From  170  To  190 DY= -117.475 mm.
 PIPE
    Dia= 323.850 mm.   Wall= 9.271 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 360.31 N.
 ------------------------------------------------------------------------------
 From  190  To  200 DY= -366.500 mm.
 RIGID  Weight= 4,915.29 N.
 RESTRAINTS
    Node  200  ANC   Cnode  201
 ------------------------------------------------------------------------------
 From  200  To  906  DX= -1,777.551 mm.  DY= 1,389.975 mm.  DZ= 1,147.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  200  To  156  DX= .000 mm.  DY= 1,389.975 mm.  DZ= -1,345.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  130  To  210  DX= 178.000 mm.  DY= -52.400 mm.
 GENERAL
    T2= 37 C   T3= 37 C   Fluid Den= .0000066 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------------
 From  210  To  1800  DX= 2,306.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
 GENERAL
    P2= 530.0121 KPa   Insul Thk= .000 mm.
 RESTRAINTS
    Node  1800  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1800  To  215  DX= 2,140.000 mm.
 RESTRAINTS
    Node  215  +Y   Mu = .30
    Node  215  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  215  To  220  DX= 500.000 mm.
 ------------------------------------------------------------------------------
 From  220  To  230  DX= 143.000 mm.
 ------------------------------------------------------------------------------
 From  230  To  240  DX= 92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  240  To  250  DX= 276.000 mm.
 GENERAL
    T1= 85 C   T2= 46 C   T3= 46 C   P2= 750.0171 KPa
 RIGID  Weight= 1,005.30 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
```

INPUT LISTING
```
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  250  To  260  DX= 92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  260  To  265  DX= 350.000 mm.
 RESTRAINTS
    Node  265  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  265  To  270  DX= 350.000 mm.
 ------------------------------------------------------------------------------
 From  270  To  280  DX= 140.000 mm.  DY= -40.000 mm.
 REDUCER
    Diam2= 88.900 mm.   Wall2= 7.620 mm.
 ------------------------------------------------------------------------------
 From  280  To  290  DX= 73.025 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 54.49 N.
 ------------------------------------------------------------------------------
 From  290  To  300  DX= 415.000 mm.
 RIGID  Weight= 113.43 N.
 ------------------------------------------------------------------------------
 From  300  To  310  DX= 73.025 mm.
 RIGID  Weight= 54.49 N.
 ------------------------------------------------------------------------------
 From  310  To  320  DX= 140.000 mm.  DY= 40.000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------------
 From  320  To  330  DX= 203.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  330  To  340  DX= 92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  340  To  350  DX= 276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ------------------------------------------------------------------------------
 From  350  To  360  DX= 92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  360  To  365  DX= 278.000 mm.
 RESTRAINTS
    Node  365  +Y   Mu = .30
    Node  365  X   Gap= 3.000 mm.   Mu = .30
    Node  365  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  365  To  370  DX= 464.000 mm.
 ------------------------------------------------------------------------------
 From  370  To  375  DX= 1,008.000 mm.
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  375  To  380  DX= 1,008.000 mm.
 ---------------------------------------------------------------------------
 From  380  To  390  DX= 92.075 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  390  To  400  DX= 92.075 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  400  To  405  DX= 2,305.000 mm.
 RESTRAINTS
    Node  405  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  405  To  410  DX= 1,995.000 mm.
 ---------------------------------------------------------------------------
 From  410  To  1610  DX= 92.075 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  1610  To  1620  DX= 415.000 mm.
 RIGID  Weight= 1,112.06 N.
 ---------------------------------------------------------------------------
 From  1620  To  1630  DX= 92.075 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  1630  To  1640  DX= 2,106.000 mm.
 RESTRAINTS
    Node  1640  +Y   Mu = .30
    Node  1640  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1640  To  1650  DX= 513.000 mm.
 ---------------------------------------------------------------------------
 From  1650  To  1660  DX= 92.075 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  1660  To  1670  DX= 515.000 mm.
 RIGID  Weight= 226.86 N.
 ---------------------------------------------------------------------------
 From  1670  To  1680  DX= 92.075 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  1680  To  1685  DX= 1,160.000 mm.
 SIF's & TEE's
    Node  1685   Welding Tee
 ---------------------------------------------------------------------------
 From  1685  To  1690  DX= 1,128.000 mm.
 RESTRAINTS
    Node  1690  +Y   Mu = .30
    Node  1690  Z
 ---------------------------------------------------------------------------
 From  1690  To  1700  DX= 2,842.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1699
    Angle/Node @2= .00 1698
 ---------------------------------------------------------------------------
 From  1700  To  1710 DZ= -1,430.000 mm.
 RESTRAINTS
```

INPUT LISTING

```
    Node  1710  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1710  To  1720 DZ= -5,011.000 mm.
 RESTRAINTS
    Node  1720  +Y   Mu = .30
    Node  1720  X   Gap= 3.000 mm.
    Node  1720  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1720  To  1730 DZ= -555.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1729
    Angle/Node @2= .00 1728
 ------------------------------------------------------------------------------
 From  1730  To  1740  DX= 979.000 mm.
 RESTRAINTS
    Node  1740  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1740  To  1750  DX= 5,750.000 mm.
 RESTRAINTS
    Node  1750  +Y   Mu = .30
    Node  1750  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1750  To  1760  DX= 6,000.000 mm.
 RESTRAINTS
    Node  1760  +Y
 ------------------------------------------------------------------------------
 From  1760  To  1770  DX= 1,730.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1769
    Angle/Node @2= .00 1768
 ------------------------------------------------------------------------------
 From  1770  To  1780 DZ= -2,012.000 mm.
 RESTRAINTS
    Node  1780  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1780  To  1790 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  1790  +Y   Mu = .30
    Node  1790  Z   Gap= 3.000 mm.   Mu = .30
    Node  1790  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  220  To  420 DY= 1,365.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 419
    Angle/Node @2= .00 418
 ------------------------------------------------------------------------------
 From  420  To  1870  DX= 441.000 mm.  DZ= -441.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 1869
    Angle/Node @2= .00 1868
 ------------------------------------------------------------------------------
 From  1870  To  430  DX= 2,668.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 429
    Angle/Node @2= .00 428
 ------------------------------------------------------------------------------
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 16:18
Job:: BNK-GCS-CN-009-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
 From  430  To  1880  DX= 441.000 mm.  DZ= 441.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.019   Angle/Node @1= 45.01 1879
    Angle/Node @2= .00 1878
 ------------------------------------------------------------------------------
 From  1880  To  440  DX= -.299 mm.  DY= -628.000 mm.
 ------------------------------------------------------------------------------
 From  440  To  450  DX= -.044 mm.  DY= -89.000 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  450  To  460  DX= -.281 mm.  DY= -410.000 mm.
 RIGID  Weight= 1,334.47 N.
 ------------------------------------------------------------------------------
 From  460  To  470  DX= -.044 mm.  DY= -89.000 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  470  To  370  DX= -.071 mm.  DY= -149.000 mm.
 ------------------------------------------------------------------------------
 From  60  To  1820  DX= -483.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
 GENERAL
    T2= 32 C   T3= 32 C   P2= 550.0125 KPa   Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1819
    Angle/Node @2= .00 1818
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1820  To  1830 DZ= 1,220.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1829
    Angle/Node @2= .00 1828
 ------------------------------------------------------------------------------
 From  1830  To  65  DX= -2,167.000 mm.
 RESTRAINTS
    Node  65  +Y   Cnode  66   Mu = .30
 ------------------------------------------------------------------------------
 From  65  To  480  DX= -3,995.700 mm.
 ------------------------------------------------------------------------------
 From  480  To  490  DX= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  490  To  500  DX= -466.750 mm.
 RIGID  Weight= 2,259.70 N.
 ------------------------------------------------------------------------------
 From  500  To  510  DX= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  510  To  520  DX= -178.000 mm.
 ------------------------------------------------------------------------------
 From  520  To  525 DZ= -978.000 mm.
 GENERAL
```

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INPUT LISTING

```
    T1= 85 C   T3= 32 C   P2= 550.0125 KPa
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  525  To  1810 DY= 27.000 mm.  DZ= -178.000 mm.
 REDUCER
    Diam2= 273.050 mm.   Wall2= 9.271 mm.
 ------------------------------------------------------------------------------
 From  1810  To  530 DZ= -777.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 529
    Angle/Node @2= .00 528
 ------------------------------------------------------------------------------
 From  530  To  540 DY= -584.000 mm.
 ------------------------------------------------------------------------------
 From  540  To  550 DY= -104.775 mm.
 RIGID  Weight= 235.76 N.
 ------------------------------------------------------------------------------
 From  550  To  560 DY= -362.000 mm.
 RIGID  Weight= 2,259.70 N.
 RESTRAINTS
    Node  560  ANC   Cnode  561
 ------------------------------------------------------------------------------
 From  520  To  570 DZ= 3,082.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 569
    Angle/Node @2= .00 568
 ------------------------------------------------------------------------------
 From  570  To  580 DY= -7,161.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 579
    Angle/Node @2= .00 578
 ------------------------------------------------------------------------------
 From  580  To  590  DX= -2,100.000 mm.
 RESTRAINTS
    Node  590  +Y   Mu = .30
    Node  590  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  590  To  600  DX= -6,000.000 mm.
 RESTRAINTS
    Node  600  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  600  To  610  DX= -4,525.000 mm.
 RESTRAINTS
    Node  610  +Y   Mu = .30
    Node  610  X   Gap= 3.000 mm.   Mu = .30
    Node  610  Z   Gap= 3.000 mm.   Mu = .30
```

INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  610  To  615  DX= -5,977.000 mm.
 RESTRAINTS
    Node  615  +Y   Mu = .30
 ----------------------------------------------------------------------------
 From  615  To  620  DX= -1,111.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 619
    Angle/Node @2= .00 618
 ----------------------------------------------------------------------------
 From  620  To  630 DZ= -633.000 mm.
 ----------------------------------------------------------------------------
 From  630  To  640 DZ= -178.000 mm.
 ----------------------------------------------------------------------------
 From  640  To  650 DZ= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ----------------------------------------------------------------------------
 From  630  To  660 DY= 397.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 659
    Angle/Node @2= .00 658
 ----------------------------------------------------------------------------
 From  660  To  670  DX= 1,160.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 669
    Angle/Node @2= .00 668
 ----------------------------------------------------------------------------
 From  670  To  680 DZ= -1,000.000 mm.
 ----------------------------------------------------------------------------
 From  680  To  690 DZ= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ----------------------------------------------------------------------------
 From  650  To  700 DZ= -670.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 15.088 mm.
 GENERAL
    P2= 750.0171 KPa   Fluid Den= .0000062 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 4,030.09 N.
 ----------------------------------------------------------------------------
 From  700  To  710 DZ= -142.875 mm.
 RIGID  Weight= 524.89 N.
 FLANGES
    Location= From   Method= Peq   Class/Grade= ASME-2009-600-3.19
    G/C= 244.602 mm.   T/P table ( 1)=  37.8 C   -> 10,342.1 KPa   ( 2)=  93.3 C
    -> 10,342.1 KPa   ( 3)=  148.9 C   -> 10,031.9 KPa   ( 4)=  204.4 C
    -> 9,721.6 KPa   ( 5)=  260.0 C   -> 9,170.0 KPa   ( 6)=  315.6 C
    -> 8,342.7 KPa   ( 7)=  343.3 C   -> 8,101.3 KPa   ( 8)=  371.1 C
    -> 7,825.5 KPa   ( 9)=  398.9 C   -> 7,342.9 KPa   (10)=  426.7 C
    -> 6,998.2 KPa   (11)=  454.4 C   -> 6,722.4 KPa   (12)=  482.2 C
    -> 6,205.3 KPa   (13)=  510.0 C   -> 5,343.4 KPa   (14)=  537.8 C
    -> 4,998.7 KPa   (15)=  565.6 C   -> 4,964.2 KPa   (16)=  593.3 C
    -> 4,447.1 KPa   (17)=  621.1 C   -> 3,792.1 KPa   (18)=  648.9 C
    -> 2,826.9 KPa   (19)=  676.7 C   -> 2,516.6 KPa   (20)=  704.4 C
```

INPUT LISTING
-> 1,896.1 KPa (21)= 732.2 C -> 1,413.4 KPa (22)= 760.0 C
-> 1,034.2 KPa (23)= 787.8 C -> 792.9 KPa (24)= 815.6 C
-> 586.1 KPa

From 710 To 715 DZ= -300.000 mm.
RESTRAINTS
Node 715 +Y Mu = .30
Node 715 X Gap= 3.000 mm. Mu = .30

From 715 To 720 DZ= -300.000 mm.

From 720 To 730 DY= -25.400 mm. DZ= -152.400 mm.
REDUCER
Diam2= 168.275 mm. Wall2= 14.275 mm.

From 730 To 740 DZ= -127.000 mm.
PIPE
Dia= 168.275 mm. Wall= 14.275 mm.
Insul Thk= .000 mm.
RIGID Weight= 364.75 N.
FLANGES
Location= To Method= Peq

From 740 To 750 DZ= -569.000 mm.
RIGID Weight= 733.96 N.

From 750 To 760 DZ= -127.000 mm.
RIGID Weight= 364.75 N.
FLANGES
Location= From Method= Peq

From 760 To 770 DY= 25.400 mm. DZ= -152.400 mm.
REDUCER
Diam2= 219.075 mm. Wall2= 15.088 mm.

From 770 To 780 DZ= -200.000 mm.
PIPE
Dia= 219.075 mm. Wall= 15.088 mm.
Insul Thk= .000 mm.

From 780 To 790 DZ= -142.875 mm.
RIGID Weight= 524.89 N.
FLANGES
Location= To Method= Peq

From 790 To 800 DZ= -670.000 mm.
RIGID Weight= 4,030.09 N.

From 800 To 810 DZ= -142.875 mm.
RIGID Weight= 524.89 N.
FLANGES
Location= From Method= Peq

From 810 To 820 DZ= -178.000 mm.
SIF's & TEE's
Node 820

INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  820  To  830 DZ= -588.500 mm.
 RESTRAINTS
    Node  830  +Y   Mu = .30
    Node  830  X   Gap= 3.000 mm.   Mu = .30
    Node  830  Z   Gap= 3.000 mm.   Mu = .30
 ----------------------------------------------------------------------------
 From  830  To  1900 DZ= -800.000 mm.
 ----------------------------------------------------------------------------
 From  1900  To  1910 DZ= -142.875 mm.
 RIGID  Weight= 524.89 N.
 FLANGES
    Location= To   Method= Peq
 ----------------------------------------------------------------------------
 From  1910  To  1920 DZ= -142.875 mm.
 RIGID  Weight= 524.89 N.
 FLANGES
    Location= From   Method= Peq
 ----------------------------------------------------------------------------
 From  1920  To  1930 DZ= -3,100.000 mm.
 RESTRAINTS
    Node  1930  +Y   Mu = .30
 ----------------------------------------------------------------------------
 From  1930  To  1940 DZ= -600.000 mm.
 ----------------------------------------------------------------------------
 From  1940  To  1950 DZ= -142.875 mm.
 RIGID  Weight= 524.89 N.
 FLANGES
    Location= From   Method= Peq
 ----------------------------------------------------------------------------
 From  1950  To  1960 DZ= -670.000 mm.
 RIGID  Weight= 5,053.18 N.
 ----------------------------------------------------------------------------
 From  1960  To  1970 DZ= -142.875 mm.
 RIGID  Weight= 524.89 N.
 FLANGES
    Location= From   Method= Peq
 ----------------------------------------------------------------------------
 From  1970  To  1980 DZ= -931.500 mm.
 RESTRAINTS
    Node  1980  +Y   Mu = .30
    Node  1980  X   Gap= 3.000 mm.   Mu = .30
 ----------------------------------------------------------------------------
 From  1980  To  1990 DZ= -931.500 mm.
 ----------------------------------------------------------------------------
 From  1990  To  2000 DZ= -142.875 mm.
 RIGID  Weight= 524.89 N.
 FLANGES
    Location= To   Method= Peq
 ----------------------------------------------------------------------------
 From  2000  To  2010 DZ= -705.000 mm.
 RIGID  Weight= 1,054.23 N.
 ----------------------------------------------------------------------------
 From  2010  To  2020 DZ= -142.875 mm.
 RIGID  Weight= 524.89 N.
 FLANGES
```

INPUT LISTING

```
    Location= From   Method= Peq
 ---------------------------------------------------------------------------
 From  2020  To  2030 DZ= -1,041.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2029
    Angle/Node @2= .00 2028
 RESTRAINTS
    Node  2030  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  2030  To  2040 DY= 890.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2039
    Angle/Node @2= .00 2038
 ---------------------------------------------------------------------------
 From  2040  To  2050  DX= -305.000 mm.
 ---------------------------------------------------------------------------
 From  2050  To  2060  DX= -178.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 15.088 mm.
    Insul Thk= .000 mm.
 REDUCER
    Diam2= 273.050 mm.   Wall2= 15.088 mm.
 ---------------------------------------------------------------------------
 From  2060  To  2070  DX= -880.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 15.088 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2070  +Y   Mu = .30
    Node  2070  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  820  To  840 DY= 397.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 14.275 mm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 839
    Angle/Node @2= .00 838
 ---------------------------------------------------------------------------
 From  840  To  850  DX= 1,160.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 849
    Angle/Node @2= .00 848
 ---------------------------------------------------------------------------
 From  850  To  855 DZ= 1,885.000 mm.
 RESTRAINTS
    Node  855  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  855  To  860 DZ= 459.126 mm.
 ---------------------------------------------------------------------------
 From  860  To  1890 DZ= 127.000 mm.
 RIGID  Weight= 364.75 N.
 FLANGES
    Location= To   Method= Peq
 ---------------------------------------------------------------------------
 From  1890  To  690 DZ= 593.000 mm.
```

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INPUT LISTING

```
 RIGID  Weight= 3,576.37 N.
 ------------------------------------------------------------------------------
 From  160  To  1300 DZ= 1,147.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.
 GENERAL
    T2= 37 C   T3= 37 C   P2= 530.0121 KPa   Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1299
    Angle/Node @2= .00 1298
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1300  To  870  DX= -531.000 mm.
 ------------------------------------------------------------------------------
 From  870  To  880  DX= -104.775 mm.
 RIGID  Weight= 235.76 N.
 ------------------------------------------------------------------------------
 From  880  To  890  DX= -537.000 mm.
 RIGID  Weight= 3,563.03 N.
 ------------------------------------------------------------------------------
 From  890  To  900  DX= -104.775 mm.
 RIGID  Weight= 235.76 N.
 ------------------------------------------------------------------------------
 From  900  To  906  DX= -500.000 mm.  DY= .000 mm.  DZ= .000 mm.
 RESTRAINTS
    Node  905  +Y   Cnode  906   Mu = .30
    Node  905  Z   Cnode  906   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  905  To  910  DX= -1,923.000 mm.
 ------------------------------------------------------------------------------
 From  910  To  920 DZ= -1,147.000 mm.
 GENERAL
    P2= 530.0121 KPa   Fluid Den= .0000059 kg./cu.cm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 919
    Angle/Node @2= .00 918
 ------------------------------------------------------------------------------
 From  920  To  930 DY= -917.000 mm.
 ------------------------------------------------------------------------------
 From  930  To  940 DY= -104.775 mm.
 RIGID  Weight= 235.76 N.
 ------------------------------------------------------------------------------
 From  940  To  950 DY= -366.000 mm.
 RIGID  Weight= 3,563.03 N.
 RESTRAINTS
    Node  950  ANC   Cnode  951
 ------------------------------------------------------------------------------
 From  910  To  1310  DX= -1,602.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1309
    Angle/Node @2= .00 1308
 ------------------------------------------------------------------------------
```

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INPUT LISTING

```
 From  1310  To  1320 DZ= -531.000 mm.
 RESTRAINTS
    Node  1320  +Y   Cnode  1321   Mu = .30
 ------------------------------------------------------------------------------
 From  1320  To  960 DZ= -651.000 mm.
 ------------------------------------------------------------------------------
 From  960  To  970 DZ= -104.775 mm.
 RIGID  Weight= 235.76 N.
 ------------------------------------------------------------------------------
 From  970  To  980 DZ= -631.000 mm.
 RIGID  Weight= 2,562.18 N.
 ------------------------------------------------------------------------------
 From  980  To  990  DX= .000 mm.  DZ= -104.775 mm.
 RIGID  Weight= 235.76 N.
 ------------------------------------------------------------------------------
 From  990  To  995 DZ= -981.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 994
    Angle/Node @2= .00 993
 ------------------------------------------------------------------------------
 From  995  To  1350  DX= -4,865.000 mm.
 RESTRAINTS
    Node  1350  +Y   Mu = .30
    Node  1350  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  1350  To  1000  DX= -8,385.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 999
    Angle/Node @2= .00 998
 ------------------------------------------------------------------------------
 From  1000  To  1010 DY= -1,500.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1009
    Angle/Node @2= .00 1008
 ------------------------------------------------------------------------------
 From  1010  To  1020 DZ= 1,651.000 mm.
 RESTRAINTS
    Node  1020  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1020  To  1030 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  1030  +Y   Mu = .30
    Node  1030  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1030  To  1040 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  1040  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1040  To  1050 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  1050  +Y   Mu = .30
    Node  1050  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1050  To  1060 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  1060  +Y   Mu = .30
```

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INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  1060  To  1400 DZ= 6,000.000 mm.
 ----------------------------------------------------------------------------
 From  11  To  1080 DY= -105.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
 GENERAL
    T1= 85 C   T2= 32 C   T3= 32 C   Insul Thk= .000 mm.
 RIGID  Weight= 177.93 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  1080  To  1090 DY= -201.000 mm.
 RESTRAINTS
    Node  1090  ANC   Cnode  1091
 EQUIPMENT LIMITS
    Nozzle Node = 1090
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,480.19 N.m.   MC= 5,820.25 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ----------------------------------------------------------------------------
 From  1091  To  1100 DY= -2,100.000 mm.
 PIPE
    Dia= 4,267.200 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  1091  To  1861  DX= .000 mm.  DY= 131.175 mm.  DZ= 2,023.000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  1100  To  1110  DX= 2,200.000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  1110  To  1120 DY= -2,100.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  1120  ANC
 ----------------------------------------------------------------------------
 From  1100  To  1130  DX= -7,500.000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  1130  To  1170  DX= -900.000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  1170  To  1140 DY= -2,100.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  1140  +Y   Mu = .30
    Node  1140  Z   Gap= 3.000 mm.   Mu = .30
 ----------------------------------------------------------------------------
 From  561  To  1150 DY= -105.000 mm.
 PIPE
```

INPUT LISTING
```
    Dia= 273.050 mm.   Wall= 9.271 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------
 From  1150  To  1160 DY= -201.000 mm.
 RESTRAINTS
    Node  1160  ANC   Cnode  1161
 EQUIPMENT LIMITS
    Nozzle Node = 1160
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 14,000.70 N.   FB= 14,000.70 N.
    FC= 10,500.52 N.   MA= 10,500.45 N.m.   MB= 7,000.30 N.m.
    MC= 9,100.39 N.m.   Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------
 From  1161  To  1130  DX= .002 mm.  DY= -2,100.000 mm.  DZ= .000 mm.
 PIPE
    Dia= 4,267.200 mm.   Wall= 9.271 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------
 From  1161  To  66  DX= 4,850.002 mm.  DY= 1,329.775 mm.  DZ= 1,932.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------
 From  201  To  1180  DX= .000 mm.  DY= -117.475 mm.  DZ= .000 mm.
 PIPE
    Dia= 323.850 mm.   Wall= 10.312 mm.
 GENERAL
    T2= 38 C   T3= 38 C   Insul Thk= .000 mm.
 RIGID  Weight= 360.31 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------
 From  1180  To  1190 DY= -171.000 mm.
 RESTRAINTS
    Node  1190  ANC   Cnode  1191
 EQUIPMENT LIMITS
    Nozzle Node = 1190
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 16,800.84 N.   FB= 16,800.84 N.
    FC= 12,600.63 N.   MA= 15,120.64 N.m.   MB= 10,080.43 N.m.
    MC= 13,100.56 N.m.   Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------
 From  1191  To  1210 DY= -762.000 mm.
 PIPE
    Dia= 1,548.384 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------
 From  1200  To  1210  DX= 200.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------
 From  1200  To  1220 DY= -762.000 mm.
 RIGID  Weight= .00 N.
```

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INPUT LISTING
```
 RESTRAINTS
    Node  1220  ANC
 ------------------------------------------------------------------------
 From  1200  To  1230  DX= -3,500.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------
 From  1230  To  1240 DY= -762.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  1240  +Y   Mu = .30
    Node  1240  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------
 From  951  To  1260 DY= -105.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 235.76 N.
 ------------------------------------------------------------------------
 From  1260  To  1270 DY= -180.000 mm.
 RESTRAINTS
    Node  1270  ANC   Cnode  1271
 EQUIPMENT LIMITS
    Nozzle Node = 1270
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 14,000.70 N.   FB= 14,000.70 N.
    FC= 10,500.52 N.   MA= 10,500.45 N.m.   MB= 7,000.30 N.m.
    MC= 9,100.39 N.m.   Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------
 From  1271  To  1321  DX= -1,602.500 mm.  DY= 1,678.449 mm.  DZ= 616.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------
 From  1271  To  1230  DX= .051 mm.  DY= -762.000 mm.  DZ= .000 mm.
 PIPE
    Dia= 1,548.384 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------
 From  1400  To  1410  DX= .000 mm.  DZ= 6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 199,086,608 KPa
    EH2= 202,064,544 KPa   EH3= 202,064,544 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000059 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  1400  +Y   Mu = .30
    Node  1400  Z   Gap= 3.000 mm.   Mu = .30
    Node  1400  X   Gap= 3.000 mm.
    Node  1410  +Y
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
```

INPUT LISTING

```
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1410  To  1420  DX= .000 mm.  DZ= 6,000.000 mm.
 RESTRAINTS
    Node  1420  +Y   Mu = .30
    Node  1420  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  1420  To  1430  DX= .000 mm.  DZ= 6,000.000 mm.
 RESTRAINTS
    Node  1430  +Y   Mu = .30
    Node  1430  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  1430  To  1440 DY= .000 mm.  DZ= 1,250.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1439
    Angle/Node @2= .00 1438
 ------------------------------------------------------------------------------
 From  1440  To  1450  DX= -6,000.000 mm.  DY= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1449
    Angle/Node @2= .00 1448
 ------------------------------------------------------------------------------
 From  1450  To  1460 DZ= 1,900.000 mm.
 RESTRAINTS
    Node  1460  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1460  To  1470 DZ= 1,900.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1469
    Angle/Node @2= .00 1468
 ------------------------------------------------------------------------------
 From  1470  To  1480  DX= 6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1479
    Angle/Node @2= .00 1478
 ------------------------------------------------------------------------------
 From  1480  To  1490 DZ= 800.000 mm.
 RESTRAINTS
    Node  1490  +Y   Mu = .30
    Node  1490  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  1490  To  1500 DZ= 4,700.000 mm.
 ------------------------------------------------------------------------------
 From  1500  To  1510 DZ= 1,300.000 mm.
 RESTRAINTS
    Node  1510  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1510  To  1520 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  1520  +Y   Mu = .30
    Node  1520  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1520  To  1530 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  1530  +Y   Mu = .30
```

INPUT LISTING

```
    Node  1530  LIM   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1530  To  1540 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  1540  +Y   Mu = .30
    Node  1540  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1540  To  1550 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  1550  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1550  To  1560 DZ= 4,700.000 mm.
 SIF's & TEE's
    Node  1560   Welding Tee
 ---------------------------------------------------------------------------
 From  1560  To  1570 DZ= 1,300.000 mm.
 RESTRAINTS
    Node  1570  +Y   Mu = .30
    Node  1570  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1570  To  1580 DZ= 500.000 mm.
 ---------------------------------------------------------------------------
 From  1580  To  1590 DZ= 120.650 mm.
 RIGID  Weight= 409.24 N.
 ---------------------------------------------------------------------------
 From  1590  To  1600 DZ= 120.650 mm.
 RIGID  Weight= 409.24 N.
 ---------------------------------------------------------------------------
 From  1685  To  2080 DY= 498.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
 GENERAL
    T1= 85 C   T2= 46 C   T3= 46 C   Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2079
    Angle/Node @2= .00 2078
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  2080  To  2090 DZ= -728.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2089
 ---------------------------------------------------------------------------
 From  2090  To  2100 DY= -552.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2099
    Angle/Node @2= .00 2098
 RESTRAINTS
    Node  2100  +Y
 ---------------------------------------------------------------------------
 From  2100  To  2110  DX= -2,372.000 mm.
 RESTRAINTS
    Node  2110  +Y   Mu = .30
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  2110  To  2120  DX= -4,700.000 mm.
 RESTRAINTS
    Node  2120  +Y   Mu = .30
    Node  2120  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  2120  To  2130  DX= -5,000.000 mm.
 RESTRAINTS
    Node  2130  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  2130  To  2140  DX= -5,026.000 mm.
 ---------------------------------------------------------------------------
 From  2140  To  2150  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  2150  To  2160  DX= -187.000 mm.
 RIGID  Weight= 258.00 N.
 ---------------------------------------------------------------------------
 From  2160  To  2170  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  2170  To  2180  DX= -77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2179
    Angle/Node @2= .00 2178
 RESTRAINTS
    Node  2180  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  2180  To  2190 DY= 996.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2189
    Angle/Node @2= .00 2188
 ---------------------------------------------------------------------------
 From  2190  To  2200  DX= -276.000 mm.
 ---------------------------------------------------------------------------
 From  2200  To  2210  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  2210  To  2220  DX= -212.000 mm.
 RIGID  Weight= 458.17 N.
 ---------------------------------------------------------------------------
 From  2220  To  2230  DX= -66.675 mm.
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  2230  To  2240  DX= -77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2239
    Angle/Node @2= .00 2238
 ---------------------------------------------------------------------------
```

INPUT LISTING
```
 From  2240  To  2250 DZ= 1,100.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2249
    Angle/Node @2= .00 2248
 ------------------------------------------------------------------------------
 From  2250  To  2260  DX= -455.000 mm.  DY= -455.000 mm.
 SIF's & TEE's
    Node  2260   Welding Tee
 ------------------------------------------------------------------------------
 From  1850  To  1860 DY= -1,097.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Fluid Den= .0000000 kg./cu.cm.   Insul Thk= .000 mm.
 RESTRAINTS
    Node  1860  +Y   Cnode  1861
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2270  To  2280 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0001362 kg./cu.cm.
 RESTRAINTS
    Node  2280  +Y   Mu = .30
    Node  2270  X   Gap= 3.000 mm.   Mu = .30
    Node  2270  +Y   Mu = .30
    Node  2270  Z   Gap= 3.000 mm.   Mu = .30
 UNIFORM LOAD
   Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
   Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
   Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2280  To  2290 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  2290  +Y   Mu = .30
    Node  2290  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  2290  To  2300 DZ= -6,000.000 mm.
 RESTRAINTS
```

INPUT LISTING
```
    Node  2300  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  2300  To  2310 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  2310  +Y   Mu = .30
    Node  2310  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  2310  To  2320 DZ= -4,500.000 mm.
 RESTRAINTS
    Node  2320  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  2320  To  2330 DZ= -1,070.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2329
    Angle/Node @2= .00 2328
 ------------------------------------------------------------------------------
 From  2330  To  2340  DX= 3,500.000 mm.
 ------------------------------------------------------------------------------
 From  2340  To  2350  DX= 5,300.000 mm.
 RESTRAINTS
    Node  2350  +Y   Mu = .30
    Node  2350  Z
 ------------------------------------------------------------------------------
 From  2350  To  2360  DX= 4,700.000 mm.
 ------------------------------------------------------------------------------
 From  2360  To  2370  DX= 97.000 mm.
 ------------------------------------------------------------------------------
 From  2370  To  2380 DY= 127.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  2370  To  2390  DX= 2,903.000 mm.
 RESTRAINTS
    Node  2390  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  2390  To  2260  DX= 4,159.000 mm.
 ------------------------------------------------------------------------------
 From  2260  To  2410  DX= 841.000 mm.
 RESTRAINTS
    Node  2410  +Y   Mu = .00
    Node  2410  Z
 ------------------------------------------------------------------------------
 From  2410  To  2420  DX= 420.000 mm.
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 MATERIAL Changes:
    10              20             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  1400            1410             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  2270            2280             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
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 JOBNAME: D:\BINAK PRO\NATIVE CAESAR FILE\NATIVE CEASAR FILE-D03\BNK-GCS-CN-009-
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 16:18
Job:: BNK-GCS-CN-009-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
ALLOWABLE STRESS Changes

10	20	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
120	130	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
130	210	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
240	250	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
60	1820	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
520	525	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
160	1300	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
11	1080	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa

INPUT LISTING

```
                                Sy= 241,316 KPa
   201            1180          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1400            1410          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1685            2080          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2220            2230          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1850            1860          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2270            2280          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
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BEND ELEMENTS
    30              40          Radius= 304.800 mm. (LONG)
                                Bend Angle= 90.000   Angle/Node @1= 45.00 39
   100             110          Radius= 304.800 mm. (LONG)
                                Bend Angle= 90.000   Angle/Node @1= 45.00
                               109   Angle/Node @2= .00 108
   125             140          Radius= 381.000 mm. (LONG)
                                Bend Angle= 90.000   Angle/Node @1= 45.00
                               139   Angle/Node @2= .00 138
```

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Job:: BNK-GCS-CN-009-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
   140             150             Radius= 381.000 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  149   Angle/Node @2= .00 148
  1690            1700             Radius= 228.600 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1699   Angle/Node @2= .00 1698
  1720            1730             Radius= 228.600 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1729   Angle/Node @2= .00 1728
  1760            1770             Radius= 228.600 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1769   Angle/Node @2= .00 1768
   220             420             Radius= 228.600 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  419   Angle/Node @2= .00 418
   420            1870             Radius= 228.600 mm. (LONG)
                                   Bend Angle= 45.000   Angle/Node @1= 22.50
                                  1869   Angle/Node @2= .00 1868
  1870             430             Radius= 228.600 mm. (LONG)
                                   Bend Angle= 45.000   Angle/Node @1= 22.50
                                  429   Angle/Node @2= .00 428
   430            1880             Radius= 228.600 mm. (LONG)
                                   Bend Angle= 90.019   Angle/Node @1= 45.01
                                  1879   Angle/Node @2= .00 1878
    60            1820             Radius= 304.800 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1819   Angle/Node @2= .00 1818
  1820            1830             Radius= 304.800 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1829   Angle/Node @2= .00 1828
  1810             530             Radius= 381.000 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  529   Angle/Node @2= .00 528
   520             570             Radius= 304.800 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  569   Angle/Node @2= .00 568
   570             580             Radius= 304.800 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  579   Angle/Node @2= .00 578
   615             620             Radius= 304.800 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  619   Angle/Node @2= .00 618
   630             660             Radius= 228.600 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  659   Angle/Node @2= .00 658
   660             670             Radius= 228.600 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  669   Angle/Node @2= .00 668
  2020            2030             Radius= 304.800 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2029   Angle/Node @2= .00 2028
  2030            2040             Radius= 304.800 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2039   Angle/Node @2= .00 2038
   820             840             Radius= 228.600 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
```

INPUT LISTING

```
                                839   Angle/Node @2= .00 838
  840            850              Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                849   Angle/Node @2= .00 848
  160           1300              Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1299   Angle/Node @2= .00 1298
  910            920              Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                919   Angle/Node @2= .00 918
  910           1310              Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1309   Angle/Node @2= .00 1308
  990            995              Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                994   Angle/Node @2= .00 993
 1350           1000              Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                999   Angle/Node @2= .00 998
 1000           1010              Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1009   Angle/Node @2= .00 1008
 1430           1440              Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1439   Angle/Node @2= .00 1438
 1440           1450              Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1449   Angle/Node @2= .00 1448
 1460           1470              Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1469   Angle/Node @2= .00 1468
 1470           1480              Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1479   Angle/Node @2= .00 1478
 1685           2080              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2079   Angle/Node @2= .00 2078
 2080           2090              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2089
 2090           2100              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2099   Angle/Node @2= .00 2098
 2170           2180              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2179   Angle/Node @2= .00 2178
 2180           2190              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2189   Angle/Node @2= .00 2188
 2230           2240              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2239   Angle/Node @2= .00 2238
 2240           2250              Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2249   Angle/Node @2= .00 2248
 2320           2330              Radius= 381.000 mm. (LONG)
```

INPUT LISTING

RIGIDS

10	20	RIGID	Weight= 2,259.70 N.
20	30	RIGID	Weight= 177.93 N.
1840	1850	RIGID	Weight= .00 N.
70	80	RIGID	Weight= 177.93 N.
80	90	RIGID	Weight= 2,090.66 N.
90	100	RIGID	Weight= 177.93 N.
170	190	RIGID	Weight= 360.31 N.
190	200	RIGID	Weight= 4,915.29 N.
200	906	RIGID	Weight= .00 N.
200	156	RIGID	Weight= .00 N.
230	240	RIGID	Weight= 111.21 N.
240	250	RIGID	Weight= 1,005.30 N.
250	260	RIGID	Weight= 111.21 N.
280	290	RIGID	Weight= 54.49 N.
290	300	RIGID	Weight= 113.43 N.
300	310	RIGID	Weight= 54.49 N.
330	340	RIGID	Weight= 111.21 N.
340	350	RIGID	Weight= 1,005.30 N.
350	360	RIGID	Weight= 111.21 N.
380	390	RIGID	Weight= 111.21 N.
390	400	RIGID	Weight= 111.21 N.
410	1610	RIGID	Weight= 111.21 N.
1610	1620	RIGID	Weight= 1,112.06 N.
1620	1630	RIGID	Weight= 111.21 N.
1650	1660	RIGID	Weight= 111.21 N.
1660	1670	RIGID	Weight= 226.86 N.
1670	1680	RIGID	Weight= 111.21 N.
440	450	RIGID	Weight= 111.21 N.
450	460	RIGID	Weight= 1,334.47 N.
460	470	RIGID	Weight= 111.21 N.
480	490	RIGID	Weight= 177.93 N.
490	500	RIGID	Weight= 2,259.70 N.
500	510	RIGID	Weight= 177.93 N.
540	550	RIGID	Weight= 235.76 N.
550	560	RIGID	Weight= 2,259.70 N.
640	650	RIGID	Weight= 177.93 N.
680	690	RIGID	Weight= 111.21 N.
650	700	RIGID	Weight= 4,030.09 N.
700	710	RIGID	Weight= 524.89 N.
730	740	RIGID	Weight= 364.75 N.
740	750	RIGID	Weight= 733.96 N.
750	760	RIGID	Weight= 364.75 N.
780	790	RIGID	Weight= 524.89 N.
790	800	RIGID	Weight= 4,030.09 N.
800	810	RIGID	Weight= 524.89 N.
1900	1910	RIGID	Weight= 524.89 N.
1910	1920	RIGID	Weight= 524.89 N.
1940	1950	RIGID	Weight= 524.89 N.
1950	1960	RIGID	Weight= 5,053.18 N.

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INPUT LISTING

1960	1970	RIGID	Weight= 524.89 N.
1990	2000	RIGID	Weight= 524.89 N.
2000	2010	RIGID	Weight= 1,054.23 N.
2010	2020	RIGID	Weight= 524.89 N.
860	1890	RIGID	Weight= 364.75 N.
1890	690	RIGID	Weight= 3,576.37 N.
870	880	RIGID	Weight= 235.76 N.
880	890	RIGID	Weight= 3,563.03 N.
890	900	RIGID	Weight= 235.76 N.
930	940	RIGID	Weight= 235.76 N.
940	950	RIGID	Weight= 3,563.03 N.
960	970	RIGID	Weight= 235.76 N.
970	980	RIGID	Weight= 2,562.18 N.
980	990	RIGID	Weight= 235.76 N.
11	1080	RIGID	Weight= 177.93 N.
1091	1100	RIGID	Weight= .00 N.
1091	1861	RIGID	Weight= .00 N.
1100	1110	RIGID	Weight= .00 N.
1110	1120	RIGID	Weight= .00 N.
1100	1130	RIGID	Weight= .00 N.
1130	1170	RIGID	Weight= .00 N.
1170	1140	RIGID	Weight= .00 N.
561	1150	RIGID	Weight= 177.93 N.
1161	1130	RIGID	Weight= .00 N.
1161	66	RIGID	Weight= .00 N.
201	1180	RIGID	Weight= 360.31 N.
1191	1210	RIGID	Weight= .00 N.
1200	1210	RIGID	Weight= .00 N.
1200	1220	RIGID	Weight= .00 N.
1200	1230	RIGID	Weight= .00 N.
1230	1240	RIGID	Weight= .00 N.
951	1260	RIGID	Weight= 235.76 N.
1271	1321	RIGID	Weight= .00 N.
1271	1230	RIGID	Weight= .00 N.
1580	1590	RIGID	Weight= 409.24 N.
1590	1600	RIGID	Weight= 409.24 N.
2140	2150	RIGID	Weight= 44.48 N.
2150	2160	RIGID	Weight= 258.00 N.
2160	2170	RIGID	Weight= 44.48 N.
2200	2210	RIGID	Weight= 44.48 N.
2210	2220	RIGID	Weight= 458.17 N.
2220	2230	RIGID	Weight= 31.14 N.
2370	2380	RIGID	Weight= .00 N.

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SIF's & TEE's

50	60	Node	60 Welding Tee
1840	1850	Node	1850 Unreinforced Tee
155	160	Node	160 Welding Tee
1680	1685	Node	1685 Welding Tee
810	820	Node	820
1550	1560	Node	1560 Welding Tee
2250	2260	Node	2260 Welding Tee

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INPUT LISTING

REDUCERS

165	170	Diam2= 323.850 mm.	Wall2= 10.312 mm.
130	210	Diam2= 168.275 mm.	Wall2= 10.973 mm.
270	280	Diam2= 88.900 mm.	Wall2= 7.620 mm.
310	320	Diam2= 168.275 mm.	Wall2= 10.973 mm.
525	1810	Diam2= 273.050 mm.	Wall2= 9.271 mm.
720	730	Diam2= 168.275 mm.	Wall2= 14.275 mm.
760	770	Diam2= 219.075 mm.	Wall2= 15.088 mm.
2050	2060	Diam2= 273.050 mm.	Wall2= 15.088 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
10	ANC	11				.000	.000	.000
125	+Y				.30	.000	1.000	.000
125	Z			3.00	.30	.000	.000	1.000
155	+Y	156			.30	.000	1.000	.000
200	ANC	201				.000	.000	.000
1800	+Y				.30	.000	1.000	.000
215	+Y				.30	.000	1.000	.000
215	Z			3.00	.30	.000	.000	1.000
265	+Y				.30	.000	1.000	.000
365	+Y				.30	.000	1.000	.000
365	X			3.00	.30	1.000	.000	.000
365	Z			3.00		.000	.000	1.000
405	+Y				.30	.000	1.000	.000
1640	+Y				.30	.000	1.000	.000
1640	Z			3.00		.000	.000	1.000
1690	+Y				.30	.000	1.000	.000
1690	Z					.000	.000	1.000
1710	+Y				.30	.000	1.000	.000
1720	+Y				.30	.000	1.000	.000
1720	X			3.00		1.000	.000	.000
1720	Z			3.00	.30	.000	.000	1.000
1740	+Y				.30	.000	1.000	.000
1750	+Y				.30	.000	1.000	.000
1750	X			3.00	.30	1.000	.000	.000
1760	+Y					.000	1.000	.000
1780	+Y				.30	.000	1.000	.000
1790	+Y				.30	.000	1.000	.000
1790	Z			3.00	.30	.000	.000	1.000
1790	X			3.00		1.000	.000	.000
65	+Y	66			.30	.000	1.000	.000
560	ANC	561				.000	.000	.000
590	+Y				.30	.000	1.000	.000
590	Z			3.00	.30	.000	.000	1.000
600	+Y				.30	.000	1.000	.000
610	+Y				.30	.000	1.000	.000
610	X			3.00	.30	1.000	.000	.000
610	Z			3.00	.30	.000	.000	1.000
615	+Y				.30	.000	1.000	.000

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INPUT LISTING

715	+Y			.30	.000	1.000	.000
715	X		3.00	.30	1.000	.000	.000
830	+Y			.30	.000	1.000	.000
830	X		3.00	.30	1.000	.000	.000
830	Z		3.00	.30	.000	.000	1.000
1930	+Y			.30	.000	1.000	.000
1980	+Y			.30	.000	1.000	.000
1980	X		3.00	.30	1.000	.000	.000
2030	+Y			.30	.000	1.000	.000
2070	+Y			.30	.000	1.000	.000
2070	Z		3.00	.30	.000	.000	1.000
855	+Y			.30	.000	1.000	.000
905	+Y	906		.30	.000	1.000	.000
905	Z	906	3.00		.000	.000	1.000
950	ANC	951			.000	.000	.000
1320	+Y	1321		.30	.000	1.000	.000
1350	+Y			.30	.000	1.000	.000
1350	Z		3.00		.000	.000	1.000
1020	+Y			.30	.000	1.000	.000
1030	+Y			.30	.000	1.000	.000
1030	X		3.00	.30	1.000	.000	.000
1040	+Y			.30	.000	1.000	.000
1050	+Y			.30	.000	1.000	.000
1050	X		3.00	.30	1.000	.000	.000
1060	+Y			.30	.000	1.000	.000
1090	ANC	1091			.000	.000	.000
1120	ANC				.000	.000	.000
1140	+Y			.30	.000	1.000	.000
1140	Z		3.00	.30	.000	.000	1.000
1160	ANC	1161			.000	.000	.000
1190	ANC	1191			.000	.000	.000
1220	ANC				.000	.000	.000
1240	+Y			.30	.000	1.000	.000
1240	Z		3.00	.30	.000	.000	1.000
1270	ANC	1271			.000	.000	.000
1400	+Y			.30	.000	1.000	.000
1400	Z		3.00	.30	.000	.000	1.000
1400	X		3.00		1.000	.000	.000
1410	+Y				.000	1.000	.000
1420	+Y			.30	.000	1.000	.000
1420	X		3.00		1.000	.000	.000
1430	+Y			.30	.000	1.000	.000
1430	X		3.00		1.000	.000	.000
1460	+Y			.30	.000	1.000	.000
1490	+Y			.30	.000	1.000	.000
1490	X		3.00		1.000	.000	.000
1510	+Y			.30	.000	1.000	.000
1520	+Y			.30	.000	1.000	.000
1520	X		3.00	.30	1.000	.000	.000
1530	+Y			.30	.000	1.000	.000
1530	LIM		3.00		.000	.000	.000
1540	+Y			.30	.000	1.000	.000
1540	X		3.00		1.000	.000	.000
1550	+Y			.30	.000	1.000	.000
1570	+Y			.30	.000	1.000	.000
1570	X		3.00		1.000	.000	.000

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INPUT LISTING

2100	+Y				.000	1.000	.000
2110	+Y			.30	.000	1.000	.000
2120	+Y			.30	.000	1.000	.000
2120	Z		3.00		.000	.000	1.000
2130	+Y			.30	.000	1.000	.000
2180	+Y			.30	.000	1.000	.000
1860	+Y	1861			.000	1.000	.000
2280	+Y			.30	.000	1.000	.000
2270	X		3.00	.30	1.000	.000	.000
2270	+Y			.30	.000	1.000	.000
2270	Z		3.00	.30	.000	.000	1.000
2290	+Y			.30	.000	1.000	.000
2290	X		3.00		1.000	.000	.000
2300	+Y			.30	.000	1.000	.000
2310	+Y			.30	.000	1.000	.000
2310	X		3.00		1.000	.000	.000
2320	+Y			.30	.000	1.000	.000
2350	+Y			.30	.000	1.000	.000
2350	Z				.000	.000	1.000
2390	+Y			.30	.000	1.000	.000
2410	+Y			.00	.000	1.000	.000
2410	Z				.000	.000	1.000

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FLANGES

700	710	Location= From Method= Peq Class/Grade= ASME-2009-600-3.19 G/C= 244.602 mm. T/P table (1)= 37.8 C -> 10,342.1 KPa (2)= 93.3 C -> 10,342.1 KPa (3)= 148.9 C -> 10,031.9 KPa (4)= 204.4 C -> 9,721.6 KPa (5)= 260.0 C -> 9,170.0 KPa (6)= 315.6 C -> 8,342.7 KPa (7)= 343.3 C -> 8,101.3 KPa (8)= 371.1 C -> 7,825.5 KPa (9)= 398.9 C -> 7,342.9 KPa (10)= 426.7 C -> 6,998.2 KPa (11)= 454.4 C -> 6,722.4 KPa (12)= 482.2 C -> 6,205.3 KPa (13)= 510.0 C -> 5,343.4 KPa (14)= 537.8 C -> 4,998.7 KPa (15)= 565.6 C -> 4,964.2 KPa (16)= 593.3 C -> 4,447.1 KPa (17)= 621.1 C -> 3,792.1 KPa (18)= 648.9 C -> 2,826.9 KPa (19)= 676.7 C -> 2,516.6 KPa (20)= 704.4 C -> 1,896.1 KPa (21)= 732.2 C -> 1,413.4 KPa (22)= 760.0 C -> 1,034.2 KPa (23)= 787.8 C -> 792.9 KPa (24)= 815.6 C -> 586.1 KPa
730	740	Location= To Method= Peq
750	760	Location= From Method= Peq
780	790	Location= To Method= Peq

INPUT LISTING

```
   800             810             Location= From   Method= Peq
  1900            1910             Location= To   Method= Peq
  1910            1920             Location= From   Method= Peq
  1940            1950             Location= From   Method= Peq
  1960            1970             Location= From   Method= Peq
  1990            2000             Location= To   Method= Peq
  2010            2020             Location= From   Method= Peq
   860            1890             Location= To   Method= Peq
```


EQUIPMENT LIMITS

```
 1080            1090             Nozzle Node = 1090

   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
   FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,480.19 N.m.   MC= 5,820.25 N.m.
   Equipment Major Direction Vector= .0000  .0000  1.0000
   Interact. Mtd= Absolute
 1150            1160             Nozzle Node = 1160

   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 14,000.70 N.   FB= 14,000.70 N.
   FC= 10,500.52 N.   MA= 10,500.45 N.m.   MB= 7,000.30 N.m.
   MC= 9,100.39 N.m.   Equipment Major Direction Vector= .0000  .0000  1.0000
   Interact. Mtd= Absolute
 1180            1190             Nozzle Node = 1190

   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 16,800.84 N.   FB= 16,800.84 N.
   FC= 12,600.63 N.   MA= 15,120.64 N.m.   MB= 10,080.43 N.m.
   MC= 13,100.56 N.m.   Equipment Major Direction Vector= .0000  .0000  1.0000
   Interact. Mtd= Absolute
 1260            1270             Nozzle Node = 1270

   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 14,000.70 N.   FB= 14,000.70 N.
   FC= 10,500.52 N.   MA= 10,500.45 N.m.   MB= 7,000.30 N.m.
   MC= 9,100.39 N.m.   Equipment Major Direction Vector= .0000  .0000  1.0000
   Interact. Mtd= Absolute
```


UNIFORM LOAD Changes

```
   10              20            Vector1 in G-s
                                 X1 Dir = .26 g's  Y1 Dir = .00 g's
                                 Z1 Dir = .00 g's
                                 Vector2 in G-s
                                 X2 Dir = .00 g's  Y2 Dir = .12 g's
                                 Z2 Dir = .00 g's
                                 Vector3 in G-s
                                 X3 Dir = .00 g's  Y3 Dir = .00 g's
                                 Z3 Dir = .26 g's
 2270            2280            Vector1 in G-s
```

INPUT LISTING

```
                                  X1 Dir = .26 g's  Y1 Dir = .00 g's
                                  Z1 Dir = .00 g's
                                  Vector2 in G-s
                                  X2 Dir = .00 g's  Y2 Dir = .12 g's
                                  Z2 Dir = .00 g's
                                  Vector3 in G-s
                                  X3 Dir = .00 g's  Y3 Dir = .00 g's
                                  Z3 Dir = .26 g's
```


INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	=	N./cm.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

SETUP FILE PARAMETERS

```
 CONNECT GEOMETRY THRU CNODES =    YES
 MIN ALLOWED BEND ANGLE =            5.00000
 MAX ALLOWED BEND ANGLE =            95.0000
 BEND LENGTH ATTACHMENT PERCENT =    1.00000
 MIN ANGLE TO ADJACENT BEND PT =     5.00000
 LOOP CLOSURE TOLERANCE =            25.4000     mm.
 THERMAL BOWING HORZ TOLERANCE =    0.100000E-03
 AUTO NODE NUMBER INCREMENT=         10.0000
 Z AXIS UP=                         NO
 USE PRESSURE STIFFENING =          DEFAULT
 ALPHA TOLERANCE =                   0.500000E-01
 RESLD-FORCE =                       NO
 HGR DEF RESWGT STIF =               0.175127E+13 N./cm.
 DECOMP SNG TOL =                    0.100000E+11
 BEND AXIAL SHAPE =                 YES
 FRICT STIF =                        0.175127E+07 N./cm.
 FRICT NORM FORCE VAR =              0.150000
 FRICT ANGLE VAR =                   15.0000
```

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Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
  FRICT SLIDE MULT =                  1.00000
  ROD TOLERANCE =                     1.00000
  ROD INC =                           2.00000
  INCORE NUMERICAL CHECK =           NO
  OUTCORE NUMERICAL CHECK =          NO
  DEFAULT TRANS RESTRAINT STIFF=     0.175127E+13    N./cm.
  DEFAULT ROT RESTRAINT STIFF=       0.112985E+12  N.m./deg
  IGNORE SPRING HANGER STIFFNESS =   NO
  MISSING MASS ZPA =                 EXTRACTED
  MIN WALL MILL TOLERANCE =           12.5000
  WRC-107 VERSION =                  MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =            LAST VALUE
  DEFAULT AMBIENT TEMPERATURE=        21.1111       C
  BOURDON PRESSURE=                  NONE
  COEFFICIENT OF FRICTION (MU) =          0.000000
  INCLUDE SPRG STIF IN HGR OPE =     NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =             B31.1(POST1980)
  USE WRC329                         NO
  NO REDUCED SIF FOR RFT AND WLT     NO
  B31.1 REDUCED Z FIX =              YES
  CLASS 1 BRANCH FLEX                NO
  ALL STRESS CASES CORRODED =        NO
  ADD TORSION IN SL STRESS =         DEFAULT
  ADD F/A IN STRESS =                DEFAULT
  OCCASIONAL LOAD FACTOR =                0.000000
  DEFAULT CODE =                     B31.3
  B31.3 SUS CASE SIF FACTOR =             0.000000
  ALLOW USERS BEND SIF =             NO
  USE SCHNEIDER                      NO
  YIELD CRITERION STRESS =           MAX 3D SHEAR
  USE PD/4T                           NO
  BASE HOOP STRESS ON ? =             ID
  EN13480 USE IN OUTPLANE SIFS=       NO
  LIBERAL EXPANSION ALLOWABLE=       YES
  B31.3 SEC 319.2.3C SAXIAL=         Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=    DEFAULT
  IMPLEMENT B313 APP-P                NO
  IMPLEMENT B313 CODE CASE 178       YES
  IGNORE B31.1/B31.3 Wc FACTOR=      YES
  USE FRP SIF =                      YES
  USE FRP FLEX =                     YES
  BS 7159 Pressure Stiffening=       Design Strain
  FRP Property Data File=            CAESAR.FRP
  FRP Emod (axial) =                  0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =       0.250000
  FRP Ea/Eh*Vh/a =                    0.152730
  FRP Laminate Type =                THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                       0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =    NO
 CAESAR II 2018  Ver.10.00.00.7700,  (Build 170726)  MAY 20,2024  16:18:46
```

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INPUT LISTING
EXECUTION CONTROL PARAMETERS

Rigid/ExpJt Print Flag	1.000	
Bourdon Option	.000	
Loop Closure Flag	2.000	
Thermal Bowing Delta Temp ..	.000	C
Liberal Allowable Flag	1.000	
Uniform Load Option	1.000	
Ambient Temperature	20.997	C
Plastic (FRP) Alpha	21.600	
Plastic (FRP) GMOD/EMODa ...	.250	
Plastic (FRP) Laminate Type.	3.000	
Eqn Optimizer	.000	
Node Selection	.000	
Eqn Ordering	.000	
Collins	.000	
Degree Determination	.000	
User Eqn Control	.000	
North Direction	-X	

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 20,2024 16:18:46

COORDINATE REPORT

NODE	X (mm.)	Y (mm.)	Z (mm.)
10	-15700.080	-7395.683	7324.219
20	-15700.080	-6913.683	7324.219
30	-15700.080	-6808.908	7324.219
40	-15700.080	-6371.908	7324.219
50	-15700.080	-6371.908	7836.219
60	-15700.080	-6371.908	8036.219
1840	-15700.080	-6371.908	9347.219
1850	-15700.080	-6473.508	9347.219
1840	-15700.080	-6371.908	9347.219
70	-15700.080	-6371.908	9891.219
80	-15700.080	-6371.908	9995.994
90	-15700.080	-6371.908	10499.994
100	-15700.080	-6371.908	10604.770
110	-15700.080	-6371.908	12384.770
120	-15700.080	-13505.908	12384.770
130	-15484.080	-13505.908	12384.770
120	-15700.080	-13505.908	12384.770
125	-17600.080	-13505.908	12384.770
140	-18350.080	-13505.908	12384.770
150	-18350.080	-9304.908	12384.770
155	-18350.080	-9304.908	15984.770
160	-18350.080	-9304.908	17329.770
165	-18350.080	-10007.908	17329.770
170	-18350.080	-10210.908	17329.770
190	-18350.080	-10328.383	17329.770
200	-18350.080	-10694.883	17329.770
905	-20127.631	-9304.908	18476.770
200	-18350.080	-10694.883	17329.770
155	-18350.080	-9304.908	15984.770
130	-15484.080	-13505.908	12384.770
210	-15306.080	-13558.309	12384.770

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INPUT LISTING

1800	-13000.080	-13558.309	12384.770
215	-10860.080	-13558.309	12384.770
220	-10360.080	-13558.309	12384.770
230	-10217.080	-13558.309	12384.770
240	-10125.005	-13558.309	12384.770
250	-9849.005	-13558.309	12384.770
260	-9756.930	-13558.309	12384.770
265	-9406.930	-13558.309	12384.770
270	-9056.930	-13558.309	12384.770
280	-8916.930	-13598.309	12384.770
290	-8843.904	-13598.309	12384.770
300	-8428.904	-13598.309	12384.770
310	-8355.879	-13598.309	12384.770
320	-8215.879	-13558.309	12384.770
330	-8012.879	-13558.309	12384.770
340	-7920.804	-13558.309	12384.770
350	-7644.804	-13558.309	12384.770
360	-7552.729	-13558.309	12384.770
365	-7274.729	-13558.309	12384.770
370	-6810.729	-13558.309	12384.770
375	-5802.729	-13558.309	12384.770
380	-4794.729	-13558.309	12384.770
390	-4702.653	-13558.309	12384.770
400	-4610.578	-13558.309	12384.770
405	-2305.578	-13558.309	12384.770
410	-310.578	-13558.309	12384.770
1610	-218.503	-13558.309	12384.770
1620	196.497	-13558.309	12384.770
1630	288.572	-13558.309	12384.770
1640	2394.572	-13558.309	12384.770
1650	2907.572	-13558.309	12384.770
1660	2999.647	-13558.309	12384.770
1670	3514.647	-13558.309	12384.770
1680	3606.722	-13558.309	12384.770
1685	4766.722	-13558.309	12384.770
1690	5894.722	-13558.309	12384.770
1700	8736.722	-13558.309	12384.770
1710	8736.722	-13558.309	10954.770
1720	8736.722	-13558.309	5943.770
1730	8736.722	-13558.309	5388.770
1740	9715.722	-13558.309	5388.770
1750	15465.722	-13558.309	5388.770
1760	21465.723	-13558.309	5388.770
1770	23195.723	-13558.309	5388.770
1780	23195.723	-13558.309	3376.770
1790	23195.723	-13558.309	-2623.230
220	-10360.080	-13558.309	12384.770
420	-10360.080	-12193.309	12384.770
1870	-9919.080	-12193.309	11943.770
430	-7251.080	-12193.309	11943.770
1880	-6810.080	-12193.309	12384.770
440	-6810.379	-12821.309	12384.770
450	-6810.423	-12910.309	12384.770
460	-6810.704	-13320.309	12384.770
470	-6810.748	-13409.309	12384.770
470	-6810.658	-13409.309	12384.770

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Job:: BNK-GCS-CN-009-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

370	-6810.729	-13558.309	12384.770
60	-15700.080	-6371.908	8036.219
1820	-16183.080	-6371.908	8036.219
1830	-16183.080	-6371.908	9256.219
65	-18350.080	-6371.908	9256.219
480	-22345.779	-6371.908	9256.219
490	-22450.555	-6371.908	9256.219
500	-22917.305	-6371.908	9256.219
510	-23022.080	-6371.908	9256.219
520	-23200.080	-6371.908	9256.219
525	-23200.080	-6371.908	8278.219
1810	-23200.080	-6344.908	8100.219
530	-23200.080	-6344.908	7323.219
540	-23200.080	-6928.908	7323.219
550	-23200.080	-7033.683	7323.219
560	-23200.080	-7395.683	7323.219
520	-23200.080	-6371.908	9256.219
570	-23200.080	-6371.908	12338.219
580	-23200.080	-13532.908	12338.219
590	-25300.080	-13532.908	12338.219
600	-31300.080	-13532.908	12338.219
610	-35825.078	-13532.908	12338.219
615	-41802.078	-13532.908	12338.219
620	-42913.078	-13532.908	12338.219
630	-42913.078	-13532.908	11705.219
640	-42913.078	-13532.908	11527.219
650	-42913.078	-13532.908	11422.443
630	-42913.078	-13532.908	11705.219
660	-42913.078	-13135.908	11705.219
670	-41753.078	-13135.908	11705.219
680	-41753.078	-13135.908	10705.219
690	-41753.078	-13135.908	10613.144
650	-42913.078	-13532.908	11422.443
700	-42913.078	-13532.908	10752.443
710	-42913.078	-13532.908	10609.568
715	-42913.078	-13532.908	10309.568
720	-42913.078	-13532.908	10009.568
730	-42913.078	-13558.309	9857.168
740	-42913.078	-13558.309	9730.168
750	-42913.078	-13558.309	9161.168
760	-42913.078	-13558.309	9034.168
770	-42913.078	-13532.908	8881.768
780	-42913.078	-13532.908	8681.768
790	-42913.078	-13532.908	8538.893
800	-42913.078	-13532.908	7868.893
810	-42913.078	-13532.908	7726.018
820	-42913.078	-13532.908	7548.018
830	-42913.078	-13532.908	6959.518
1900	-42913.078	-13532.908	6159.518
1910	-42913.078	-13532.908	6016.643
1920	-42913.078	-13532.908	5873.768
1930	-42913.078	-13532.908	2773.768
1940	-42913.078	-13532.908	2173.768
1950	-42913.078	-13532.908	2030.893
1960	-42913.078	-13532.908	1360.893
1970	-42913.078	-13532.908	1218.018

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INPUT LISTING

1980	-42913.078	-13532.908	286.518
1990	-42913.078	-13532.908	-644.982
2000	-42913.078	-13532.908	-787.857
2010	-42913.078	-13532.908	-1492.857
2020	-42913.078	-13532.908	-1635.732
2030	-42913.078	-13532.908	-2676.732
2040	-42913.078	-12642.908	-2676.732
2050	-43218.078	-12642.908	-2676.732
2060	-43396.078	-12642.908	-2676.732
2070	-44276.078	-12642.908	-2676.732
820	-42913.078	-13532.908	7548.018
840	-42913.078	-13135.908	7548.018
850	-41753.078	-13135.908	7548.018
855	-41753.078	-13135.908	9433.018
860	-41753.078	-13135.908	9892.144
1890	-41753.078	-13135.908	10019.144
1890	-41753.078	-13135.908	10020.144
690	-41753.078	-13135.908	10613.144
160	-18350.080	-9304.908	17329.770
1300	-18350.080	-9304.908	18476.770
870	-18881.080	-9304.908	18476.770
880	-18985.855	-9304.908	18476.770
890	-19522.855	-9304.908	18476.770
900	-19627.631	-9304.908	18476.770
905	-20127.631	-9304.908	18476.770
910	-22050.631	-9304.908	18476.770
920	-22050.631	-9304.908	17329.770
930	-22050.631	-10221.908	17329.770
940	-22050.631	-10326.684	17329.770
950	-22050.631	-10692.684	17329.770
910	-22050.631	-9304.908	18476.770
1310	-23652.631	-9304.908	18476.770
1320	-23652.631	-9304.908	17945.770
960	-23652.631	-9304.908	17294.770
970	-23652.631	-9304.908	17189.994
980	-23652.631	-9304.908	16558.994
990	-23652.631	-9304.908	16454.219
995	-23652.631	-9304.908	15473.219
1350	-28517.631	-9304.908	15473.219
1000	-36902.633	-9304.908	15473.219
1010	-36902.633	-10804.908	15473.219
1020	-36902.633	-10804.908	17124.219
1030	-36902.633	-10804.908	23124.219
1040	-36902.633	-10804.908	29124.219
1050	-36902.633	-10804.908	35124.219
1060	-36902.633	-10804.908	41124.219
1400	-36902.633	-10804.908	47124.219
10	-15700.080	-7395.683	7324.219
1080	-15700.080	-7500.683	7324.219
1090	-15700.080	-7701.683	7324.219
1100	-15700.080	-9801.684	7324.219
1090	-15700.080	-7701.683	7324.219
1860	-15700.080	-7570.508	9347.219
1100	-15700.080	-9801.684	7324.219
1110	-13500.080	-9801.684	7324.219
1120	-13500.080	-11901.684	7324.219

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INPUT LISTING

1100	-15700.080	-9801.684	7324.219
1130	-23200.080	-9801.684	7324.219
1170	-24100.080	-9801.684	7324.219
1140	-24100.080	-11901.684	7324.219
560	-23200.080	-7395.683	7323.219
1150	-23200.080	-7500.683	7323.219
1160	-23200.080	-7701.683	7323.219
1160	-23200.082	-7701.683	7324.219
1130	-23200.080	-9801.684	7324.219
1160	-23200.082	-7701.683	7324.219
65	-18350.080	-6371.908	9256.219
200	-18350.080	-10694.883	17329.770
1180	-18350.080	-10812.357	17329.770
1190	-18350.080	-10983.357	17329.770
1210	-18350.080	-11745.357	17329.770
1200	-18550.080	-11745.357	17329.770
1210	-18350.080	-11745.357	17329.770
1200	-18550.080	-11745.357	17329.770
1220	-18550.080	-12507.357	17329.770
1200	-18550.080	-11745.357	17329.770
1230	-22050.080	-11745.357	17329.770
1240	-22050.080	-12507.357	17329.770
950	-22050.631	-10692.684	17329.770
1260	-22050.631	-10797.684	17329.770
1270	-22050.631	-10977.684	17329.770
1270	-22050.131	-10983.357	17329.770
1320	-23652.631	-9304.908	17945.770
1270	-22050.131	-10983.357	17329.770
1230	-22050.080	-11745.357	17329.770
1400	-36902.633	-10804.908	47124.219
1410	-36902.633	-10804.908	53124.219
1420	-36902.633	-10804.908	59124.219
1430	-36902.633	-10804.908	65124.219
1440	-36902.633	-10804.908	66374.219
1450	-42902.633	-10804.908	66374.219
1460	-42902.633	-10804.908	68274.219
1470	-42902.633	-10804.908	70174.219
1480	-36902.633	-10804.908	70174.219
1490	-36902.633	-10804.908	70974.219
1500	-36902.633	-10804.908	75674.219
1510	-36902.633	-10804.908	76974.219
1520	-36902.633	-10804.908	82974.219
1530	-36902.633	-10804.908	88974.219
1540	-36902.633	-10804.908	94974.219
1550	-36902.633	-10804.908	100974.219
1560	-36902.633	-10804.908	105674.219
1570	-36902.633	-10804.908	106974.219
1580	-36902.633	-10804.908	107474.219
1590	-36902.633	-10804.908	107594.867
1600	-36902.633	-10804.908	107715.516
1685	4766.722	-13558.309	12384.770
2080	4766.722	-13060.309	12384.770
2090	4766.722	-13060.309	11656.770
2100	4766.722	-13612.309	11656.770
2110	2394.722	-13612.309	11656.770
2120	-2305.278	-13612.309	11656.770

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INPUT LISTING

2130	-7305.278	-13612.309	11656.770
2140	-12331.278	-13612.309	11656.770
2150	-12404.304	-13612.309	11656.770
2160	-12591.304	-13612.309	11656.770
2170	-12664.329	-13612.309	11656.770
2180	-12741.329	-13612.309	11656.770
2190	-12741.329	-12616.309	11656.770
2200	-13017.329	-12616.309	11656.770
2210	-13090.354	-12616.309	11656.770
2220	-13302.354	-12616.309	11656.770
2230	-13369.029	-12616.309	11656.770
2240	-13446.029	-12616.309	11656.770
2250	-13446.029	-12616.309	12756.770
2260	-13901.029	-13071.309	12756.770
1850	-15700.080	-6473.508	9347.219
1860	-15700.080	-7570.508	9347.219
2270	-34560.031	-13071.309	42326.770
2280	-34560.031	-13071.309	36326.770
2290	-34560.031	-13071.309	30326.770
2300	-34560.031	-13071.309	24326.770
2310	-34560.031	-13071.309	18326.770
2320	-34560.031	-13071.309	13826.770
2330	-34560.031	-13071.309	12756.770
2340	-31060.029	-13071.309	12756.770
2350	-25760.029	-13071.309	12756.770
2360	-21060.029	-13071.309	12756.770
2370	-20963.029	-13071.309	12756.770
2380	-20963.029	-12944.309	12756.770
2370	-20963.029	-13071.309	12756.770
2390	-18060.029	-13071.309	12756.770
2260	-13901.029	-13071.309	12756.770
2410	-13060.029	-13071.309	12756.770
2420	-12640.029	-13071.309	12756.770

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T2+P2
7 (OPE) W+T3+P1
8 (Alt-SUS) W+P1
9 (SUS) W+P1
10 (SUS) WNC
11 (OPE) W+T2+P1+U1
12 (OPE) W+T2+P1-U1
13 (OPE) W+T2+P1+U2
14 (OPE) W+T2+P1-U2
15 (OPE) W+T2+P1+U3
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15-L4
21 (OCC) L21=L16+L9
22 (OCC) L22=L17+L9
23 (OCC) L23=L18+L9
24 (OCC) L24=L19+L9
25 (OCC) L25=L20+L9
26 (EXP) L26=L2-L9
27 (EXP) L27=L4-L9
28 (EXP) L28=L2-L4

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 7 (OPE) W+T3+P1
CASE 9 (SUS) W+P1
CASE 10 (SUS) WNC
CASE 11 (OPE) W+T2+P1+U1
CASE 12 (OPE) W+T2+P1-U1
CASE 13 (OPE) W+T2+P1+U2
CASE 14 (OPE) W+T2+P1-U2
CASE 15 (OPE) W+T2+P1+U3
CASE 16 (OCC) L16=L11-L4
CASE 17 (OCC) L17=L12-L4
CASE 18 (OCC) L18=L13-L4
CASE 19 (OCC) L19=L14-L4
CASE 20 (OCC) L20=L15-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid ANC;					
	1(HYD)	-210	-1819	85	-216	102	-43
	2(OPE)	576	-4923	-845	254	364	-858
	4(OPE)	-10	-2502	-143	-41	138	-205
	7(OPE)	-1	-2466	-140	-46	53	-277
	9(SUS)	-144	-1763	50	-182	64	-36
	10(SUS)	-144	-1762	49	-182	64	-36
	11(OPE)	2619	-2428	-721	-544	2789	-2099
	12(OPE)	-1717	-2506	51	121	-2193	658
	13(OPE)	-16	-2290	-137	-9	114	-179
	14(OPE)	-22	-2713	-140	-65	149	-215
	15(OPE)	-8	-2193	2525	1768	139	-215
	16(OCC)	2629	74	-578	-503	2650	-1894
	17(OCC)	-1707	-4	194	162	-2332	864
	18(OCC)	-6	213	6	32	-24	26
	19(OCC)	-12	-211	4	-24	11	-10
	20(OCC)	2	309	2668	1808	1	-10
	MAX	2629/L16	-4923/L2	2668/L20	1808/L20	2789/L11	-2099/L11
65		TYPE=Rigid +Y;					
	1(HYD)	1766	-6250	-232	0	0	0
	2(OPE)	982	-3356	-222	0	0	0
	4(OPE)	1225	-4122	-168	0	0	0
	7(OPE)	1218	-4103	-177	0	0	0
	9(SUS)	1186	-4182	-147	0	0	0
	10(SUS)	1182	-4169	-146	0	0	0
	11(OPE)	1230	-4126	-136	0	0	0
	12(OPE)	-1229	-4110	101	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	1074	-3615	-149	0	0	0
	14(OPE)	1375	-4625	-186	0	0	0
	15(OPE)	1043	-4243	730	0	0	0
	16(OCC)	5	-4	32	0	0	0
	17(OCC)	-2454	12	269	0	0	0
	18(OCC)	-151	506	18	0	0	0
	19(OCC)	150	-503	-19	0	0	0
	20(OCC)	-182	-121	898	0	0	0
	MAX	-2454/L17	-6250/L1	898/L20			
125		TYPE=Rigid Z w/gap; Rigid +Y;					
	1(HYD)	1005	-13608	-32	0	0	0
	2(OPE)	-2871	-9738	-542	0	0	0
	4(OPE)	-2543	-8504	-208	0	0	0
	7(OPE)	-2508	-8385	-198	0	0	0
	9(SUS)	663	-7894	-5	0	0	0
	10(SUS)	661	-7858	-5	0	0	0
	11(OPE)	2355	-7872	-180	0	0	0
	12(OPE)	-2625	-8773	-189	0	0	0
	13(OPE)	-2253	-7543	-213	0	0	0
	14(OPE)	-2825	-9448	-230	0	0	0
	15(OPE)	-2457	-8364	511	0	0	0
	16(OCC)	4897	632	28	0	0	0
	17(OCC)	-82	-269	19	0	0	0
	18(OCC)	290	961	-5	0	0	0
	19(OCC)	-282	-944	-22	0	0	0
	20(OCC)	86	140	719	0	0	0
	MAX	4897/L16	-13608/L1	719/L20			
155		TYPE=Rigid +Y;					
	1(HYD)	99	-2755	820	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	-8	-34	6	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(SUS)	140	-1292	361	0	0	0
	10(SUS)	140	-1283	358	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	-34	-186	44	0	0	0
	15(OPE)	-1	-6	2	0	0	0
	16(OCC)	8	34	-6	0	0	0
	17(OCC)	8	34	-6	0	0	0
	18(OCC)	8	34	-6	0	0	0
	19(OCC)	-26	-152	38	0	0	0
	20(OCC)	7	28	-5	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	140/L10	-2755/L1	820/L1			
200		TYPE=Rigid ANC;					
	1(HYD)	202	-17454	-6	2993	-2	5854
	2(OPE)	-714	-12118	1106	7970	2347	3930
	4(OPE)	-67	-12797	273	5162	342	4360
	7(OPE)	-169	-12787	267	5214	714	4310
	9(SUS)	89	-13146	-16	3279	-210	4319
	10(SUS)	88	-13119	-15	3281	-211	4310
	11(OPE)	3902	-12992	235	5427	-806	980
	12(OPE)	-4320	-12541	342	5054	2727	7479
	13(OPE)	-80	-11221	276	4666	360	3813
	14(OPE)	-63	-14383	274	5571	332	4900
	15(OPE)	-58	-12963	4338	8946	1313	4605
	16(OCC)	3969	-195	-38	265	-1148	-3380
	17(OCC)	-4253	255	69	-107	2385	3119
	18(OCC)	-13	1576	3	-496	19	-547
	19(OCC)	4	-1586	1	410	-10	540
	20(OCC)	9	-166	4065	3784	971	245
	MAX	-4320/L12	-17454/L1	4338/L15	8946/L15	2727/L12	7479/L12
215		TYPE=Rigid Z w/gap; Rigid +Y;					
	1(HYD)	-153	-527	-39	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	107	-356	1	0	0	0
	7(OPE)	-74	-247	0	0	0	0
	9(SUS)	-164	-557	-34	0	0	0
	10(SUS)	-164	-557	-34	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	-220	-734	5	0	0	0
	13(OPE)	90	-300	1	0	0	0
	14(OPE)	124	-414	1	0	0	0
	15(OPE)	68	-514	138	0	0	0
	16(OCC)	-107	356	-1	0	0	0
	17(OCC)	-327	-378	4	0	0	0
	18(OCC)	-17	56	0	0	0	0
	19(OCC)	18	-58	-0	0	0	0
	20(OCC)	-39	-158	138	0	0	0
	MAX	-327/L17	-734/L12	138/L15			
265		TYPE=Rigid +Y;					
	1(HYD)	-348	-2490	50	0	0	0
	2(OPE)	555	-1860	60	0	0	0
	4(OPE)	619	-2064	9	0	0	0
	7(OPE)	-84	-2134	25	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(SUS)	-213	-2032	42	0	0	0
	10(SUS)	-212	-2030	42	0	0	0
	11(OPE)	605	-2017	6	0	0	0
	12(OPE)	-580	-1935	11	0	0	0
	13(OPE)	543	-1809	8	0	0	0
	14(OPE)	695	-2318	10	0	0	0
	15(OPE)	278	-1938	510	0	0	0
	16(OCC)	-14	48	-3	0	0	0
	17(OCC)	-1200	129	2	0	0	0
	18(OCC)	-77	256	-1	0	0	0
	19(OCC)	76	-253	1	0	0	0
	20(OCC)	-341	127	501	0	0	0
	MAX	-1200/L17	-2490/L1	510/L15			
365		TYPE=Rigid X w/gap; Rigid Z w/gap; Rigid +Y;					
	1(HYD)	-48	-6645	-3	0	0	0
	2(OPE)	4197	-5483	-100	0	0	0
	4(OPE)	1619	-5396	-12	0	0	0
	7(OPE)	1617	-5391	-4	0	0	0
	9(SUS)	-26	-5409	-3	0	0	0
	10(SUS)	-26	-5401	-3	0	0	0
	11(OPE)	1672	-5572	-10	0	0	0
	12(OPE)	-1583	-5278	11	0	0	0
	13(OPE)	1425	-4750	-18	0	0	0
	14(OPE)	1813	-6043	-6	0	0	0
	15(OPE)	895	-5419	1357	0	0	0
	16(OCC)	53	-176	2	0	0	0
	17(OCC)	-3202	118	23	0	0	0
	18(OCC)	-194	646	-6	0	0	0
	19(OCC)	194	-647	6	0	0	0
	20(OCC)	-724	-23	1370	0	0	0
	MAX	4197/L2	-6645/L1	1370/L20			
405		TYPE=Rigid +Y;					
	1(HYD)	-26	-3654	-11	0	0	0
	2(OPE)	851	-2879	-144	0	0	0
	4(OPE)	854	-2870	-106	0	0	0
	7(OPE)	849	-2833	-29	0	0	0
	9(SUS)	-15	-2829	-9	0	0	0
	10(SUS)	-15	-2824	-9	0	0	0
	11(OPE)	875	-2949	-134	0	0	0
	12(OPE)	-840	-2802	-39	0	0	0
	13(OPE)	753	-2534	-103	0	0	0
	14(OPE)	957	-3208	-105	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	15(OPE)	668	-2889	552	0	0	0
	16(OCC)	20	-79	-27	0	0	0
	17(OCC)	-1694	68	68	0	0	0
	18(OCC)	-101	336	4	0	0	0
	19(OCC)	102	-338	1	0	0	0
	20(OCC)	-186	-18	658	0	0	0
	MAX	-1694/L17	-3654/L1	658/L20			
560		TYPE=Rigid ANC;					
	1(HYD)	-620	-8730	257	5371	233	1485
	2(OPE)	-289	-6395	231	2752	805	1246
	4(OPE)	-357	-6610	164	3566	289	988
	7(OPE)	-375	-6611	163	3567	270	1002
	9(SUS)	-421	-6680	151	3731	146	979
	10(SUS)	-420	-6667	151	3720	146	976
	11(OPE)	2463	-6521	769	4195	2702	-743
	12(OPE)	-2264	-6650	-299	3067	-1229	1983
	13(OPE)	-334	-5811	142	3114	245	895
	14(OPE)	-401	-7411	183	4014	312	1100
	15(OPE)	-222	-6595	2886	5597	299	878
	16(OCC)	2820	89	605	629	2413	-1731
	17(OCC)	-1907	-40	-462	-499	-1518	995
	18(OCC)	22	800	-21	-452	-43	-93
	19(OCC)	-44	-801	19	448	23	112
	20(OCC)	135	16	2722	2031	10	-110
	MAX	2820/L16	-8730/L1	2886/L15	5597/L15	2702/L11	1983/L12
590		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-450	-13911	-203	0	0	0
	2(OPE)	2904	-9682	51	0	0	0
	4(OPE)	2751	-9173	-56	0	0	0
	7(OPE)	2752	-9175	-55	0	0	0
	9(SUS)	-296	-9070	-116	0	0	0
	10(SUS)	-295	-9038	-115	0	0	0
	11(OPE)	2760	-9205	-89	0	0	0
	12(OPE)	-1917	-9138	-14	0	0	0
	13(OPE)	2425	-8085	-43	0	0	0
	14(OPE)	3078	-10262	-66	0	0	0
	15(OPE)	2226	-9136	1600	0	0	0
	16(OCC)	9	-32	-34	0	0	0
	17(OCC)	-4668	35	42	0	0	0
	18(OCC)	-326	1088	12	0	0	0
	19(OCC)	326	-1089	-11	0	0	0
	20(OCC)	-526	36	1655	0	0	0
	MAX	-4668/L17	-13911/L1	1655/L20			

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
600		TYPE=Rigid +Y;					
	1(HYD)	-191	-1339	141	0	0	0
	2(OPE)	334	-1129	-57	0	0	0
	4(OPE)	246	-821	-3	0	0	0
	7(OPE)	246	-821	-4	0	0	0
	9(SUS)	-124	-789	86	0	0	0
	10(SUS)	-124	-785	86	0	0	0
	11(OPE)	207	-703	41	0	0	0
	12(OPE)	-281	-938	-21	0	0	0
	13(OPE)	219	-731	-7	0	0	0
	14(OPE)	274	-914	2	0	0	0
	15(OPE)	-60	-813	236	0	0	0
	16(OCC)	-39	118	44	0	0	0
	17(OCC)	-527	-117	-18	0	0	0
	18(OCC)	-27	90	-4	0	0	0
	19(OCC)	28	-93	6	0	0	0
	20(OCC)	-306	8	240	0	0	0
	MAX	-527/L17	-1339/L1	240/L20			
610		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	-107	-5142	-44	0	0	0
	2(OPE)	331	-3173	892	0	0	0
	4(OPE)	-959	-3253	183	0	0	0
	7(OPE)	-959	-3253	183	0	0	0
	9(SUS)	-66	-3219	-27	0	0	0
	10(SUS)	-66	-3207	-27	0	0	0
	11(OPE)	977	-3259	34	0	0	0
	12(OPE)	-951	-3174	49	0	0	0
	13(OPE)	-841	-2859	170	0	0	0
	14(OPE)	-1079	-3644	177	0	0	0
	15(OPE)	-374	-3225	892	0	0	0
	16(OCC)	1936	-7	-148	0	0	0
	17(OCC)	8	79	-134	0	0	0
	18(OCC)	118	394	-13	0	0	0
	19(OCC)	-120	-391	-5	0	0	0
	20(OCC)	585	28	710	0	0	0
	MAX	1936/L16	-5142/L1	892/L15			
615		TYPE=Rigid +Y;					
	1(HYD)	-76	-5760	3	0	0	0
	2(OPE)	-872	-4250	930	0	0	0
	4(OPE)	-1005	-4023	669	0	0	0
	7(OPE)	-1005	-4023	669	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(SUS)	-40	-4110	1	0	0	0
	10(SUS)	-40	-4099	1	0	0	0
	11(OPE)	-572	-4164	1111	0	0	0
	12(OPE)	-1167	-4118	406	0	0	0
	13(OPE)	-878	-3548	602	0	0	0
	14(OPE)	-1129	-4502	741	0	0	0
	15(OPE)	-779	-4157	974	0	0	0
	16(OCC)	433	-141	442	0	0	0
	17(OCC)	-162	-95	-263	0	0	0
	18(OCC)	126	475	-67	0	0	0
	19(OCC)	-125	-479	72	0	0	0
	20(OCC)	226	-134	305	0	0	0
	MAX	-1167/L12	-5760/L1	1111/L11			
715		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-112	-9137	-224	0	0	0
	2(OPE)	-3751	-8228	2419	0	0	0
	4(OPE)	-2000	-8379	1523	0	0	0
	7(OPE)	-2000	-8379	1523	0	0	0
	9(SUS)	-88	-8567	-176	0	0	0
	10(SUS)	-87	-8564	-176	0	0	0
	11(OPE)	2149	-8420	1328	0	0	0
	12(OPE)	-2483	-8599	700	0	0	0
	13(OPE)	-1758	-7375	1343	0	0	0
	14(OPE)	-2220	-9391	1734	0	0	0
	15(OPE)	-1326	-8506	2180	0	0	0
	16(OCC)	4149	-41	-195	0	0	0
	17(OCC)	-483	-220	-823	0	0	0
	18(OCC)	242	1004	-180	0	0	0
	19(OCC)	-220	-1011	211	0	0	0
	20(OCC)	674	-126	657	0	0	0
	MAX	4149/L16	-9391/L14	2419/L2			
830		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	-124	-7646	-190	0	0	0
	2(OPE)	61	-6748	2024	0	0	0
	4(OPE)	245	-6506	288	0	0	0
	7(OPE)	245	-6506	289	0	0	0
	9(SUS)	-81	-6372	-152	0	0	0
	10(SUS)	-81	-6364	-152	0	0	0
	11(OPE)	1786	-6461	-752	0	0	0
	12(OPE)	-1926	-6448	185	0	0	0
	13(OPE)	153	-5729	245	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	307	-7283	281	0	0	0
	15(OPE)	-32	-6342	1902	0	0	0
	16(OCC)	1541	45	-1040	0	0	0
	17(OCC)	-2171	58	-103	0	0	0
	18(OCC)	-92	777	-43	0	0	0
	19(OCC)	62	-777	-7	0	0	0
	20(OCC)	-277	164	1614	0	0	0
	MAX	-2171/L17	-7646/L1	2024/L2			
855		TYPE=Rigid +Y;					
	1(HYD)	266	-6070	71	0	0	0
	2(OPE)	-528	-5276	1492	0	0	0
	4(OPE)	-636	-5531	1533	0	0	0
	7(OPE)	-636	-5531	1533	0	0	0
	9(SUS)	171	-5405	78	0	0	0
	10(SUS)	170	-5401	78	0	0	0
	11(OPE)	1526	-5406	549	0	0	0
	12(OPE)	-1532	-5306	433	0	0	0
	13(OPE)	-565	-4855	1343	0	0	0
	14(OPE)	-680	-6196	1730	0	0	0
	15(OPE)	-471	-5457	1568	0	0	0
	16(OCC)	2161	125	-983	0	0	0
	17(OCC)	-896	225	-1100	0	0	0
	18(OCC)	71	675	-190	0	0	0
	19(OCC)	-45	-665	197	0	0	0
	20(OCC)	164	74	35	0	0	0
	MAX	2161/L16	-6196/L14	1730/L14			
905		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	194	-670	-52	0	0	0
	2(OPE)	43	-248	-61	0	0	0
	4(OPE)	49	-249	-56	0	0	0
	7(OPE)	48	-250	-58	0	0	0
	9(SUS)	39	-159	-27	0	0	0
	10(SUS)	38	-156	-27	0	0	0
	11(OPE)	116	-462	-76	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	41	-211	-48	0	0	0
	14(OPE)	55	-277	-62	0	0	0
	15(OPE)	66	-385	-95	0	0	0
	16(OCC)	66	-214	-20	0	0	0
	17(OCC)	-49	249	56	0	0	0
	18(OCC)	-8	38	8	0	0	0
	19(OCC)	6	-29	-6	0	0	0
	20(OCC)	17	-136	-39	0	0	0
	MAX	194/L1	-670/L1	-95/L15			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
950		TYPE=Rigid ANC;					
	1(HYD)	-922	-9660	411	285	-544	231
	2(OPE)	1456	-7106	2320	2109	1058	-2146
	4(OPE)	283	-7271	1073	900	114	-876
	7(OPE)	282	-7269	1076	903	113	-875
	9(SUS)	-650	-7442	275	100	-372	155
	10(SUS)	-649	-7429	274	98	-371	155
	11(OPE)	3463	-7258	1171	957	774	-3389
	12(OPE)	-2024	-7579	-78	-377	-452	654
	13(OPE)	207	-6386	995	834	64	-738
	14(OPE)	216	-8144	1173	990	94	-865
	15(OPE)	451	-6966	3475	2723	545	-982
	16(OCC)	3180	13	98	56	660	-2512
	17(OCC)	-2307	-308	-1151	-1278	-566	1530
	18(OCC)	-76	886	-78	-66	-50	138
	19(OCC)	-67	-872	100	90	-20	11
	20(OCC)	168	305	2402	1823	431	-106
	MAX	3463/L11	-9660/L1	3475/L15	2723/L15	1058/L2	-3389/L11
1020		TYPE=Rigid +Y;					
	1(HYD)	-875	-10954	120	0	0	0
	2(OPE)	-762	-6228	-1706	0	0	0
	4(OPE)	-628	-5976	-1679	0	0	0
	7(OPE)	-628	-5976	-1679	0	0	0
	9(SUS)	-394	-5881	68	0	0	0
	10(SUS)	-391	-5851	67	0	0	0
	11(OPE)	406	-5980	-1747	0	0	0
	12(OPE)	-1288	-5965	-1242	0	0	0
	13(OPE)	-562	-5275	-1479	0	0	0
	14(OPE)	-677	-6677	-1885	0	0	0
	15(OPE)	-728	-5921	-1621	0	0	0
	16(OCC)	1034	-4	-68	0	0	0
	17(OCC)	-660	11	437	0	0	0
	18(OCC)	66	701	200	0	0	0
	19(OCC)	-49	-701	-206	0	0	0
	20(OCC)	-100	54	59	0	0	0
	MAX	-1288/L12	-10954/L1	-1885/L14			
1030		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	137	-4971	54	0	0	0
	2(OPE)	-970	-2859	-1083	0	0	0
	4(OPE)	-143	-2744	-811	0	0	0
	7(OPE)	-143	-2744	-811	0	0	0
	9(SUS)	46	-2709	30	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(SUS)	46	-2696	30	0	0	0
	11(OPE)	630	-2704	-580	0	0	0
	12(OPE)	-1026	-2713	-683	0	0	0
	13(OPE)	-134	-2411	-711	0	0	0
	14(OPE)	-150	-3078	-911	0	0	0
	15(OPE)	-144	-2891	-855	0	0	0
	16(OCC)	773	41	231	0	0	0
	17(OCC)	-883	31	128	0	0	0
	18(OCC)	9	333	100	0	0	0
	19(OCC)	-7	-334	-100	0	0	0
	20(OCC)	-1	-146	-44	0	0	0
	MAX	-1026/L12	-4971/L1	-1083/L2			
1040		TYPE=Rigid +Y;					
	1(HYD)	-35	-6947	24	0	0	0
	2(OPE)	15	-3744	-1123	0	0	0
	4(OPE)	-8	-3774	-1132	0	0	0
	7(OPE)	-8	-3774	-1132	0	0	0
	9(SUS)	-12	-3784	14	0	0	0
	10(SUS)	-12	-3765	14	0	0	0
	11(OPE)	1013	-3785	-513	0	0	0
	12(OPE)	-902	-3783	-689	0	0	0
	13(OPE)	-14	-3322	-997	0	0	0
	14(OPE)	-4	-4226	-1268	0	0	0
	15(OPE)	47	-3736	-1120	0	0	0
	16(OCC)	1021	-11	620	0	0	0
	17(OCC)	-894	-8	443	0	0	0
	18(OCC)	-7	452	136	0	0	0
	19(OCC)	4	-452	-136	0	0	0
	20(OCC)	55	39	13	0	0	0
	MAX	1021/L16	-6947/L1	-1268/L14			
1050		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	9	-6423	11	0	0	0
	2(OPE)	78	-3509	-1050	0	0	0
	4(OPE)	34	-3501	-1050	0	0	0
	7(OPE)	34	-3501	-1050	0	0	0
	9(SUS)	3	-3499	6	0	0	0
	10(SUS)	3	-3481	6	0	0	0
	11(OPE)	1058	-3498	-240	0	0	0
	12(OPE)	-1005	-3499	-303	0	0	0
	13(OPE)	32	-3081	-924	0	0	0
	14(OPE)	35	-3922	-1176	0	0	0
	15(OPE)	6	-3512	1053	0	0	0
	16(OCC)	1024	3	810	0	0	0
	17(OCC)	-1039	2	747	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	18(OCC)	-2	420	126	0	0	0
	19(OCC)	1	-420	-126	0	0	0
	20(OCC)	-28	-10	2103	0	0	0
	MAX	1058/L11	-6423/L1	2103/L20			
1060		TYPE=Rigid +Y;					
	1(HYD)	-2	-6565	5	0	0	0
	2(OPE)	3	-3573	-1072	0	0	0
	4(OPE)	-20	-3576	1072	0	0	0
	7(OPE)	-20	-3576	1072	0	0	0
	9(SUS)	-1	-3576	3	0	0	0
	10(SUS)	-1	-3559	3	0	0	0
	11(OPE)	1056	-3576	189	0	0	0
	12(OPE)	-1029	-3576	305	0	0	0
	13(OPE)	-20	-3147	944	0	0	0
	14(OPE)	-19	-4005	1201	0	0	0
	15(OPE)	-18	-3573	1072	0	0	0
	16(OCC)	1076	-1	-884	0	0	0
	17(OCC)	-1008	-1	-767	0	0	0
	18(OCC)	0	429	-129	0	0	0
	19(OCC)	1	-429	129	0	0	0
	20(OCC)	3	3	-1	0	0	0
	MAX	1076/L16	-6565/L1	1201/L14			
1090		TYPE=Rigid ANC;					
	1(HYD)	-210	-2194	85	-190	102	22
	2(OPE)	576	-5206	-845	-5	364	-1034
	4(OPE)	-10	-2785	-143	-85	138	-202
	7(OPE)	-1	-2749	-140	-89	53	-277
	9(SUS)	-144	-2046	50	-167	64	8
	10(SUS)	-144	-2045	49	-167	64	8
	11(OPE)	2693	-2711	-721	-765	2789	-2915
	12(OPE)	-1790	-2789	51	137	-2193	1198
	13(OPE)	-16	-2539	-137	-51	114	-174
	14(OPE)	-22	-3030	-140	-107	149	-208
	15(OPE)	-8	-2476	2598	2555	139	-213
	16(OCC)	2703	74	-578	-680	2650	-2713
	17(OCC)	-1780	-4	194	221	-2332	1400
	18(OCC)	-6	247	6	34	-24	28
	19(OCC)	-12	-245	4	-23	11	-6
	20(OCC)	2	309	2742	2639	1	-11
	MAX	2703/L16	-5206/L2	2742/L20	2639/L20	2789/L11	-2915/L11
1120		TYPE=Rigid ANC;					
	1(HYD)	1035	-13068	144	31771	5662	11991
	2(OPE)	3861	-7151	-856	5387	2439	-62

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	3346	-8781	-130	18651	3096	3317
	7(OPE)	3306	-8791	-131	18758	2904	3357
	9(SUS)	691	-9702	82	22137	3661	9016
	10(SUS)	689	-9681	82	22077	3648	8998
	11(OPE)	8799	-10678	-96	19673	13129	-8719
	12(OPE)	-1883	-6705	-151	18187	-7895	13410
	13(OPE)	2962	-7675	-135	15991	2713	2848
	14(OPE)	3733	-9890	-123	21312	3495	3809
	15(OPE)	3366	-8974	6199	53051	39731	3458
	16(OCC)	5453	-1897	34	1023	10033	-12036
	17(OCC)	-5229	2076	-22	-464	-10991	10092
	18(OCC)	-384	1106	-6	-2660	-384	-470
	19(OCC)	387	-1109	7	2662	399	492
	20(OCC)	20	-193	6329	34400	36635	140
	MAX	8799/L11	-13068/L1	6329/L20	53051/L15	39731/L15	13410/L12
1140		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-100	-11617	-34	0	0	0
	2(OPE)	-2431	-8104	-0	0	0	0
	4(OPE)	-2682	-8940	-0	0	0	0
	7(OPE)	-2686	-8954	-0	0	0	0
	9(SUS)	-70	-8652	-28	0	0	0
	10(SUS)	-70	-8633	-28	0	0	0
	11(OPE)	-2172	-7239	1	0	0	0
	12(OPE)	-3279	-10930	-3	0	0	0
	13(OPE)	-2352	-7841	-0	0	0	0
	14(OPE)	-3010	-10034	-0	0	0	0
	15(OPE)	-2708	-9027	7	0	0	0
	16(OCC)	510	1701	2	0	0	0
	17(OCC)	-597	-1990	-3	0	0	0
	18(OCC)	330	1099	0	0	0	0
	19(OCC)	-328	-1095	-0	0	0	0
	20(OCC)	-26	-87	7	0	0	0
	MAX	-3279/L12	-11617/L1	-34/L1			
1160		TYPE=Rigid ANC;					
	1(HYD)	-620	-9179	257	5449	233	1675
	2(OPE)	-289	-6693	231	2823	805	1335
	4(OPE)	-357	-6908	164	3616	289	1097
	7(OPE)	-375	-6909	163	3617	270	1117
	9(SUS)	-421	-6978	151	3777	146	1108
	10(SUS)	-420	-6963	151	3766	146	1104
	11(OPE)	2540	-6819	769	4430	2702	-1512
	12(OPE)	-2342	-6948	-299	2975	-1229	2691
	13(OPE)	-334	-6072	142	3158	245	997
	14(OPE)	-401	-7744	183	4070	312	1223

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	15(OPE)	-222	-6892	2963	6495	299	946
	16(OCC)	2897	89	605	814	2413	-2609
	17(OCC)	-1985	-40	-462	-641	-1518	1594
	18(OCC)	22	835	-21	-458	-43	-100
	19(OCC)	-44	-837	19	454	23	125
	20(OCC)	135	16	2800	2879	10	-151
	MAX	2897/L16	-9179/L1	2963/L15	6495/L15	2702/L11	2691/L12
1190		TYPE=Rigid ANC;					
	1(HYD)	202	-18152	-6	2991	-2	5795
	2(OPE)	-714	-12613	1106	8289	2347	4135
	4(OPE)	-67	-13292	273	5240	342	4379
	7(OPE)	-169	-13282	267	5291	714	4359
	9(SUS)	89	-13641	-16	3275	-210	4294
	10(SUS)	88	-13613	-15	3277	-211	4284
	11(OPE)	4031	-13487	235	5495	-806	-170
	12(OPE)	-4449	-13036	342	5153	2727	8750
	13(OPE)	-80	-11656	276	4745	360	3836
	14(OPE)	-63	-14938	274	5650	332	4918
	15(OPE)	-58	-13458	4466	10221	1313	4622
	16(OCC)	4098	-195	-38	254	-1148	-4549
	17(OCC)	-4382	255	69	-87	2385	4371
	18(OCC)	-13	1636	3	-495	19	-544
	19(OCC)	4	-1646	1	410	-10	539
	20(OCC)	9	-166	4193	4981	971	243
	MAX	-4449/L12	-18152/L1	4466/L15	10221/L15	2727/L12	8750/L12
1220		TYPE=Rigid ANC;					
	1(HYD)	233	-16025	325	6725	1066	1010
	2(OPE)	5809	-11890	3639	19516	13229	-2328
	4(OPE)	4867	-11940	1277	10445	4462	-2064
	7(OPE)	4787	-11919	1273	10492	4840	-1972
	9(SUS)	201	-12294	180	5547	439	743
	10(SUS)	201	-12271	180	5540	435	741
	11(OPE)	11268	-14967	1146	10112	3268	-11368
	12(OPE)	-2476	-7928	537	8130	2781	7818
	13(OPE)	4433	-10458	1164	9388	3933	-1909
	14(OPE)	5420	-13433	1388	11411	4964	-2297
	15(OPE)	5367	-12015	8555	30237	16804	-2259
	16(OCC)	6401	-3028	-131	-333	-1193	-9304
	17(OCC)	-7343	4012	-741	-2314	-1680	9883
	18(OCC)	-433	1482	-113	-1056	-528	156
	19(OCC)	553	-1493	110	966	502	-233
	20(OCC)	501	-75	7278	19792	12343	-195
	MAX	11268/L11	-16025/L1	8555/L15	30237/L15	16804/L15	-11368/L11

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1240		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	41	-17198	-18	0	0	0
	2(OPE)	-3693	-12311	3	0	0	0
	4(OPE)	-3743	-12477	4	0	0	0
	7(OPE)	-3746	-12487	4	0	0	0
	9(SUS)	26	-12402	-17	0	0	0
	10(SUS)	26	-12373	-17	0	0	0
	11(OPE)	-2817	-9390	2	0	0	0
	12(OPE)	-4936	-16452	0	0	0	0
	13(OPE)	-3304	-11013	3	0	0	0
	14(OPE)	-4185	-13951	5	0	0	0
	15(OPE)	-3754	-12512	19	0	0	0
	16(OCC)	926	3087	-1	0	0	0
	17(OCC)	-1193	-3976	-4	0	0	0
	18(OCC)	439	1464	-1	0	0	0
	19(OCC)	-442	-1475	1	0	0	0
	20(OCC)	-11	-36	15	0	0	0
	MAX	-4936/L12	-17198/L1	19/L15			
1270		TYPE=Rigid ANC;					
	1(HYD)	-922	-10153	411	402	-544	494
	2(OPE)	1456	-7460	2320	2770	1058	-2561
	4(OPE)	283	-7626	1073	1206	114	-957
	7(OPE)	282	-7623	1076	1210	113	-955
	9(SUS)	-650	-7796	275	178	-372	340
	10(SUS)	-649	-7782	274	176	-371	340
	11(OPE)	3555	-7613	1171	1290	774	-4393
	12(OPE)	-2117	-7934	-78	-400	-452	1248
	13(OPE)	207	-6698	995	1118	64	-797
	14(OPE)	216	-8540	1173	1324	94	-927
	15(OPE)	451	-7320	3567	3731	545	-1111
	16(OCC)	3273	13	98	84	660	-3436
	17(OCC)	-2399	-308	-1151	-1606	-566	2205
	18(OCC)	-76	928	-78	-88	-50	160
	19(OCC)	-67	-915	100	118	-20	30
	20(OCC)	168	305	2494	2524	431	-153
	MAX	3555/L11	-10153/L1	3567/L15	3731/L15	1058/L2	-4393/L11
1320		TYPE=Rigid +Y;					
	1(HYD)	994	-4918	-99	0	0	0
	2(OPE)	1223	-4129	195	0	0	0
	4(OPE)	1048	-3499	-65	0	0	0
	7(OPE)	1048	-3500	-66	0	0	0
	9(SUS)	789	-3258	-96	0	0	0
	10(SUS)	788	-3248	-96	0	0	0

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	11(OPE)	942	-3258	-262	0	0	0
	12(OPE)	-978	-3411	302	0	0	0
	13(OPE)	930	-3117	-96	0	0	0
	14(OPE)	1171	-3906	-51	0	0	0
	15(OPE)	1004	-3749	506	0	0	0
	16(OCC)	-106	241	-198	0	0	0
	17(OCC)	-2025	88	366	0	0	0
	18(OCC)	-118	382	-31	0	0	0
	19(OCC)	123	-407	14	0	0	0
	20(OCC)	-43	-250	571	0	0	0
	MAX	-2025/L17	-4918/L1	571/L20			
1350		TYPE=Rigid Z w/gap; Rigid +Y;					
	1(HYD)	524	-11197	-485	0	0	0
	2(OPE)	-1239	-5300	-4144	0	0	0
	4(OPE)	-780	-6106	-1657	0	0	0
	7(OPE)	-780	-6106	-1657	0	0	0
	9(SUS)	182	-6388	-277	0	0	0
	10(SUS)	180	-6360	-276	0	0	0
	11(OPE)	1296	-6174	-1324	0	0	0
	12(OPE)	-1751	-6170	-600	0	0	0
	13(OPE)	-669	-5343	-1457	0	0	0
	14(OPE)	-902	-6866	-1852	0	0	0
	15(OPE)	-697	-5964	34	0	0	0
	16(OCC)	2076	-68	334	0	0	0
	17(OCC)	-971	-65	1058	0	0	0
	18(OCC)	111	763	201	0	0	0
	19(OCC)	-122	-760	-194	0	0	0
	20(OCC)	83	142	1691	0	0	0
	MAX	2076/L16	-11197/L1	-4144/L2			
1400		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	1(HYD)	0	-6513	3	0	0	0
	2(OPE)	105	-3549	3807	0	0	0
	4(OPE)	3	-3548	1064	0	0	0
	7(OPE)	3	-3548	1064	0	0	0
	9(SUS)	0	-3548	1	0	0	0
	10(SUS)	0	-3530	1	0	0	0
	11(OPE)	1347	-3548	492	0	0	0
	12(OPE)	-1426	-3548	523	0	0	0
	13(OPE)	16	-3122	937	0	0	0
	14(OPE)	-5	-3974	1192	0	0	0
	15(OPE)	33	-3549	8577	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OCC)	1345	0	-572	0	0	0
	17(OCC)	-1429	0	-542	0	0	0
	18(OCC)	13	426	-128	0	0	0
	19(OCC)	-8	-426	128	0	0	0
	20(OCC)	30	-1	7513	0	0	0
	MAX	-1429/L17	-6513/L1	8577/L15			
1410		TYPE=Rigid +Y;					
	1(HYD)	0	-6584	0	0	0	0
	2(OPE)	0	-3582	0	0	0	0
	4(OPE)	0	-3585	0	0	0	0
	7(OPE)	0	-3585	0	0	0	0
	9(SUS)	0	-3586	0	0	0	0
	10(SUS)	0	-3568	0	0	0	0
	11(OPE)	0	-3585	0	0	0	0
	12(OPE)	0	-3586	0	0	0	0
	13(OPE)	0	-3155	0	0	0	0
	14(OPE)	0	-4015	0	0	0	0
	15(OPE)	0	-3585	0	0	0	0
	16(OCC)	0	-0	0	0	0	0
	17(OCC)	0	-0	0	0	0	0
	18(OCC)	0	430	0	0	0	0
	19(OCC)	0	-430	0	0	0	0
	20(OCC)	0	1	0	0	0	0
	MAX		-6584/L1				
1420		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-0	-6349	1	0	0	0
	2(OPE)	741	-3473	1012	0	0	0
	4(OPE)	271	-3463	1003	0	0	0
	7(OPE)	271	-3463	1003	0	0	0
	9(SUS)	-0	-3459	0	0	0	0
	10(SUS)	-0	-3442	0	0	0	0
	11(OPE)	1924	-3462	816	0	0	0
	12(OPE)	-1386	-3461	826	0	0	0
	13(OPE)	268	-3048	874	0	0	0
	14(OPE)	279	-3878	1129	0	0	0
	15(OPE)	134	-3464	1031	0	0	0
	16(OCC)	1653	1	-187	0	0	0
	17(OCC)	-1657	2	-177	0	0	0
	18(OCC)	-2	415	-129	0	0	0
	19(OCC)	8	-415	126	0	0	0
	20(OCC)	-136	-1	28	0	0	0
	MAX	1924/L11	-6349/L1	1129/L14			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1430		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-7859	0	0	0	0
	2(OPE)	245	-4240	1252	0	0	0
	4(OPE)	440	-4270	1203	0	0	0
	7(OPE)	440	-4270	1203	0	0	0
	9(SUS)	0	-4280	0	0	0	0
	10(SUS)	0	-4259	0	0	0	0
	11(OPE)	661	-4273	1098	0	0	0
	12(OPE)	-911	-4274	1103	0	0	0
	13(OPE)	393	-3756	1056	0	0	0
	14(OPE)	485	-4783	1351	0	0	0
	15(OPE)	139	-4266	1272	0	0	0
	16(OCC)	221	-3	-105	0	0	0
	17(OCC)	-1351	-4	-100	0	0	0
	18(OCC)	-47	514	-147	0	0	0
	19(OCC)	45	-513	147	0	0	0
	20(OCC)	-301	4	69	0	0	0
	MAX	-1351/L17	-7859/L1	1351/L14			
1460		TYPE=Rigid +Y;					
	1(HYD)	-0	-10289	-0	0	0	0
	2(OPE)	-1656	-5636	342	0	0	0
	4(OPE)	-1381	-5613	129	0	0	0
	7(OPE)	-1381	-5613	129	0	0	0
	9(SUS)	-0	-5605	-0	0	0	0
	10(SUS)	-0	-5578	-0	0	0	0
	11(OPE)	1663	-5611	260	0	0	0
	12(OPE)	-1670	-5610	210	0	0	0
	13(OPE)	-1476	-4941	134	0	0	0
	14(OPE)	-1485	-6286	136	0	0	0
	15(OPE)	-654	-5616	1553	0	0	0
	16(OCC)	3044	2	130	0	0	0
	17(OCC)	-289	3	80	0	0	0
	18(OCC)	-95	673	4	0	0	0
	19(OCC)	-104	-673	6	0	0	0
	20(OCC)	727	-3	1423	0	0	0
	MAX	3044/L16	-10289/L1	1553/L15			
1490		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-7016	0	0	0	0
	2(OPE)	137	-3827	-1140	0	0	0
	4(OPE)	396	-3823	-1076	0	0	0
	7(OPE)	396	-3823	-1076	0	0	0
	9(SUS)	0	-3822	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
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	10(SUS)	0	-3803	0	0	0	0
	11(OPE)	751	-3823	-866	0	0	0
	12(OPE)	-1202	-3823	-797	0	0	0
	13(OPE)	354	-3365	-945	0	0	0
	14(OPE)	440	-4282	-1207	0	0	0
	15(OPE)	124	-3824	-1140	0	0	0
	16(OCC)	355	0	210	0	0	0
	17(OCC)	-1598	1	279	0	0	0
	18(OCC)	-42	459	131	0	0	0
	19(OCC)	44	-459	-130	0	0	0
	20(OCC)	-272	-0	-64	0	0	0
	MAX	-1598/L17	-7016/L1	-1207/L14			
1510		TYPE=Rigid +Y;					
	1(HYD)	-0	-6836	0	0	0	0
	2(OPE)	353	-3715	-1057	0	0	0
	4(OPE)	260	-3721	-1086	0	0	0
	7(OPE)	260	-3721	-1086	0	0	0
	9(SUS)	-0	-3723	0	0	0	0
	10(SUS)	-0	-3705	0	0	0	0
	11(OPE)	974	-3722	-545	0	0	0
	12(OPE)	-855	-3722	-719	0	0	0
	13(OPE)	248	-3274	-951	0	0	0
	14(OPE)	270	-4168	-1221	0	0	0
	15(OPE)	247	-3720	1089	0	0	0
	16(OCC)	715	-1	541	0	0	0
	17(OCC)	-1114	-1	367	0	0	0
	18(OCC)	-12	447	135	0	0	0
	19(OCC)	11	-447	-135	0	0	0
	20(OCC)	-13	1	2174	0	0	0
	MAX	-1114/L17	-6836/L1	2174/L20			
1520		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-6441	0	0	0	0
	2(OPE)	299	-3512	-1010	0	0	0
	4(OPE)	7	-3510	-1053	0	0	0
	7(OPE)	7	-3510	-1053	0	0	0
	9(SUS)	0	-3510	0	0	0	0
	10(SUS)	0	-3492	0	0	0	0
	11(OPE)	1008	-3510	-303	0	0	0
	12(OPE)	-989	-3510	-361	0	0	0
	13(OPE)	17	-3089	-927	0	0	0
	14(OPE)	-3	-3932	-1179	0	0	0
	15(OPE)	0	-3511	1053	0	0	0
	16(OCC)	1002	0	750	0	0	0
	17(OCC)	-996	0	692	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	18(OCC)	10	421	126	0	0	0
	19(OCC)	-10	-421	-126	0	0	0
	20(OCC)	-7	-0	2106	0	0	0
	MAX	1008/L11	-6441/L1	2106/L20			
1530		TYPE=Rigid +Y; Rigid LIM w/gap;					
	1(HYD)	-0	-6602	0	0	0	0
	2(OPE)	-53	-3592	1897	0	0	0
	4(OPE)	-39	-3592	1077	0	0	0
	7(OPE)	-39	-3592	1077	0	0	0
	9(SUS)	-0	-3592	0	0	0	0
	10(SUS)	-0	-3575	0	0	0	0
	11(OPE)	1063	-3592	177	0	0	0
	12(OPE)	-1044	-3592	269	0	0	0
	13(OPE)	-40	-3161	948	0	0	0
	14(OPE)	-38	-4023	1206	0	0	0
	15(OPE)	-7	-3592	2907	0	0	0
	16(OCC)	1102	-0	-900	0	0	0
	17(OCC)	-1005	-0	-808	0	0	0
	18(OCC)	-1	431	-129	0	0	0
	19(OCC)	1	-431	129	0	0	0
	20(OCC)	32	0	1830	0	0	0
	MAX	1102/L16	-6602/L1	2907/L15			
1540		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-6348	0	0	0	0
	2(OPE)	-22	-3472	1041	0	0	0
	4(OPE)	3	-3471	1041	0	0	0
	7(OPE)	3	-3471	1041	0	0	0
	9(SUS)	0	-3471	0	0	0	0
	10(SUS)	0	-3454	0	0	0	0
	11(OPE)	889	-3471	543	0	0	0
	12(OPE)	-872	-3471	569	0	0	0
	13(OPE)	2	-3055	916	0	0	0
	14(OPE)	4	-3888	1166	0	0	0
	15(OPE)	-2	-3471	1041	0	0	0
	16(OCC)	886	0	-499	0	0	0
	17(OCC)	-876	0	-472	0	0	0
	18(OCC)	-1	417	-125	0	0	0
	19(OCC)	1	-417	125	0	0	0
	20(OCC)	-5	-0	0	0	0	0
	MAX	889/L11	-6348/L1	1166/L14			
1550		TYPE=Rigid +Y;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	1(HYD)	-0	-7214	0	0	0	0
	2(OPE)	-6	-3878	1164	0	0	0
	4(OPE)	1	-3878	1164	0	0	0
	7(OPE)	1	-3878	1164	0	0	0
	9(SUS)	-0	-3878	0	0	0	0
	10(SUS)	-0	-3859	0	0	0	0
	11(OPE)	879	-3878	763	0	0	0
	12(OPE)	-862	-3878	782	0	0	0
	13(OPE)	1	-3413	1024	0	0	0
	14(OPE)	1	-4344	1303	0	0	0
	15(OPE)	0	-3878	1164	0	0	0
	16(OCC)	878	-0	-401	0	0	0
	17(OCC)	-862	-0	-381	0	0	0
	18(OCC)	0	465	-140	0	0	0
	19(OCC)	-0	-465	140	0	0	0
	20(OCC)	-1	0	-0	0	0	0
	MAX	879/L11	-7214/L1	1303/L14			
1570		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-4213	0	0	0	0
	2(OPE)	1	-2643	793	0	0	0
	4(OPE)	-0	-2643	793	0	0	0
	7(OPE)	-0	-2643	793	0	0	0
	9(SUS)	0	-2643	0	0	0	0
	10(SUS)	0	-2633	0	0	0	0
	11(OPE)	801	-2643	616	0	0	0
	12(OPE)	-787	-2643	625	0	0	0
	13(OPE)	-0	-2326	698	0	0	0
	14(OPE)	-0	-2960	888	0	0	0
	15(OPE)	0	-2643	793	0	0	0
	16(OCC)	801	0	-177	0	0	0
	17(OCC)	-787	0	-167	0	0	0
	18(OCC)	0	317	-95	0	0	0
	19(OCC)	-0	-317	95	0	0	0
	20(OCC)	0	-0	0	0	0	0
	MAX	801/L16	-4213/L1	888/L14			
1640		TYPE=Rigid Z w/gap; Rigid +Y;					
	1(HYD)	-9	-3229	3	0	0	0
	2(OPE)	679	-2304	-127	0	0	0
	4(OPE)	681	-2307	-125	0	0	0
	7(OPE)	771	-2575	-44	0	0	0
	9(SUS)	-5	-2552	3	0	0	0
	10(SUS)	-4	-2548	3	0	0	0
	11(OPE)	625	-2137	-145	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	705	-2437	-194	0	0	0
	13(OPE)	584	-1982	-111	0	0	0
	14(OPE)	776	-2625	-135	0	0	0
	15(OPE)	675	-2260	67	0	0	0
	16(OCC)	-56	170	-19	0	0	0
	17(OCC)	24	-130	-69	0	0	0
	18(OCC)	-96	325	14	0	0	0
	19(OCC)	95	-318	-10	0	0	0
	20(OCC)	-6	47	193	0	0	0
	MAX	776/L14	-3229/L1	-194/L12			
1690		TYPE=Rigid Z; Rigid +Y;					
	1(HYD)	-3	-1747	4	0	0	0
	2(OPE)	395	-1318	2240	0	0	0
	4(OPE)	391	-1304	1026	0	0	0
	7(OPE)	370	-1234	743	0	0	0
	9(SUS)	-1	-1236	3	0	0	0
	10(SUS)	-1	-1233	3	0	0	0
	11(OPE)	391	-1302	1074	0	0	0
	12(OPE)	372	-1241	1011	0	0	0
	13(OPE)	343	-1144	978	0	0	0
	14(OPE)	434	-1445	1069	0	0	0
	15(OPE)	422	-1407	2756	0	0	0
	16(OCC)	-1	3	48	0	0	0
	17(OCC)	-19	63	-14	0	0	0
	18(OCC)	-48	160	-48	0	0	0
	19(OCC)	42	-141	44	0	0	0
	20(OCC)	31	-103	1731	0	0	0
	MAX	434/L14	-1747/L1	2756/L15			
1710		TYPE=Rigid +Y;					
	1(HYD)	0	-3223	-0	0	0	0
	2(OPE)	701	-2343	48	0	0	0
	4(OPE)	703	-2345	-14	0	0	0
	7(OPE)	693	-2317	-48	0	0	0
	9(SUS)	0	-2320	-0	0	0	0
	10(SUS)	0	-2314	-0	0	0	0
	11(OPE)	705	-2362	72	0	0	0
	12(OPE)	674	-2336	-194	0	0	0
	13(OPE)	620	-2069	-19	0	0	0
	14(OPE)	787	-2622	-10	0	0	0
	15(OPE)	673	-2332	190	0	0	0
	16(OCC)	2	-17	85	0	0	0
	17(OCC)	-30	9	-180	0	0	0
	18(OCC)	-83	276	-5	0	0	0
	19(OCC)	83	-278	4	0	0	0
	20(OCC)	-30	12	204	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	787/L14	-3223/L1	204/L20			
1720		TYPE=Rigid Z w/gap; Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-1218	-0	0	0	0
	2(OPE)	-423	-823	-1035	0	0	0
	4(OPE)	-178	-832	-175	0	0	0
	7(OPE)	-180	-877	-191	0	0	0
	9(SUS)	-0	-873	-0	0	0	0
	10(SUS)	-0	-871	-0	0	0	0
	11(OPE)	206	-790	-117	0	0	0
	12(OPE)	-761	-849	-131	0	0	0
	13(OPE)	-151	-719	-154	0	0	0
	14(OPE)	-203	-939	-195	0	0	0
	15(OPE)	-215	-724	30	0	0	0
	16(OCC)	384	42	59	0	0	0
	17(OCC)	-583	-16	45	0	0	0
	18(OCC)	27	113	21	0	0	0
	19(OCC)	-25	-107	-20	0	0	0
	20(OCC)	-37	108	205	0	0	0
	MAX	-761/L12	-1218/L1	-1035/L2			
1740		TYPE=Rigid +Y;					
	1(HYD)	-0	-2221	-0	0	0	0
	2(OPE)	-290	-1627	-393	0	0	0
	4(OPE)	-321	-1621	-366	0	0	0
	7(OPE)	-305	-1594	-369	0	0	0
	9(SUS)	0	-1596	-0	0	0	0
	10(SUS)	0	-1592	-0	0	0	0
	11(OPE)	360	-1648	-338	0	0	0
	12(OPE)	-400	-1611	-271	0	0	0
	13(OPE)	-279	-1435	-328	0	0	0
	14(OPE)	-362	-1812	-405	0	0	0
	15(OPE)	-27	-1691	-302	0	0	0
	16(OCC)	681	-26	27	0	0	0
	17(OCC)	-80	10	95	0	0	0
	18(OCC)	41	186	38	0	0	0
	19(OCC)	-42	-190	-39	0	0	0
	20(OCC)	293	-69	63	0	0	0
	MAX	681/L16	-2221/L1	-405/L14			
1750		TYPE=Rigid X w/gap; Rigid +Y;					
	1(HYD)	-0	-3947	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	797	-2832	-295	0	0	0
	4(OPE)	186	-2832	-101	0	0	0
	7(OPE)	149	-2836	-91	0	0	0
	9(SUS)	0	-2835	0	0	0	0
	10(SUS)	0	-2828	0	0	0	0
	11(OPE)	1488	-2830	-113	0	0	0
	12(OPE)	-847	-2834	-68	0	0	0
	13(OPE)	215	-2492	-118	0	0	0
	14(OPE)	185	-3173	-84	0	0	0
	15(OPE)	359	-2826	768	0	0	0
	16(OCC)	1302	3	-12	0	0	0
	17(OCC)	-1033	-1	33	0	0	0
	18(OCC)	30	341	-18	0	0	0
	19(OCC)	-0	-340	17	0	0	0
	20(OCC)	174	6	869	0	0	0
	MAX	1488/L11	-3947/L1	869/L20			
1760		TYPE=Rigid +Y;					
	1(HYD)	0	-2338	0	0	0	0
	2(OPE)	0	-1680	0	0	0	0
	4(OPE)	0	-1680	0	0	0	0
	7(OPE)	0	-1680	0	0	0	0
	9(SUS)	0	-1680	0	0	0	0
	10(SUS)	0	-1675	0	0	0	0
	11(OPE)	0	-1680	0	0	0	0
	12(OPE)	0	-1680	0	0	0	0
	13(OPE)	0	-1478	0	0	0	0
	14(OPE)	0	-1882	0	0	0	0
	15(OPE)	0	-1681	0	0	0	0
	16(OCC)	0	-0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	202	0	0	0	0
	19(OCC)	0	-202	0	0	0	0
	20(OCC)	0	-1	0	0	0	0
	MAX		-2338/L1				
1780		TYPE=Rigid +Y;					
	1(HYD)	0	-3255	-0	0	0	0
	2(OPE)	670	-2338	207	0	0	0
	4(OPE)	665	-2338	223	0	0	0
	7(OPE)	664	-2338	225	0	0	0
	9(SUS)	0	-2338	-0	0	0	0
	10(SUS)	0	-2332	-0	0	0	0
	11(OPE)	694	-2338	98	0	0	0
	12(OPE)	-390	-2338	126	0	0	0
	13(OPE)	574	-2057	226	0	0	0
	14(OPE)	742	-2618	257	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	15(OPE)	343	-2338	612	0	0	0
	16(OCC)	29	-0	-125	0	0	0
	17(OCC)	-1055	0	-97	0	0	0
	18(OCC)	-91	281	3	0	0	0
	19(OCC)	77	-281	34	0	0	0
	20(OCC)	-322	0	389	0	0	0
	MAX	-1055/L17	-3255/L1	612/L15			
1790		TYPE=Rigid X w/gap; Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-0	-1495	-0	0	0	0
	2(OPE)	-43	-1074	-351	0	0	0
	4(OPE)	-97	-1074	-307	0	0	0
	7(OPE)	-97	-1074	-307	0	0	0
	9(SUS)	-0	-1074	-0	0	0	0
	10(SUS)	-0	-1071	-0	0	0	0
	11(OPE)	301	-1074	-115	0	0	0
	12(OPE)	-277	-1074	-164	0	0	0
	13(OPE)	-72	-945	-274	0	0	0
	14(OPE)	-108	-1203	-344	0	0	0
	15(OPE)	-48	-1074	591	0	0	0
	16(OCC)	398	-0	192	0	0	0
	17(OCC)	-180	0	143	0	0	0
	18(OCC)	25	129	33	0	0	0
	19(OCC)	-11	-129	-37	0	0	0
	20(OCC)	49	-0	898	0	0	0
	MAX	398/L16	-1495/L1	898/L20			
1800		TYPE=Rigid +Y;					
	1(HYD)	-599	-5572	-21	0	0	0
	2(OPE)	-1781	-5946	89	0	0	0
	4(OPE)	183	-4306	58	0	0	0
	7(OPE)	-1339	-4463	6	0	0	0
	9(SUS)	-387	-3811	-6	0	0	0
	10(SUS)	-385	-3799	-6	0	0	0
	11(OPE)	1500	-4999	-5	0	0	0
	12(OPE)	-1201	-4003	6	0	0	0
	13(OPE)	477	-3839	59	0	0	0
	14(OPE)	-337	-4768	55	0	0	0
	15(OPE)	361	-4120	1182	0	0	0
	16(OCC)	1317	-694	-64	0	0	0
	17(OCC)	-1384	303	-52	0	0	0
	18(OCC)	295	467	0	0	0	0
	19(OCC)	-520	-463	-4	0	0	0
	20(OCC)	178	186	1124	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-1781/L2	-5946/L2	1182/L15			
1860		TYPE=Rigid +Y;					
	1(HYD)	0	-7061	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	-3906	0	0	0	0
	7(OPE)	0	-3984	0	0	0	0
	9(SUS)	0	-5148	0	0	0	0
	10(SUS)	0	-5137	0	0	0	0
	11(OPE)	0	-4261	0	0	0	0
	12(OPE)	0	-3788	0	0	0	0
	13(OPE)	0	-3290	0	0	0	0
	14(OPE)	0	-4526	0	0	0	0
	15(OPE)	0	-4390	0	0	0	0
	16(OCC)	0	-355	0	0	0	0
	17(OCC)	0	118	0	0	0	0
	18(OCC)	0	616	0	0	0	0
	19(OCC)	0	-620	0	0	0	0
	20(OCC)	0	-484	0	0	0	0
	MAX		-7061/L1				
1930		TYPE=Rigid +Y;					
	1(HYD)	12	-6668	-311	0	0	0
	2(OPE)	749	-4920	-1272	0	0	0
	4(OPE)	181	-5565	-1660	0	0	0
	7(OPE)	181	-5565	-1660	0	0	0
	9(SUS)	8	-5688	-241	0	0	0
	10(SUS)	8	-5682	-240	0	0	0
	11(OPE)	1489	-5583	-766	0	0	0
	12(OPE)	-1637	-5580	-353	0	0	0
	13(OPE)	177	-4891	-1457	0	0	0
	14(OPE)	180	-6239	-1863	0	0	0
	15(OPE)	286	-5596	1654	0	0	0
	16(OCC)	1309	-19	893	0	0	0
	17(OCC)	-1817	-16	1307	0	0	0
	18(OCC)	-4	674	203	0	0	0
	19(OCC)	-1	-674	-204	0	0	0
	20(OCC)	105	-31	3314	0	0	0
	MAX	-1817/L17	-6668/L1	3314/L20			
1980		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-32	-6002	-405	0	0	0
	2(OPE)	711	-7907	-2263	0	0	0
	4(OPE)	39	-5708	-1712	0	0	0
	7(OPE)	39	-5708	-1712	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	9(SUS)	-23	-5328	-311	0	0	0
	10(SUS)	-23	-5324	-310	0	0	0
	11(OPE)	1471	-5657	-847	0	0	0
	12(OPE)	-1541	-5669	-719	0	0	0
	13(OPE)	38	-5032	-1509	0	0	0
	14(OPE)	41	-6383	-1915	0	0	0
	15(OPE)	166	-5552	1657	0	0	0
	16(OCC)	1432	50	865	0	0	0
	17(OCC)	-1580	39	993	0	0	0
	18(OCC)	-1	676	203	0	0	0
	19(OCC)	2	-675	-203	0	0	0
	20(OCC)	127	155	3369	0	0	0
	MAX	-1580/L17	-7907/L2	3369/L20			
2030		TYPE=Rigid +Y;					
	1(HYD)	208	-3400	999	0	0	0
	2(OPE)	-11	-1393	-418	0	0	0
	4(OPE)	-30	-2345	-703	0	0	0
	7(OPE)	-30	-2345	-703	0	0	0
	9(SUS)	180	-2560	747	0	0	0
	10(SUS)	180	-2555	745	0	0	0
	11(OPE)	592	-2349	-383	0	0	0
	12(OPE)	-547	-2315	-428	0	0	0
	13(OPE)	-27	-2064	-619	0	0	0
	14(OPE)	-32	-2624	-787	0	0	0
	15(OPE)	-5	-2477	743	0	0	0
	16(OCC)	622	-3	320	0	0	0
	17(OCC)	-517	30	275	0	0	0
	18(OCC)	3	281	84	0	0	0
	19(OCC)	-2	-279	-84	0	0	0
	20(OCC)	25	-132	1446	0	0	0
	MAX	622/L16	-3400/L1	1446/L20			
2070		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-120	-851	48	0	0	0
	2(OPE)	-1237	158	-4158	0	0	0
	4(OPE)	-38	-523	-152	0	0	0
	7(OPE)	-38	-523	-152	0	0	0
	9(SUS)	-94	-582	38	0	0	0
	10(SUS)	-94	-580	38	0	0	0
	11(OPE)	136	-558	-97	0	0	0
	12(OPE)	-147	-583	-95	0	0	0
	13(OPE)	-32	-456	-133	0	0	0
	14(OPE)	-43	-592	-172	0	0	0
	15(OPE)	-77	-517	135	0	0	0
	16(OCC)	174	-35	55	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OCC)	-109	-59	57	0	0	0
	18(OCC)	5	67	19	0	0	0
	19(OCC)	-5	-69	-20	0	0	0
	20(OCC)	-40	6	287	0	0	0
	MAX	-1237/L2	-851/L1	-4158/L2			
2100		TYPE=Rigid +Y;					
	1(HYD)	0	-249	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	-3	0	0	0	0
	7(OPE)	0	-220	0	0	0	0
	9(SUS)	0	-207	0	0	0	0
	10(SUS)	0	-206	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	-128	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	-44	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	3	0	0	0	0
	17(OCC)	0	-124	0	0	0	0
	18(OCC)	0	3	0	0	0	0
	19(OCC)	0	-41	0	0	0	0
	20(OCC)	0	3	0	0	0	0
	MAX		-249/L1				
2110		TYPE=Rigid +Y;					
	1(HYD)	-146	-489	-6	0	0	0
	2(OPE)	232	-839	-97	0	0	0
	4(OPE)	225	-843	-115	0	0	0
	7(OPE)	118	-395	11	0	0	0
	9(SUS)	-130	-433	-5	0	0	0
	10(SUS)	-130	-432	-5	0	0	0
	11(OPE)	265	-1009	-146	0	0	0
	12(OPE)	180	-654	-77	0	0	0
	13(OPE)	212	-799	-112	0	0	0
	14(OPE)	235	-873	-115	0	0	0
	15(OPE)	242	-837	-66	0	0	0
	16(OCC)	40	-166	-31	0	0	0
	17(OCC)	-45	189	38	0	0	0
	18(OCC)	-13	44	4	0	0	0
	19(OCC)	10	-30	0	0	0	0
	20(OCC)	17	6	50	0	0	0
	MAX	265/L11	-1009/L11	-146/L11			
2120		TYPE=Rigid Z w/gap; Rigid +Y;					

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	1(HYD)	-180	-599	1	0	0	0
	2(OPE)	105	-356	-28	0	0	0
	4(OPE)	105	-355	-19	0	0	0
	7(OPE)	164	-546	-4	0	0	0
	9(SUS)	-159	-531	1	0	0	0
	10(SUS)	-159	-530	1	0	0	0
	11(OPE)	93	-313	-65	0	0	0
	12(OPE)	117	-404	33	0	0	0
	13(OPE)	85	-291	-28	0	0	0
	14(OPE)	126	-424	-16	0	0	0
	15(OPE)	103	-354	158	0	0	0
	16(OCC)	-12	42	-46	0	0	0
	17(OCC)	12	-50	53	0	0	0
	18(OCC)	-19	64	-9	0	0	0
	19(OCC)	22	-69	4	0	0	0
	20(OCC)	-1	1	177	0	0	0
	MAX	-180/L1	-599/L1	177/L20			
2130		TYPE=Rigid +Y;					
	1(HYD)	-200	-666	2	0	0	0
	2(OPE)	235	-1051	-210	0	0	0
	4(OPE)	227	-1053	-220	0	0	0
	7(OPE)	-164	-550	22	0	0	0
	9(SUS)	-177	-591	1	0	0	0
	10(SUS)	-177	-590	1	0	0	0
	11(OPE)	264	-1150	-222	0	0	0
	12(OPE)	212	-948	-190	0	0	0
	13(OPE)	204	-983	-213	0	0	0
	14(OPE)	250	-1113	-221	0	0	0
	15(OPE)	310	-1063	-73	0	0	0
	16(OCC)	38	-97	-2	0	0	0
	17(OCC)	-15	106	30	0	0	0
	18(OCC)	-23	71	7	0	0	0
	19(OCC)	24	-59	-1	0	0	0
	20(OCC)	84	-10	147	0	0	0
	MAX	310/L15	-1150/L11	-222/L11			
2180		TYPE=Rigid +Y;					
	1(HYD)	401	-1346	44	0	0	0
	2(OPE)	283	-1908	-497	0	0	0
	4(OPE)	297	-1886	-482	0	0	0
	7(OPE)	-316	-1182	162	0	0	0
	9(SUS)	376	-1263	47	0	0	0
	10(SUS)	376	-1262	47	0	0	0
	11(OPE)	367	-1972	-464	0	0	0
	12(OPE)	109	-1828	-538	0	0	0
	13(OPE)	268	-1709	-437	0	0	0

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Various Load Cases

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	14(OPE)	324	-2047	-522	0	0	0
	15(OPE)	356	-1984	-477	0	0	0
	16(OCC)	70	-85	18	0	0	0
	17(OCC)	-189	58	-56	0	0	0
	18(OCC)	-30	177	44	0	0	0
	19(OCC)	27	-160	-40	0	0	0
	20(OCC)	59	-97	5	0	0	0
	MAX	401/L1	-2047/L14	-538/L12			
2270		TYPE=Rigid X w/gap; Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-0	-2575	-0	0	0	0
	2(OPE)	-24	-1398	10991	0	0	0
	4(OPE)	-19	-1398	11030	0	0	0
	7(OPE)	-1777	-1397	-6332	0	0	0
	9(SUS)	-0	-1397	-0	0	0	0
	10(SUS)	-0	-1395	-0	0	0	0
	11(OPE)	2982	-1398	10112	0	0	0
	12(OPE)	-3564	-1398	12040	0	0	0
	13(OPE)	-9	-1230	10345	0	0	0
	14(OPE)	-39	-1565	11801	0	0	0
	15(OPE)	-29	-1398	15928	0	0	0
	16(OCC)	3001	-0	-918	0	0	0
	17(OCC)	-3545	0	1010	0	0	0
	18(OCC)	9	168	-685	0	0	0
	19(OCC)	-20	-168	772	0	0	0
	20(OCC)	-10	-0	4898	0	0	0
	MAX	-3564/L12	-2575/L1	15928/L15			
2280		TYPE=Rigid +Y;					
	1(HYD)	0	-7426	-0	0	0	0
	2(OPE)	87	-4027	-1205	0	0	0
	4(OPE)	90	-4027	-1205	0	0	0
	7(OPE)	-69	-4030	1207	0	0	0
	9(SUS)	0	-4030	-0	0	0	0
	10(SUS)	0	-4025	-0	0	0	0
	11(OPE)	273	-4027	-1177	0	0	0
	12(OPE)	-256	-4028	-1181	0	0	0
	13(OPE)	83	-3544	-1060	0	0	0
	14(OPE)	87	-4511	-1350	0	0	0
	15(OPE)	84	-4027	-1205	0	0	0
	16(OCC)	183	1	28	0	0	0
	17(OCC)	-346	-1	24	0	0	0
	18(OCC)	-7	484	145	0	0	0
	19(OCC)	-2	-484	-146	0	0	0

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Various Load Cases

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	20(OCC)	-6	0	-0	0	0	0
	MAX	-346/L17	-7426/L1	-1350/L14			
2290		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-0	-6214	-0	0	0	0
	2(OPE)	457	-3384	-1012	0	0	0
	4(OPE)	415	-3383	-1012	0	0	0
	7(OPE)	-15	-3371	1011	0	0	0
	9(SUS)	-0	-3372	-0	0	0	0
	10(SUS)	-0	-3367	-0	0	0	0
	11(OPE)	1508	-3386	-1012	0	0	0
	12(OPE)	-1	-3381	-1014	0	0	0
	13(OPE)	382	-2979	-891	0	0	0
	14(OPE)	543	-3788	-1133	0	0	0
	15(OPE)	493	-3385	-1012	0	0	0
	16(OCC)	1093	-2	-1	0	0	0
	17(OCC)	-416	2	-3	0	0	0
	18(OCC)	-34	405	121	0	0	0
	19(OCC)	127	-404	-121	0	0	0
	20(OCC)	78	-2	-1	0	0	0
	MAX	1508/L11	-6214/L1	-1133/L14			
2300		TYPE=Rigid +Y;					
	1(HYD)	0	-6933	-0	0	0	0
	2(OPE)	77	-3719	-1113	0	0	0
	4(OPE)	73	-3720	-1114	0	0	0
	7(OPE)	109	-3769	1125	0	0	0
	9(SUS)	0	-3765	-0	0	0	0
	10(SUS)	0	-3760	-0	0	0	0
	11(OPE)	10	-3711	-1113	0	0	0
	12(OPE)	124	-3729	-1112	0	0	0
	13(OPE)	61	-3269	-979	0	0	0
	14(OPE)	93	-4172	-1248	0	0	0
	15(OPE)	79	-3713	-1111	0	0	0
	16(OCC)	-63	9	0	0	0	0
	17(OCC)	51	-9	2	0	0	0
	18(OCC)	-12	451	135	0	0	0
	19(OCC)	20	-452	-135	0	0	0
	20(OCC)	6	7	3	0	0	0
	MAX	124/L12	-6933/L1	-1248/L14			
2310		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-0	-4870	-0	0	0	0
	2(OPE)	-6125	-2876	-862	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	-5942	-2870	-860	0	0	0
	7(OPE)	655	-2613	752	0	0	0
	9(SUS)	-0	-2633	-0	0	0	0
	10(SUS)	-0	-2630	-0	0	0	0
	11(OPE)	-1175	-2919	-875	0	0	0
	12(OPE)	-11998	-2822	-846	0	0	0
	13(OPE)	-5790	-2551	-765	0	0	0
	14(OPE)	-6404	-3183	-954	0	0	0
	15(OPE)	-6222	-2909	-872	0	0	0
	16(OCC)	4767	-49	-15	0	0	0
	17(OCC)	-6056	48	14	0	0	0
	18(OCC)	151	319	96	0	0	0
	19(OCC)	-462	-313	-94	0	0	0
	20(OCC)	-280	-39	-12	0	0	0
	MAX	-11998/L12	-4870/L1	-954/L14			
2320		TYPE=Rigid +Y;					
	1(HYD)	2	-7805	-0	0	0	0
	2(OPE)	-157	-4042	-1202	0	0	0
	4(OPE)	-149	-4047	-1205	0	0	0
	7(OPE)	466	-4261	1191	0	0	0
	9(SUS)	2	-4244	-0	0	0	0
	10(SUS)	2	-4239	-0	0	0	0
	11(OPE)	16	-4006	-1202	0	0	0
	12(OPE)	-349	-4088	-1175	0	0	0
	13(OPE)	-124	-3541	-1055	0	0	0
	14(OPE)	-193	-4559	-1354	0	0	0
	15(OPE)	-160	-4015	-1194	0	0	0
	16(OCC)	165	41	3	0	0	0
	17(OCC)	-200	-40	30	0	0	0
	18(OCC)	25	507	150	0	0	0
	19(OCC)	-44	-512	-149	0	0	0
	20(OCC)	-11	32	11	0	0	0
	MAX	466/L7	-7805/L1	-1354/L14			
2350		TYPE=Rigid +Y; Rigid Z;					
	1(HYD)	25	-10631	2	0	0	0
	2(OPE)	1727	-5755	-7587	0	0	0
	4(OPE)	1727	-5755	-7631	0	0	0
	7(OPE)	382	-5769	1380	0	0	0
	9(SUS)	22	-5768	2	0	0	0
	10(SUS)	22	-5760	2	0	0	0
	11(OPE)	1727	-5756	-6654	0	0	0
	12(OPE)	1727	-5755	-9015	0	0	0
	13(OPE)	1519	-5063	-7579	0	0	0
	14(OPE)	1934	-6448	-7811	0	0	0
	15(OPE)	1726	-5754	-5612	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OCC)	0	-0	977	0	0	0
	17(OCC)	-0	0	-1384	0	0	0
	18(OCC)	-208	692	52	0	0	0
	19(OCC)	208	-692	-180	0	0	0
	20(OCC)	-1	2	2019	0	0	0
	MAX	1934/L14	-10631/L1	-9015/L12			
2390		TYPE=Rigid +Y;					
	1(HYD)	49	-6980	-17	0	0	0
	2(OPE)	1071	-3836	421	0	0	0
	4(OPE)	1074	-3836	413	0	0	0
	7(OPE)	-1058	-3796	-420	0	0	0
	9(SUS)	43	-3803	-15	0	0	0
	10(SUS)	43	-3798	-15	0	0	0
	11(OPE)	1104	-3821	310	0	0	0
	12(OPE)	955	-3850	649	0	0	0
	13(OPE)	948	-3380	360	0	0	0
	14(OPE)	1195	-4291	480	0	0	0
	15(OPE)	1053	-3838	465	0	0	0
	16(OCC)	30	15	-103	0	0	0
	17(OCC)	-119	-14	236	0	0	0
	18(OCC)	-126	456	-54	0	0	0
	19(OCC)	121	-455	66	0	0	0
	20(OCC)	-21	-2	52	0	0	0
	MAX	1195/L14	-6980/L1	649/L12			
2410		TYPE=Rigid +Y; Rigid Z;					
	1(HYD)	0	-2642	-30	0	0	0
	2(OPE)	0	-488	2205	0	0	0
	4(OPE)	0	-507	2205	0	0	0
	7(OPE)	0	-1624	-208	0	0	0
	9(SUS)	0	-1507	-33	0	0	0
	10(SUS)	0	-1505	-33	0	0	0
	11(OPE)	0	-364	2154	0	0	0
	12(OPE)	0	-631	2228	0	0	0
	13(OPE)	0	-352	2173	0	0	0
	14(OPE)	0	-689	2205	0	0	0
	15(OPE)	0	-401	3413	0	0	0
	16(OCC)	0	143	-51	0	0	0
	17(OCC)	0	-124	23	0	0	0
	18(OCC)	0	155	-32	0	0	0
	19(OCC)	0	-181	-0	0	0	0
	20(OCC)	0	106	1208	0	0	0
	MAX		-2642/L1	3413/L15			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T2+P2
7 (OPE) W+T3+P1
8 (Alt-SUS) W+P1
9 (SUS) W+P1
10 (SUS) WNC
11 (OPE) W+T2+P1+U1
12 (OPE) W+T2+P1-U1
13 (OPE) W+T2+P1+U2
14 (OPE) W+T2+P1-U2
15 (OPE) W+T2+P1+U3
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15-L4
21 (OCC) L21=L16+L9
22 (OCC) L22=L17+L9
23 (OCC) L23=L18+L9
24 (OCC) L24=L19+L9
25 (OCC) L25=L20+L9
26 (EXP) L26=L2-L9
27 (EXP) L27=L4-L9
28 (EXP) L28=L2-L4

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 9 (SUS) W+P1
CASE 10 (SUS) WNC
CASE 21 (OCC) L21=L16+L9
CASE 22 (OCC) L22=L17+L9
CASE 23 (OCC) L23=L18+L9
CASE 24 (OCC) L24=L19+L9
CASE 25 (OCC) L25=L20+L9
CASE 26 (EXP) L26=L2-L9
CASE 27 (EXP) L27=L4-L9
CASE 28 (EXP) L28=L2-L4

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	17.6	@Node	590
Code Stress:	42472.8	Allowable Stress:	241316.5
Axial Stress:	10848.6	@Node	130
Bending Stress:	36348.6	@Node	590
Torsion Stress:	5279.5	@Node	1309
Hoop Stress:	22229.3	@Node	130
Max Stress Intensity:	42639.3	@Node	590

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 9 (SUS) W+P1			
Ratio (%):	45.8	@Node	590
Code Stress:	63146.8	Allowable Stress:	137895.1
Axial Stress:	21725.1	@Node	130
Bending Stress:	52463.9	@Node	590
Torsion Stress:	9698.4	@Node	1309
Hoop Stress:	43653.9	@Node	130
Max Stress Intensity:	70274.6	@Node	530

CODE STRESS CHECK PASSED : LOADCASE 10 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 10 (SUS) WNC			
Ratio (%):	38.0	@Node	590
Code Stress:	52459.7	Allowable Stress:	137895.1
Axial Stress:	3144.6	@Node	1190
Bending Stress:	52280.8	@Node	590
Torsion Stress:	9672.9	@Node	1309
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	52459.7	@Node	590

CODE STRESS CHECK PASSED : LOADCASE 21 (OCC) L21=L16+L9

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Highest Stresses: (   KPa    ) LOADCASE 21 (OCC) L21=L16+L9
Ratio (%):                53.7       @Node   2078
Code Stress:             98509.5       Allowable Stress:     183400.5
Axial Stress:            22865.9       @Node    130
Bending Stress:          82668.0       @Node   2330
Torsion Stress:          41973.0       @Node   2078
Hoop Stress:             43653.9       @Node    130
Max Stress Intensity:   100204.3       @Node   2330

 CODE STRESS CHECK PASSED      : LOADCASE 22 (OCC) L22=L17+L9

Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L17+L9
Ratio (%):                56.3       @Node   2078
Code Stress:            103186.3       Allowable Stress:     183400.5
Axial Stress:            22180.3       @Node    130
Bending Stress:         104277.4       @Node   2330
Torsion Stress:          44394.2       @Node   2078
Hoop Stress:             43653.9       @Node    130
Max Stress Intensity:   122115.3       @Node   2330

 CODE STRESS CHECK PASSED      : LOADCASE 23 (OCC) L23=L18+L9

Highest Stresses: (   KPa    ) LOADCASE 23 (OCC) L23=L18+L9
Ratio (%):                38.0       @Node    590
Code Stress:             69624.5       Allowable Stress:     183400.5
Axial Stress:            21868.8       @Node    130
Bending Stress:          58812.0       @Node    590
Torsion Stress:           8546.8       @Node   1309
Hoop Stress:             43653.9       @Node    130
Max Stress Intensity:    76554.0       @Node    530

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L19+L9

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L19+L9
Ratio (%):                38.0       @Node    590
Code Stress:             69608.5       Allowable Stress:     183400.5
Axial Stress:            21710.7       @Node    130
Bending Stress:          58774.3       @Node    590
Torsion Stress:          10833.7       @Node   1309
Hoop Stress:             43653.9       @Node    130
Max Stress Intensity:    76536.9       @Node    530

 CODE STRESS CHECK PASSED      : LOADCASE 25 (OCC) L25=L20+L9

Highest Stresses: (   KPa    ) LOADCASE 25 (OCC) L25=L20+L9
Ratio (%):                50.3       @Node   2260
Code Stress:             86495.1       Allowable Stress:     172055.9
Axial Stress:            21963.7       @Node    130
Bending Stress:         108656.4       @Node   2260
Torsion Stress:           9418.7       @Node   1308
Hoop Stress:             43653.9       @Node    130
Max Stress Intensity:   113482.6       @Node   2260
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

CODE STRESS CHECK PASSED : LOADCASE 26 (EXP) L26=L2-L9

Highest Stresses: (KPa) LOADCASE 26 (EXP) L26=L2-L9			
Ratio (%):	57.3	@Node	2260
Code Stress:	182829.8	Allowable Stress:	319215.3
Axial Stress:	2568.4	@Node	280
Bending Stress:	140528.4	@Node	2260
Torsion Stress:	57770.2	@Node	2249
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	482153.0	@Node	2260

CODE STRESS CHECK PASSED : LOADCASE 27 (EXP) L27=L4-L9

Highest Stresses: (KPa) LOADCASE 27 (EXP) L27=L4-L9			
Ratio (%):	57.2	@Node	2260
Code Stress:	182435.7	Allowable Stress:	319215.3
Axial Stress:	2261.4	@Node	2140
Bending Stress:	140636.0	@Node	2260
Torsion Stress:	57665.0	@Node	2249
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	481386.8	@Node	2260

CODE STRESS CHECK PASSED : LOADCASE 28 (EXP) L28=L2-L4

Highest Stresses: (KPa) LOADCASE 28 (EXP) L28=L2-L4			
Ratio (%):	6.4	@Node	1450
Code Stress:	20869.6	Allowable Stress:	324257.8
Axial Stress:	1530.9	@Node	280
Bending Stress:	20703.5	@Node	1450
Torsion Stress:	5952.0	@Node	2030
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	55371.2	@Node	1450

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Flange Peq : 6 (OPE) W+T2+P2 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T2+P2
7 (OPE) W+T3+P1
8 (Alt-SUS) W+P1
9 (SUS) W+P1
10 (SUS) WNC
11 (OPE) W+T2+P1+U1
12 (OPE) W+T2+P1-U1
13 (OPE) W+T2+P1+U2
14 (OPE) W+T2+P1-U2
15 (OPE) W+T2+P1+U3
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15-L4
21 (OCC) L21=L16+L9
22 (OCC) L22=L17+L9
23 (OCC) L23=L18+L9
24 (OCC) L24=L19+L9
25 (OCC) L25=L20+L9
26 (EXP) L26=L2-L9
27 (EXP) L27=L4-L9
28 (EXP) L28=L2-L4

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FLANGE PEQ REPORT: Flange (Equiv Pressure Method)
CASE 6 (OPE) W+T2+P2

Node	Axial Force N.	Bending Moment N.m.	G/C mm.	P Equivalent KPa	Rating Temperature C	Allowable Pressure /Stress	Ratio %	
700	2005	919	244.60	1112.48	32.00	10342.14	10.76	
710								
730								
740	3439	1538	244.60	1358.48	32.00	10342.14	13.14	
750	3439	1889	244.60	1480.66	32.00	10342.14	14.32	
760								
780								
790	3439	2504	244.60	1694.63	32.00	10342.14	16.39	
800	3439	1836	244.60	1462.07	32.00	10342.14	14.14	
810								
1900								
1910	4084	486	244.60	1005.95	32.00	10342.14	9.73	
1910	4084	486	244.60	1005.95	32.00	10342.14	9.73	
1920								
1940	2478	1005	244.60	1152.59	32.00	10342.14	11.14	
1950								
1960	2478	1745	244.60	1409.92	32.00	10342.14	13.63	
1970								
1990								
2000	771	734	244.60	1021.83	32.00	10342.14	9.88	
2010	771	1184	244.60	1178.49	32.00	10342.14	11.40	
2020								
860								
1890	1282	273	244.60	872.34	32.00	10342.14	8.43	

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T2+P2
7 (OPE) W+T3+P1
8 (Alt-SUS) W+P1
9 (SUS) W+P1
10 (SUS) WNC
11 (OPE) W+T2+P1+U1
12 (OPE) W+T2+P1-U1
13 (OPE) W+T2+P1+U2
14 (OPE) W+T2+P1-U2
15 (OPE) W+T2+P1+U3
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15-L4
21 (OCC) L21=L16+L9
22 (OCC) L22=L17+L9
23 (OCC) L23=L18+L9
24 (OCC) L24=L19+L9
25 (OCC) L25=L20+L9
26 (EXP) L26=L2-L9
27 (EXP) L27=L4-L9
28 (EXP) L28=L2-L4

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 16:18
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NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 7 (OPE) W+T3+P1
CASE 9 (SUS) W+P1
CASE 10 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
1090		Absolute Method								
	Limits	11201	11201	8400		6720	4480	5820		
	2(OPE)	5206	-845	-576	0.465	-364	-1034	5	0.231	
	4(OPE)	2785	-143	10	0.249	-138	-202	85	0.045	
	7(OPE)	2749	-140	1	0.245	-53	-277	89	0.062	
	9(SUS)	2046	50	144	0.183	-64	8	167	0.029	
	10(SUS)	2045	49	144	0.183	-64	8	167	0.029	
1160		Absolute Method								
	Limits	14001	14001	10501		10500	7000	9100		
	2(OPE)	6693	231	289	0.478	-805	1335	-2823	0.310	
	4(OPE)	6908	164	357	0.493	-289	1097	-3616	0.397	
	7(OPE)	6909	163	375	0.493	-270	1117	-3617	0.397	
	9(SUS)	6978	151	421	0.498	-146	1108	-3777	0.415	
	10(SUS)	6963	151	420	0.497	-146	1104	-3766	0.414	
1190		Absolute Method								
	Limits	16801	16801	12601		15121	10080	13101		
	2(OPE)	12613	1106	714	0.751	-2347	4135	-8289	0.633	
	4(OPE)	13292	273	67	0.791	-342	4379	-5240	0.434	
	7(OPE)	13282	267	169	0.791	-714	4359	-5291	0.432	
	9(SUS)	13641	-16	-89	0.812	210	4294	-3275	0.426	
	10(SUS)	13613	-15	-88	0.810	211	4284	-3277	0.425	

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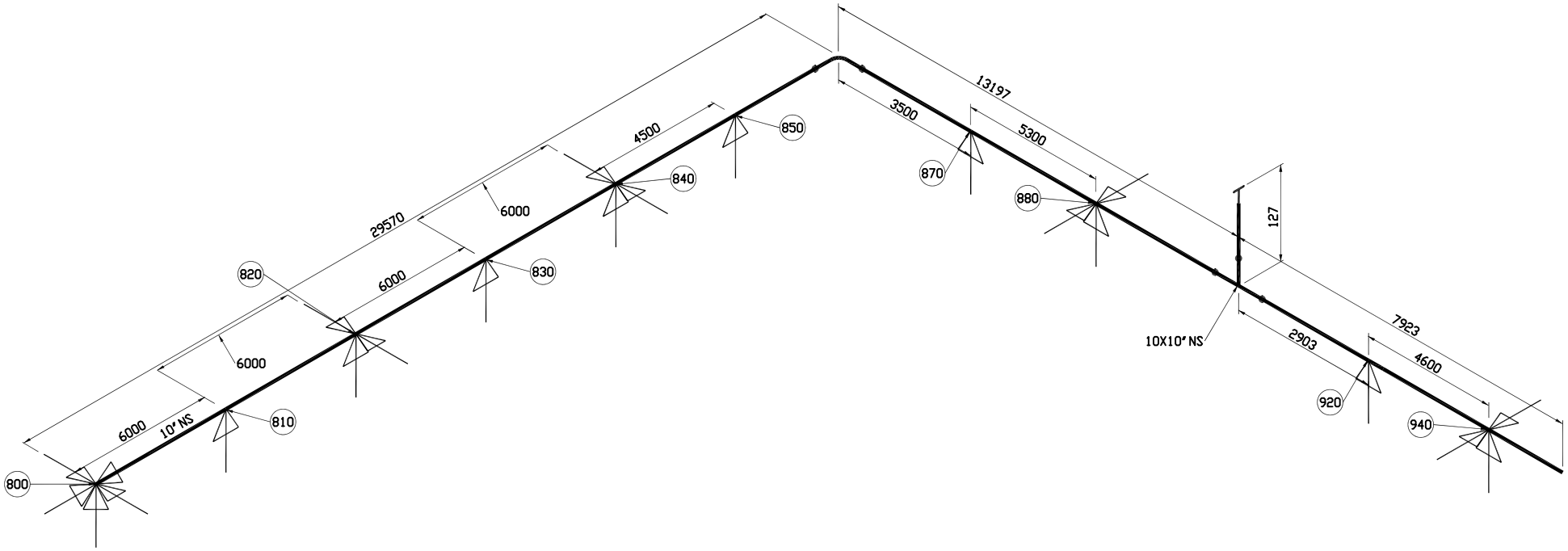
NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
1270		Absolute Method								
	Limits	14001	14001	10501		10500	7000	9100		
	2(OPE)	7460	2320	-1456	0.533	-1058	-2561	-2770	0.366	
	4(OPE)	7626	1073	-283	0.545	-114	-957	-1206	0.137	
	7(OPE)	7623	1076	-282	0.544	-113	-955	-1210	0.136	
	9(SUS)	7796	275	650	0.557	372	340	-178	0.049	
	10(SUS)	7782	274	649	0.556	371	340	-176	0.049	

BNK-GCS-CN-010

1. GAS-111-0021-AN07-6"-PT
2. GAS-111-0022-AN07-6"-PT
3. FL-112-0011-AN07-8"-PT
4. FL-112-0009-AN07-8"-PT
5. FL-112-0010-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 5

REV.	CHANGE	DATE
		13 MAY 2024

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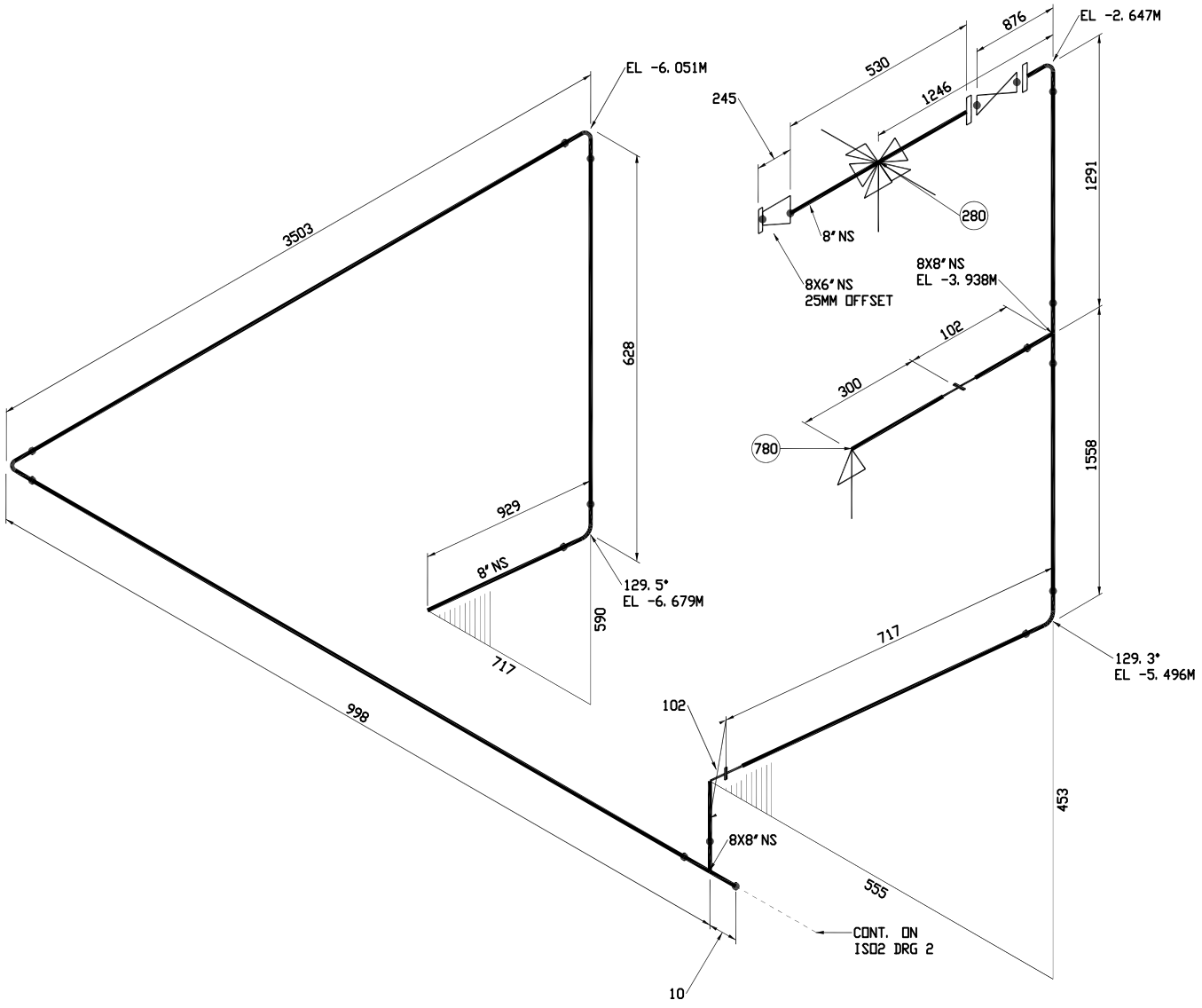

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 2 OF 5

REV.	CHANGE	DATE
		13 MAY 2024

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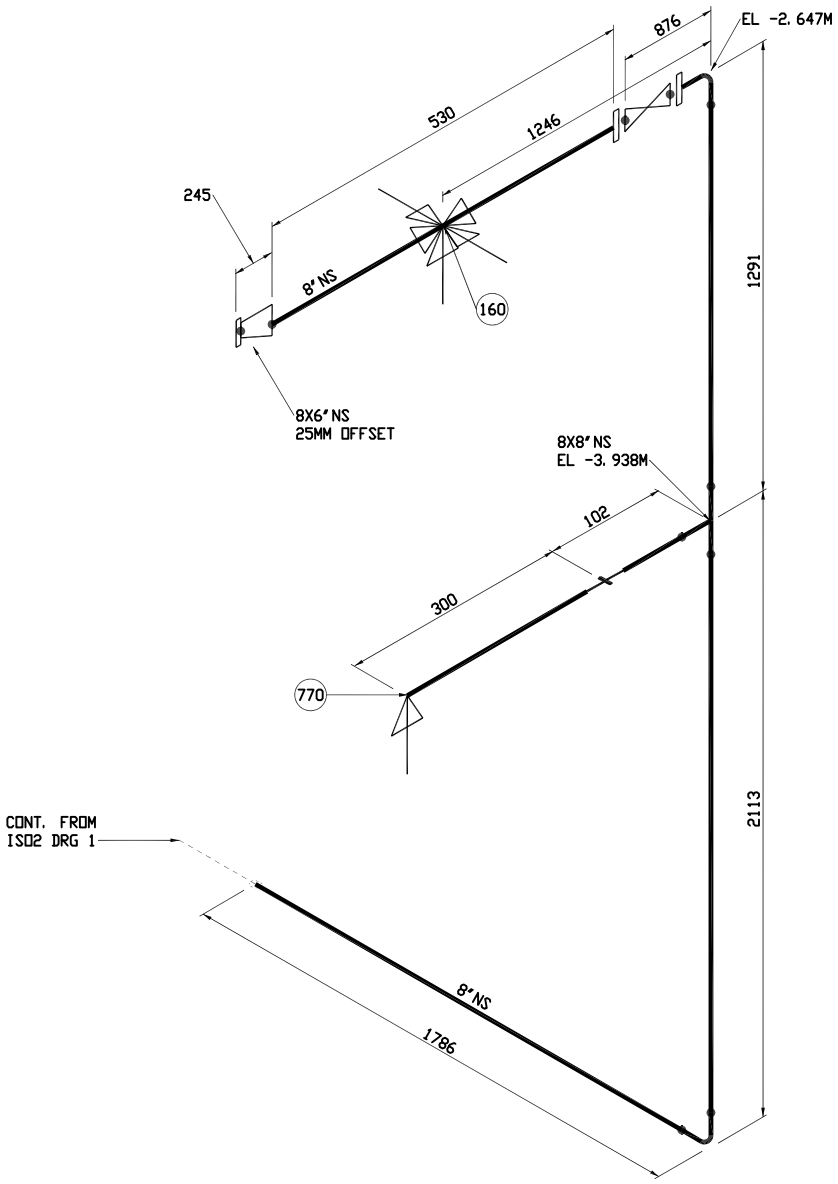

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

3 OF 5

REV.	CHANGE	DATE
		13 MAY 2024

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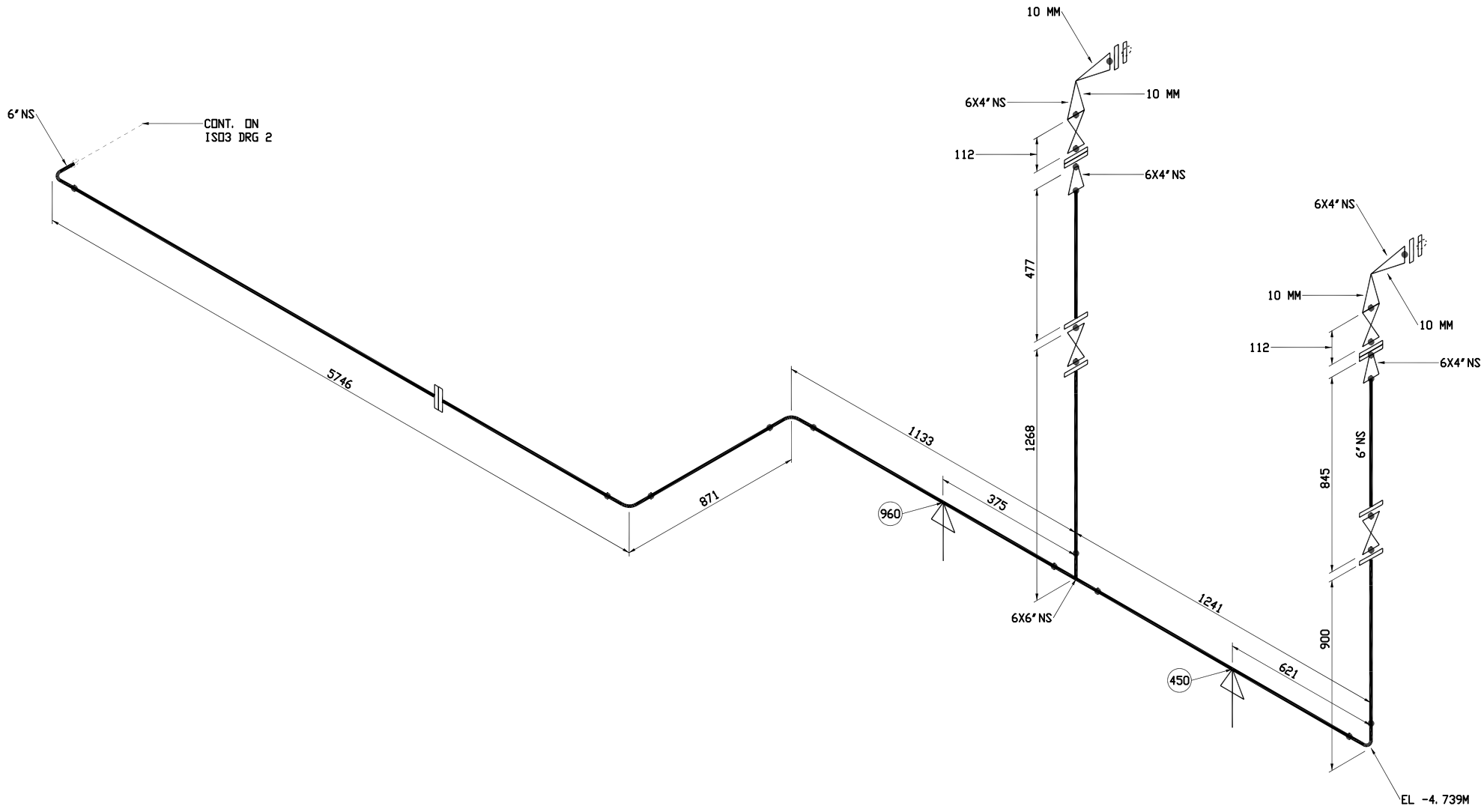

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

4 OF 5

REV.	CHANGE	DATE
		13 MAY 2024

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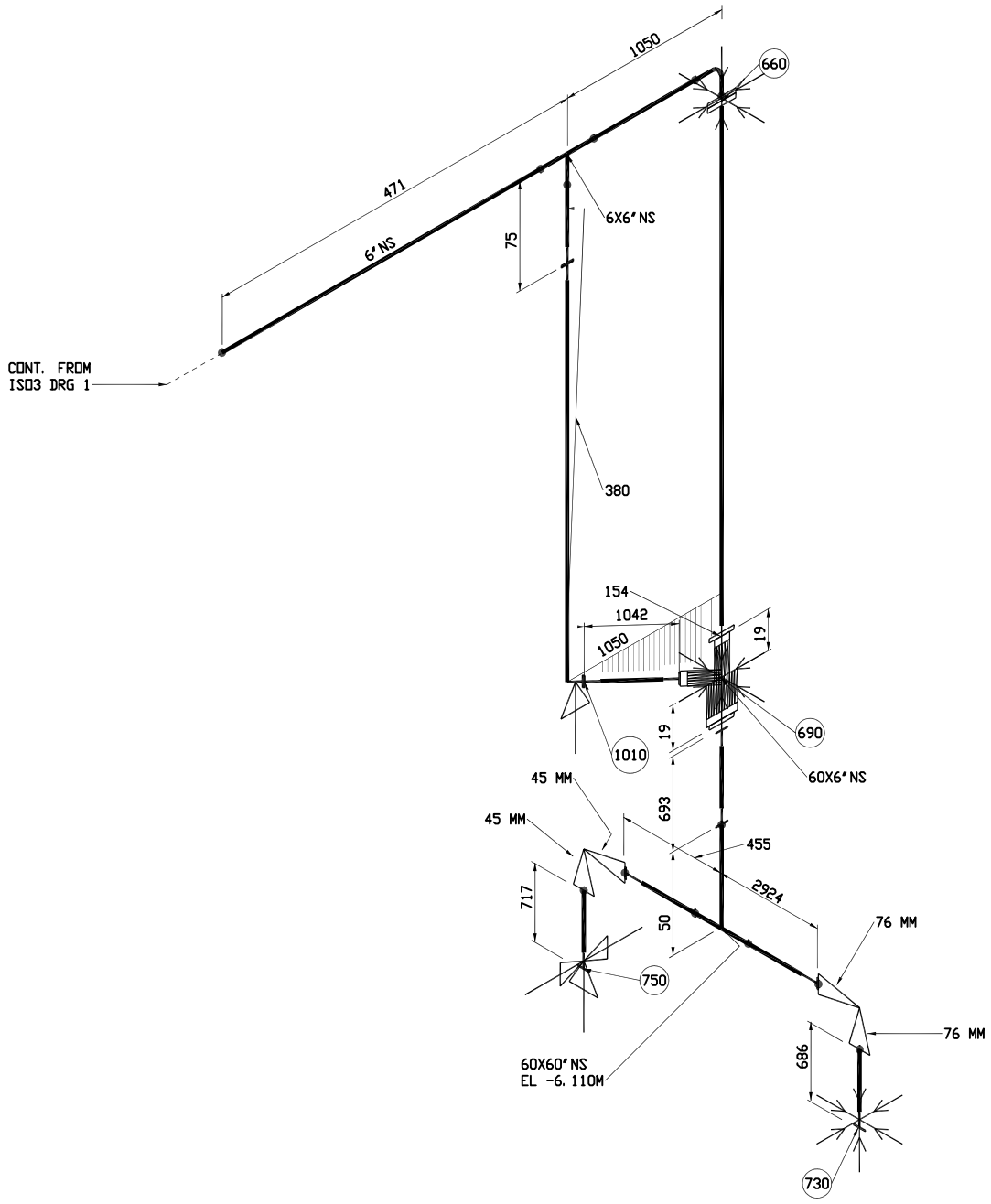

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

5 OF 5

REV.	CHANGE	DATE
		13 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OPE) W+T2+P1+F2
17 (OCC) L17=L10-L4
18 (OCC) L18=L11-L4
19 (OCC) L19=L12-L4
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17+L8
25 (OCC) L25=L18+L8
26 (OCC) L26=L19+L8
27 (OCC) L27=L20+L8
28 (OCC) L28=L21+L8
29 (OCC) L29=L22+L8
30 (OCC) L30=L23+L8
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8
33 (EXP) L33=L2-L4
34 (EXP) L34=L6-L8
35 (EXP) L35=L2-L6
36 (EXP) L36=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:27
Job:: BNK-GCS-CN-010-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 19,2024 14:27:12

PIPE DATA

From 10 To 20 DY= 127.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
GENERAL
T1= 272 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 1,125.0256 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,335,024 KPa
EH2= 187,335,024 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RIGID Weight= .00 N.
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 20 To 30 DX= 717.000 mm. DY= 590.000 mm.
PIPE
Dia= 219.075 mm. Wall= 10.312 mm.
GENERAL
T1= 272 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
Insul Thk= .000 mm.
BEND at "TO" end
Radius= 304.800 mm. (LONG) Bend Angle= 50.550 Angle/Node @1= 25.27 29
Angle/Node @2= .00 28
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 30 To 40 DY= 628.000 mm.
BEND at "TO" end
Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 39
Angle/Node @2= .00 38

From 40 To 50 DZ= 3,503.000 mm.
BEND at "TO" end

INPUT LISTING
```
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 49
    Angle/Node @2= .00 48
 ---------------------------------------------------------------------------
 From  50  To  60  DX= 998.000 mm.
 ---------------------------------------------------------------------------
 From  60  To  70 DY= 101.600 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  60  To  80  DX= 1,796.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 79
    Angle/Node @2= .00 78
 ---------------------------------------------------------------------------
 From  80  To  90 DY= 2,113.000 mm.
 ---------------------------------------------------------------------------
 From  90  To  100 DZ= 101.600 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  90  To  110 DY= 1,291.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 109
    Angle/Node @2= .00 108
 ---------------------------------------------------------------------------
 From  110  To  120 DZ= 305.000 mm.
 ---------------------------------------------------------------------------
 From  120  To  130 DZ= 105.000 mm.
 RIGID  Weight= 177.93 N.
 ---------------------------------------------------------------------------
 From  130  To  140 DZ= 466.000 mm.
 RIGID  Weight= 2,259.70 N.
 ---------------------------------------------------------------------------
 From  140  To  150 DZ= 105.000 mm.
 RIGID  Weight= 177.93 N.
 ---------------------------------------------------------------------------
 From  150  To  160 DZ= 265.000 mm.
 RESTRAINTS
    Node  160  +Y
    Node  160  X   Gap= 3.000 mm.
    Node  160  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  160  To  170 DZ= 265.000 mm.
 ---------------------------------------------------------------------------
 From  170  To  180 DY= 25.400 mm.  DZ= 153.000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ---------------------------------------------------------------------------
 From  180  To  190 DZ= 92.075 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  70  To  200  DX= 555.000 mm.  DY= 453.400 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
```

INPUT LISTING
```
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 50.753   Angle/Node @1= 25.38 199
    Angle/Node @2= .00 198
 ---------------------------------------------------------------------------
 From  200  To  210 DY= 1,558.000 mm.
 ---------------------------------------------------------------------------
 From  210  To  220 DZ= 101.600 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  210  To  230 DY= 1,291.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 229
    Angle/Node @2= .00 228
 ---------------------------------------------------------------------------
 From  230  To  240 DZ= 305.000 mm.
 ---------------------------------------------------------------------------
 From  240  To  250 DZ= 105.000 mm.
 RIGID  Weight= 177.93 N.
 ---------------------------------------------------------------------------
 From  250  To  260 DZ= 466.000 mm.
 RIGID  Weight= 2,259.70 N.
 ---------------------------------------------------------------------------
 From  260  To  270 DZ= 105.000 mm.
 RIGID  Weight= 177.93 N.
 ---------------------------------------------------------------------------
 From  270  To  280 DZ= 265.000 mm.
 RESTRAINTS
    Node  280  +Y
    Node  280  X   Gap= 3.000 mm.
    Node  280  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  280  To  290 DZ= 265.000 mm.
 ---------------------------------------------------------------------------
 From  290  To  300 DY= 25.400 mm.  DZ= 153.000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ---------------------------------------------------------------------------
 From  300  To  310 DZ= 92.075 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  190  To  320 DZ= 92.075 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Fluid Den= .0000062 kg./cu.cm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= 111.21 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  320  To  330 DZ= 108.000 mm.
 RIGID  Weight= 111.21 N.
```

INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  330  To  340 DY= -122.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 8.560 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 71.17 N.
 FORCES & MOMENTS
    Node  340   FY1= 1,500.07 N.   FZ1= 2,000.10 N.
 ----------------------------------------------------------------------------
 From  340  To  350 DY= -79.375 mm.
 RIGID  Weight= 71.17 N.
 ----------------------------------------------------------------------------
 From  350  To  360 DY= -79.375 mm.
 RIGID  Weight= 71.17 N.
 ----------------------------------------------------------------------------
 From  360  To  370 DY= -140.000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ----------------------------------------------------------------------------
 From  370  To  380 DY= -337.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 ----------------------------------------------------------------------------
 From  380  To  390 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ----------------------------------------------------------------------------
 From  390  To  400 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ----------------------------------------------------------------------------
 From  400  To  410 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ----------------------------------------------------------------------------
 From  410  To  420 DY= -108.000 mm.
 ----------------------------------------------------------------------------
 From  420  To  430 DY= -352.000 mm.
 ----------------------------------------------------------------------------
 From  430  To  440 DY= -440.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 439
    Angle/Node @2= .00 438
 ----------------------------------------------------------------------------
 From  440  To  450  DX= -620.500 mm.
 RESTRAINTS
    Node  450  +Y
 ----------------------------------------------------------------------------
 From  450  To  460  DX= -620.500 mm.
 ----------------------------------------------------------------------------
 From  310  To  470 DZ= 92.075 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 199,086,608 KPa
    EH2= 202,081,088 KPa   EH3= 202,081,088 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
```

INPUT LISTING
```
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000060 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= 111.21 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  470  To  480 DZ= 108.000 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  480  To  490 DY= -122.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 8.560 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 71.17 N.
 FORCES & MOMENTS
    Node  490   FY2= 1,500.07 N.   FZ2= 2,000.10 N.
 ------------------------------------------------------------------------------
 From  490  To  500 DY= -79.375 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  500  To  510 DY= -79.375 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  510  To  520 DY= -140.000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------------
 From  520  To  530 DY= -337.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  530  To  540 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  540  To  550 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ------------------------------------------------------------------------------
 From  550  To  560 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  560  To  570 DY= -108.000 mm.
 ------------------------------------------------------------------------------
 From  570  To  580 DY= -352.000 mm.
 ------------------------------------------------------------------------------
 From  580  To  460 DY= -440.000 mm.
 SIF's & TEE's
    Node  460   Welding Tee
 ------------------------------------------------------------------------------
 From  460  To  960  DX= -375.000 mm.
 RESTRAINTS
    Node  960  +Y
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  960  To  590  DX= -758.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 589
    Angle/Node @2= .00 588
 ---------------------------------------------------------------------------
 From  590  To  600 DZ= 871.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 599
    Angle/Node @2= .00 598
 ---------------------------------------------------------------------------
 From  600  To  610  DX= -1,178.000 mm.
 ---------------------------------------------------------------------------
 From  610  To  970  DX= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  970  To  980  DX= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  980  To  630  DX= -4,384.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 629
    Angle/Node @2= .00 628
 ---------------------------------------------------------------------------
 From  630  To  990 DZ= -700.000 mm.
 ---------------------------------------------------------------------------
 From  990  To  1000 DY= -75.000 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  1000   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  990  To  640 DZ= -1,050.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 639
    Angle/Node @2= .00 638
 ---------------------------------------------------------------------------
 From  640  To  650 DY= -229.000 mm.
 ---------------------------------------------------------------------------
 From  650  To  660 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 RESTRAINTS
    Node  660  ANC   Cnode  670
 ---------------------------------------------------------------------------
 From  670  To  680 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ---------------------------------------------------------------------------
 From  680  To  690 DY= -196.000 mm.
 RESTRAINTS
    Node  690  ANC   Cnode  691
 EQUIPMENT LIMITS
    Nozzle Node = 690   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,400.42 N.
    FB= 8,400.42 N.   FC= 6,300.31 N.   MA= 3,780.16 N.m.   MB= 2,520.11 N.m.
    MC= 3,280.14 N.m.   Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  690  To  1011  DX= .000 mm.  DY= 154.150 mm.  DZ= 1,050.000 mm.
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:27
Job:: BNK-GCS-CN-010-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  691  To  700 DY= -762.000 mm.
 PIPE
    Dia= 1,524.000 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  700  To  720  DX= 3,000.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  720  To  730 DY= -762.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  730  ANC
 ------------------------------------------------------------------------------
 From  700  To  740  DX= -500.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  740  To  750 DY= -762.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  750  +Y   Mu = .30
    Node  750  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  100  To  770 DZ= 300.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  770  +Y
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  220  To  780 DZ= 300.000 mm.
 RESTRAINTS
    Node  780  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  800  To  810 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
```

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INPUT LISTING
```
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0001362 kg./cu.cm.
 RESTRAINTS
    Node  810  +Y   Mu = .30
    Node  800  +Y   Mu = .30
    Node  800  X   Gap= 3.000 mm.   Mu = .30
    Node  800  Z   Gap= 3.000 mm.   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  810  To  820 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  820  +Y   Mu = .30
    Node  820  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  820  To  830 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  830  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  830  To  840 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  840  +Y   Mu = .30
    Node  840  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  840  To  850 DZ= -4,500.000 mm.
 RESTRAINTS
    Node  850  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  850  To  860 DZ= -1,070.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 859
    Angle/Node @2= .00 858
 ------------------------------------------------------------------------------
 From  860  To  870  DX= 3,500.000 mm.
 RESTRAINTS
    Node  870  +Y
 ------------------------------------------------------------------------------
 From  870  To  880  DX= 5,300.000 mm.
 RESTRAINTS
    Node  880  +Y   Mu = .30
    Node  880  Z
 ------------------------------------------------------------------------------
 From  880  To  890  DX= 4,300.000 mm.
 ------------------------------------------------------------------------------
 From  890  To  900  DX= 97.000 mm.
 ------------------------------------------------------------------------------
 From  900  To  910 DY= 127.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  900  To  920  DX= 2,903.000 mm.
 RESTRAINTS
    Node  920  +Y   Mu = .30
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  920  To  10  DX= 562.000 mm.
 ---------------------------------------------------------------------------
 From  10  To  940  DX= 4,038.000 mm.
 RESTRAINTS
    Node  940  +Y   Mu = .00
    Node  940  Z
 ---------------------------------------------------------------------------
 From  940  To  950  DX= 420.000 mm.
 ---------------------------------------------------------------------------
 From  1000  To  1010 DY= -380.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  1010  +Y   Cnode  1011   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
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 MATERIAL Changes:
    10              20              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
   310             470              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
   100             770              Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
   800             810              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
  1000            1010              Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
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 JOBNAME: D:\BINAK PRO\STRESS REPORT -D03\BNK-GCS-CN-010-D03\BNK-GCS-CN-010-D03

 ALLOWABLE STRESS Changes
    10              20              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 129,365 KPa
                                    Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
    20              30              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 129,365 KPa
```

INPUT LISTING

```
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   190              320           B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   310              470           B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   100              770           B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   800              810           B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  1000             1010           B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
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BEND ELEMENTS
    20               30           Radius= 304.800 mm. (LONG)
                                  Bend Angle= 50.550   Angle/Node @1= 25.27 29
                                  Angle/Node @2= .00 28
    30               40           Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 39
                                  Angle/Node @2= .00 38
    40               50           Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 49
                                  Angle/Node @2= .00 48
    60               80           Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 79
```

INPUT LISTING

```
                                  Angle/Node @2= .00 78
    90              110           Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                109   Angle/Node @2= .00 108
    70              200           Radius= 304.800 mm. (LONG)
                                  Bend Angle= 50.753   Angle/Node @1= 25.38
                                199   Angle/Node @2= .00 198
   210              230           Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                229   Angle/Node @2= .00 228
   430              440           Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                439   Angle/Node @2= .00 438
   960              590           Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                589   Angle/Node @2= .00 588
   590              600           Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                599   Angle/Node @2= .00 598
   980              630           Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                629   Angle/Node @2= .00 628
   990              640           Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                639   Angle/Node @2= .00 638
   850              860           Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                859   Angle/Node @2= .00 858
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RIGIDS
    10               20          RIGID  Weight= .00 N.
    60               70          RIGID  Weight= .00 N.
    90              100          RIGID  Weight= .00 N.
   120              130          RIGID  Weight= 177.93 N.
   130              140          RIGID  Weight= 2,259.70 N.
   140              150          RIGID  Weight= 177.93 N.
   180              190          RIGID  Weight= 111.21 N.
   210              220          RIGID  Weight= .00 N.
   240              250          RIGID  Weight= 177.93 N.
   250              260          RIGID  Weight= 2,259.70 N.
   260              270          RIGID  Weight= 177.93 N.
   300              310          RIGID  Weight= 111.21 N.
   190              320          RIGID  Weight= 111.21 N.
   320              330          RIGID  Weight= 111.21 N.
   330              340          RIGID  Weight= 71.17 N.
   340              350          RIGID  Weight= 71.17 N.
   350              360          RIGID  Weight= 71.17 N.
   380              390          RIGID  Weight= 111.21 N.
   390              400          RIGID  Weight= 1,005.30 N.
   400              410          RIGID  Weight= 111.21 N.
   310              470          RIGID  Weight= 111.21 N.
   470              480          RIGID  Weight= 111.21 N.
   480              490          RIGID  Weight= 71.17 N.
```

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INPUT LISTING

490	500	RIGID	Weight= 71.17 N.
500	510	RIGID	Weight= 71.17 N.
530	540	RIGID	Weight= 111.21 N.
540	550	RIGID	Weight= 1,005.30 N.
550	560	RIGID	Weight= 111.21 N.
610	970	RIGID	Weight= 111.21 N.
970	980	RIGID	Weight= 111.21 N.
990	1000	RIGID	Weight= .00 N.
650	660	RIGID	Weight= 111.21 N.
670	680	RIGID	Weight= 111.21 N.
690	1011	RIGID	Weight= .00 N.
691	700	RIGID	Weight= .00 N.
700	720	RIGID	Weight= .00 N.
720	730	RIGID	Weight= .00 N.
700	740	RIGID	Weight= .00 N.
740	750	RIGID	Weight= .00 N.
900	910	RIGID	Weight= .00 N.

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SIF's & TEE's

580	460	Node 460 Welding Tee
990	1000	Node 1000 Unreinforced Tee

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REDUCERS

170	180	Diam2= 168.275 mm.	Wall2= 10.973 mm.
290	300	Diam2= 168.275 mm.	Wall2= 10.973 mm.
360	370	Diam2= 168.275 mm.	Wall2= 10.973 mm.
510	520	Diam2= 168.275 mm.	Wall2= 10.973 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
160	+Y					.000	1.000	.000
160	X			3.00		1.000	.000	.000
160	Z			3.00		.000	.000	1.000
280	+Y					.000	1.000	.000
280	X			3.00		1.000	.000	.000
280	Z			3.00		.000	.000	1.000
450	+Y					.000	1.000	.000
960	+Y					.000	1.000	.000
660	ANC	670				.000	.000	.000
690	ANC	691				.000	.000	.000
730	ANC					.000	.000	.000
750	+Y				.30	.000	1.000	.000
750	Z			3.00	.30	.000	.000	1.000
770	+Y					.000	1.000	.000
780	+Y				.30	.000	1.000	.000
810	+Y				.30	.000	1.000	.000
800	+Y				.30	.000	1.000	.000

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INPUT LISTING

```
     800   X                              3.00        .30   1.000   .000   .000
     800   Z                              3.00        .30    .000   .000  1.000
     820   +Y                                         .30    .000  1.000   .000
     820   X                              3.00              1.000   .000   .000
     830   +Y                                         .30    .000  1.000   .000
     840   +Y                                         .30    .000  1.000   .000
     840   X                              3.00              1.000   .000   .000
     850   +Y                                         .30    .000  1.000   .000
     870   +Y                                                .000  1.000   .000
     880   +Y                                         .30    .000  1.000   .000
     880   Z                                                 .000   .000  1.000
     920   +Y                                         .30    .000  1.000   .000
     940   +Y                                         .00    .000  1.000   .000
     940   Z                                                 .000   .000  1.000
    1010   +Y      1011                               .30    .000  1.000   .000
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 EQUIPMENT LIMITS
   680             690              Nozzle Node = 690


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,400.42 N.   FB= 8,400.42 N.
    FC= 6,300.31 N.   MA= 3,780.16 N.m.   MB= 2,520.11 N.m.   MC= 3,280.14 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
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 FORCES AND MOMENTS
   330             340              Node  340   FY1= 1,500.07 N.
                                    FZ1= 2,000.10 N.
   480             490              Node  490   FY2= 1,500.07 N.
                                    FZ2= 2,000.10 N.
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 UNIFORM LOAD Changes
    10              20             Vector1 in G-s
                                   X1 Dir = .26 g's  Y1 Dir = .00 g's
                                   Z1 Dir = .00 g's
                                   Vector2 in G-s
                                   X2 Dir = .00 g's  Y2 Dir = .12 g's
                                   Z2 Dir = .00 g's
                                   Vector3 in G-s
                                   X3 Dir = .00 g's  Y3 Dir = .00 g's
                                   Z3 Dir = .26 g's
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 INPUT UNITS USED...

 UNITS=    SI (m NOM/SCH INPUT= ON
       LENGTH             inches        x     25.400   =   mm.
```

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INPUT LISTING

FORCE	pounds	x	4.448	= N.
MASS(dynamics)	pounds	x	0.454	= Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	= N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	= N.m.
STRESS	lbs./sq.in.	x	6.895	= KPa
TEMP. SCALE	degrees F.	x	0.556	= C
PRESSURE	psig	x	6.895	= KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	= KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	= kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	= kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	= kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	= N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	= N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	= N./cm.
G LOAD	g's	x	1.000	= g's
WIND LOAD	lbs./sq.in.	x	6.895	= KPa
ELEVATION	inches	x	0.025	= m.
COMPOUND LENGTH	inches	x	25.400	= mm.
DIAMETER	inches	x	25.400	= mm.
WALL THICKNESS	inches	x	25.400	= mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS =	NO
MISSING MASS ZPA =	EXTRACTED
MIN WALL MILL TOLERANCE =	12.5000
WRC-107 VERSION =	MAR 79 1B1/2B1
WRC-107 INTERPOLATION =	LAST VALUE
DEFAULT AMBIENT TEMPERATURE=	21.1111 C
BOURDON PRESSURE=	NONE

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INPUT LISTING

```
  COEFFICIENT OF FRICTION (MU) =         0.000000
  INCLUDE SPRG STIF IN HGR OPE =    NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =            B31.1(POST1980)
  USE WRC329                        NO
  NO REDUCED SIF FOR RFT AND WLT    NO
  B31.1 REDUCED Z FIX =             YES
  CLASS 1 BRANCH FLEX               NO
  ALL STRESS CASES CORRODED =       NO
  ADD TORSION IN SL STRESS =        DEFAULT
  ADD F/A IN STRESS =               DEFAULT
  OCCASIONAL LOAD FACTOR =               0.000000
  DEFAULT CODE =                    B31.3
  B31.3 SUS CASE SIF FACTOR =            0.000000
  ALLOW USERS BEND SIF =            NO
  USE SCHNEIDER                     NO
  YIELD CRITERION STRESS =          MAX 3D SHEAR
  USE PD/4T                          NO
  BASE HOOP STRESS ON ? =            ID
  EN13480 USE IN OUTPLANE SIFS=      NO
  LIBERAL EXPANSION ALLOWABLE=      YES
  B31.3 SEC 319.2.3C SAXIAL=        Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178      YES
  IGNORE B31.1/B31.3 Wc FACTOR=     YES
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152730
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
    Uniform Load Option ........    1.000

    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
```

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INPUT LISTING

```
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
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```

COORDINATE REPORT

NODE	X (mm.)	Y (mm.)	Z (mm.)
10	-338.080	-7395.683	-35745.781
20	-338.080	-7268.683	-35745.781
30	378.920	-6678.683	-35745.781
40	378.920	-6050.683	-35745.781
50	378.920	-6050.683	-32242.781
60	1376.920	-6050.683	-32242.781
70	1376.920	-5949.083	-32242.781
60	1376.920	-6050.683	-32242.781
80	3172.920	-6050.683	-32242.781
90	3172.920	-3937.683	-32242.781
100	3172.920	-3937.683	-32141.182
90	3172.920	-3937.683	-32242.781
110	3172.920	-2646.683	-32242.781
120	3172.920	-2646.683	-31937.781
130	3172.920	-2646.683	-31832.781
140	3172.920	-2646.683	-31366.781
150	3172.920	-2646.683	-31261.781
160	3172.920	-2646.683	-30996.781
170	3172.920	-2646.683	-30731.781
180	3172.920	-2621.283	-30578.781
190	3172.920	-2621.283	-30486.707
70	1376.920	-5949.083	-32242.781
200	1931.920	-5495.683	-32242.781
210	1931.920	-3937.683	-32242.781
220	1931.920	-3937.683	-32141.182
210	1931.920	-3937.683	-32242.781
230	1931.920	-2646.683	-32242.781
240	1931.920	-2646.683	-31937.781
250	1931.920	-2646.683	-31832.781
260	1931.920	-2646.683	-31366.781
270	1931.920	-2646.683	-31261.781
280	1931.920	-2646.683	-30996.781
290	1931.920	-2646.683	-30731.781
300	1931.920	-2621.283	-30578.781
310	1931.920	-2621.283	-30486.707
190	3172.920	-2621.283	-30486.707
320	3172.920	-2621.283	-30394.633
330	3172.920	-2621.283	-30286.633
340	3172.920	-2743.408	-30286.633
350	3172.920	-2822.783	-30286.633
360	3172.920	-2902.158	-30286.633
370	3172.920	-3042.158	-30286.633
380	3172.920	-3379.158	-30286.633
390	3172.920	-3471.233	-30286.633
400	3172.920	-3747.233	-30286.633

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INPUT LISTING

410	3172.920	-3839.308	-30286.633
420	3172.920	-3947.308	-30286.633
430	3172.920	-4299.308	-30286.633
440	3172.920	-4739.308	-30286.633
450	2552.420	-4739.308	-30286.633
460	1931.920	-4739.308	-30286.633
310	1931.920	-2621.283	-30486.707
470	1931.920	-2621.283	-30394.633
480	1931.920	-2621.283	-30286.633
490	1931.920	-2743.408	-30286.633
500	1931.920	-2822.783	-30286.633
510	1931.920	-2902.158	-30286.633
520	1931.920	-3042.158	-30286.633
530	1931.920	-3379.158	-30286.633
540	1931.920	-3471.233	-30286.633
550	1931.920	-3747.233	-30286.633
560	1931.920	-3839.308	-30286.633
570	1931.920	-3947.308	-30286.633
580	1931.920	-4299.308	-30286.633
460	1931.920	-4739.308	-30286.633
960	1556.920	-4739.308	-30286.633
590	798.920	-4739.308	-30286.633
600	798.920	-4739.308	-29415.633
610	-379.080	-4739.308	-29415.633
970	-471.155	-4739.308	-29415.633
980	-563.230	-4739.308	-29415.633
630	-4947.230	-4739.308	-29415.633
990	-4947.230	-4739.308	-30115.633
1000	-4947.230	-4814.308	-30115.633
990	-4947.230	-4739.308	-30115.633
640	-4947.230	-4739.308	-31165.633
650	-4947.230	-4968.308	-31165.633
660	-4947.230	-5060.383	-31165.633
680	-4947.230	-5152.458	-31165.633
690	-4947.230	-5348.458	-31165.633
1010	-4947.230	-5194.308	-30115.633
690	-4947.230	-5348.458	-31165.633
700	-4947.230	-6110.458	-31165.633
720	-1947.230	-6110.458	-31165.633
730	-1947.230	-6872.458	-31165.633
700	-4947.230	-6110.458	-31165.633
740	-5447.230	-6110.458	-31165.633
750	-5447.230	-6872.458	-31165.633
100	3172.920	-3937.683	-32141.182
770	3172.920	-3937.683	-31841.182
220	1931.920	-3937.683	-32141.182
780	1931.920	-3937.683	-31841.182
800	-17000.080	-7395.683	-6175.781
810	-17000.080	-7395.683	-12175.781
820	-17000.080	-7395.683	-18175.781
830	-17000.080	-7395.683	-24175.781
840	-17000.080	-7395.683	-30175.781
850	-17000.080	-7395.683	-34675.781
860	-17000.080	-7395.683	-35745.781
870	-13500.080	-7395.683	-35745.781
880	-8200.080	-7395.683	-35745.781

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INPUT LISTING

890	-3900.080	-7395.683	-35745.781
900	-3803.080	-7395.683	-35745.781
910	-3803.080	-7268.683	-35745.781
900	-3803.080	-7395.683	-35745.781
920	-900.080	-7395.683	-35745.781
10	-338.080	-7395.683	-35745.781
940	3699.920	-7395.683	-35745.781
950	4119.920	-7395.683	-35745.781
1000	-4947.230	-4814.308	-30115.633
1010	-4947.230	-5194.308	-30115.633

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OPE) W+T2+P1+F2
17 (OCC) L17=L10-L4
18 (OCC) L18=L11-L4
19 (OCC) L19=L12-L4
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17+L8
25 (OCC) L25=L18+L8
26 (OCC) L26=L19+L8
27 (OCC) L27=L20+L8
28 (OCC) L28=L21+L8
29 (OCC) L29=L22+L8
30 (OCC) L30=L23+L8
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8
33 (EXP) L33=L2-L4
34 (EXP) L34=L6-L8
35 (EXP) L35=L2-L6
36 (EXP) L36=L4-L6

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1+U3
CASE 14 (OPE) W+T2+P1-U3
CASE 15 (OPE) W+T2+P1+F1
CASE 16 (OPE) W+T2+P1+F2
CASE 17 (OCC) L17=L10-L4
CASE 18 (OCC) L18=L11-L4
CASE 19 (OCC) L19=L12-L4
CASE 20 (OCC) L20=L13-L4
CASE 21 (OCC) L21=L14-L4
CASE 22 (OCC) L22=L15-L4
CASE 23 (OCC) L23=L16-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
160		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	0	-4481	0	0	0	0
	2(OPE)	1988	0	3824	0	0	0
	4(OPE)	1256	0	4430	0	0	0
	6(OPE)	0	-5575	-752	0	0	0
	8(SUS)	0	-4235	0	0	0	0
	9(SUS)	0	-4232	0	0	0	0
	10(OPE)	3352	0	5723	0	0	0
	11(OPE)	0	0	1953	0	0	0
	12(OPE)	1394	0	4482	0	0	0
	13(OPE)	1158	0	6281	0	0	0
	14(OPE)	1529	0	2821	0	0	0
	15(OPE)	1164	0	6175	0	0	0
	16(OPE)	1413	0	4463	0	0	0
	17(OCC)	2096	0	1293	0	0	0
	18(OCC)	-1256	0	-2477	0	0	0
	19(OCC)	137	0	52	0	0	0
	20(OCC)	-98	0	1851	0	0	0
	21(OCC)	273	0	-1609	0	0	0
	22(OCC)	-92	0	1745	0	0	0
	23(OCC)	157	0	33	0	0	0
	MAX	3352/L10	-5575/L6	6281/L13			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
280		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	0	-5145	0	0	0	0
	2(OPE)	88	0	4112	0	0	0
	4(OPE)	0	0	3681	0	0	0
	6(OPE)	0	-5891	0	0	0	0
	8(SUS)	0	-3977	0	0	0	0
	9(SUS)	0	-3978	0	0	0	0
	10(OPE)	1902	0	2913	0	0	0
	11(OPE)	0	0	4109	0	0	0
	12(OPE)	135	0	3472	0	0	0
	13(OPE)	0	0	5488	0	0	0
	14(OPE)	36	0	1458	0	0	0
	15(OPE)	0	0	3390	0	0	0
	16(OPE)	0	0	5097	0	0	0
	17(OCC)	1902	0	-768	0	0	0
	18(OCC)	0	0	428	0	0	0
	19(OCC)	135	0	-209	0	0	0
	20(OCC)	0	0	1807	0	0	0
	21(OCC)	36	0	-2223	0	0	0
	22(OCC)	0	0	-291	0	0	0
	23(OCC)	0	0	1416	0	0	0
	MAX	1902/L10	-5891/L6	5488/L13			
450		TYPE=Rigid +Y;					
	1(HYD)	0	0	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	0	0	0	0	0	0
	9(SUS)	0	0	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	23(OCC)	0	0	0	0	0	0
660		TYPE=Rigid ANC;					
	1(HYD)	346	887	1093	87	293	-906
	2(OPE)	1053	198	210	515	1593	-1643
	4(OPE)	1823	734	-29	8	2719	-1549
	6(OPE)	132	422	488	152	-70	-519
	8(SUS)	252	637	789	61	207	-655
	9(SUS)	251	635	788	61	207	-653
	10(OPE)	3544	624	-120	4	4685	-2045
	11(OPE)	333	884	564	110	65	-975
	12(OPE)	2046	436	-49	43	2775	-1265
	13(OPE)	2167	287	613	188	2483	-1198
	14(OPE)	1542	1029	-676	-154	2892	-1733
	15(OPE)	2039	433	-44	43	2737	-1372
	16(OPE)	1902	449	-12	47	2534	-1227
	17(OCC)	1721	-111	-91	-3	1966	-496
	18(OCC)	-1490	150	592	102	-2654	574
	19(OCC)	223	-299	-20	36	57	284
	20(OCC)	344	-447	642	180	-235	351
	21(OCC)	-282	295	-647	-162	174	-184
	22(OCC)	216	-302	-15	35	19	177
	23(OCC)	79	-285	17	39	-184	322
	MAX	3544/L10	1029/L14	1093/L1	515/L2	4685/L10	-2045/L10
690		TYPE=Rigid ANC;					
	1(HYD)	-107	-3334	-9	4412	-182	-936
	2(OPE)	1862	-2762	-129	3428	2442	-2071
	4(OPE)	2919	-2605	-149	3284	3869	-2243
	6(OPE)	-658	-2460	8	3042	-899	-435
	8(SUS)	-82	-2436	-4	3190	-144	-676
	9(SUS)	-82	-2431	-4	3183	-143	-674
	10(OPE)	4540	-2760	-175	3311	5678	-3221
	11(OPE)	-560	-2765	-27	3810	-820	-932
	12(OPE)	2885	-2255	-119	2665	3656	-1984
	13(OPE)	2986	-2498	607	3086	3343	-1948
	14(OPE)	2759	-2668	-895	3294	4171	-2365
	15(OPE)	2919	-2591	-122	2990	3661	-2095
	16(OPE)	2777	-2507	-95	2932	3453	-1909
	17(OCC)	1622	-155	-25	27	1809	-978
	18(OCC)	-3479	-160	123	526	-4689	1311
	19(OCC)	-34	350	30	-619	-213	259
	20(OCC)	67	107	757	-198	-526	295
	21(OCC)	-159	-63	-746	10	302	-122
	22(OCC)	1	14	27	-294	-208	148
	23(OCC)	-142	98	54	-352	-416	334

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	4540/L10	-3334/L1	-895/L14	4412/L1	5678/L10	-3221/L10
730		TYPE=Rigid ANC;					
	1(HYD)	-96	-848	56	4399	20	528
	2(OPE)	2224	-1506	-129	3231	2056	-1018
	4(OPE)	3136	-1823	-150	3056	3420	-1612
	6(OPE)	-58	-293	9	3055	-872	362
	8(SUS)	-75	-616	43	3184	10	389
	9(SUS)	-75	-615	43	3176	10	388
	10(OPE)	4600	-2576	-175	3045	5154	-2503
	11(OPE)	92	-507	-26	3770	-898	313
	12(OPE)	3067	-1683	-119	2484	3298	-1618
	13(OPE)	3244	-1728	607	4012	5164	-1699
	14(OPE)	3027	-1820	-895	1930	1485	-1534
	15(OPE)	3183	-1769	-122	2804	3294	-1647
	16(OPE)	3024	-1668	-96	2787	3166	-1558
	17(OCC)	1464	-753	-25	-11	1734	-891
	18(OCC)	-3044	1317	123	713	-4318	1925
	19(OCC)	-69	140	30	-572	-122	-6
	20(OCC)	108	95	757	955	1744	-87
	21(OCC)	-108	4	-746	-1127	-1935	77
	22(OCC)	48	54	27	-253	-126	-35
	23(OCC)	-112	156	54	-270	-254	53
	MAX	4600/L10	-2576/L10	-895/L14	4399/L1	5164/L13	-2503/L10
750		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-10	-2486	-66	0	0	0
	2(OPE)	-377	-1256	0	0	0	0
	4(OPE)	-234	-782	0	0	0	0
	6(OPE)	-650	-2168	-0	0	0	0
	8(SUS)	-8	-1820	-48	0	0	0
	9(SUS)	-7	-1816	-47	0	0	0
	10(OPE)	-55	-184	0	0	0	0
	11(OPE)	-678	-2259	-1	0	0	0
	12(OPE)	-172	-572	0	0	0	0
	13(OPE)	-231	-770	0	0	0	0
	14(OPE)	-254	-848	0	0	0	0
	15(OPE)	-246	-822	0	0	0	0
	16(OPE)	-252	-840	0	0	0	0
	17(OCC)	179	598	-0	0	0	0
	18(OCC)	-443	-1477	-1	0	0	0
	19(OCC)	63	209	-0	0	0	0
	20(OCC)	4	12	0	0	0	0
	21(OCC)	-20	-66	-0	0	0	0
	22(OCC)	-12	-40	0	0	0	0
	23(OCC)	-17	-58	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-678/L11	-2486/L1	-66/L1			
770		TYPE=Rigid +Y;					
	1(HYD)	0	-2900	0	0	0	0
	2(OPE)	0	-846	0	0	0	0
	4(OPE)	0	-2164	0	0	0	0
	6(OPE)	0	-937	0	0	0	0
	8(SUS)	0	-1899	0	0	0	0
	9(SUS)	0	-1899	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	-2419	0	0	0	0
	12(OPE)	0	-1354	0	0	0	0
	13(OPE)	0	-2372	0	0	0	0
	14(OPE)	0	-1390	0	0	0	0
	15(OPE)	0	-1245	0	0	0	0
	16(OPE)	0	-1757	0	0	0	0
	17(OCC)	0	2164	0	0	0	0
	18(OCC)	0	-256	0	0	0	0
	19(OCC)	0	810	0	0	0	0
	20(OCC)	0	-208	0	0	0	0
	21(OCC)	0	774	0	0	0	0
	22(OCC)	0	919	0	0	0	0
	23(OCC)	0	407	0	0	0	0
	MAX		-2900/L1				
780		TYPE=Rigid +Y;					
	1(HYD)	-226	-7974	-699	0	0	0
	2(OPE)	2781	-10259	1318	0	0	0
	4(OPE)	2434	-9073	1218	0	0	0
	6(OPE)	-567	-4344	-1174	0	0	0
	8(SUS)	-130	-5301	-466	0	0	0
	9(SUS)	-130	-5297	-465	0	0	0
	10(OPE)	2924	-10474	1151	0	0	0
	11(OPE)	781	-8984	2579	0	0	0
	12(OPE)	2037	-7650	1056	0	0	0
	13(OPE)	2158	-8791	1516	0	0	0
	14(OPE)	2619	-9173	845	0	0	0
	15(OPE)	2218	-8481	1247	0	0	0
	16(OPE)	2117	-8087	1184	0	0	0
	17(OCC)	490	-1402	-66	0	0	0
	18(OCC)	-1653	89	1362	0	0	0
	19(OCC)	-397	1423	-161	0	0	0
	20(OCC)	-276	282	298	0	0	0
	21(OCC)	185	-101	-373	0	0	0
	22(OCC)	-217	592	29	0	0	0
	23(OCC)	-317	986	-34	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	2924/L10	-10474/L10	2579/L11			
800		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	-0	-2577	0	0	0	0
	2(OPE)	-225	-1398	13354	0	0	0
	4(OPE)	-236	-1398	13398	0	0	0
	6(OPE)	1740	-1398	-6185	0	0	0
	8(SUS)	-0	-1398	0	0	0	0
	9(SUS)	-0	-1397	0	0	0	0
	10(OPE)	607	-1398	13049	0	0	0
	11(OPE)	-4198	-1398	14165	0	0	0
	12(OPE)	-236	-1230	12756	0	0	0
	13(OPE)	-236	-1398	18291	0	0	0
	14(OPE)	-2452	-1397	8505	0	0	0
	15(OPE)	-231	-1398	13321	0	0	0
	16(OPE)	-232	-1398	13341	0	0	0
	17(OCC)	843	-0	-349	0	0	0
	18(OCC)	-3962	0	767	0	0	0
	19(OCC)	0	168	-642	0	0	0
	20(OCC)	1	-0	4893	0	0	0
	21(OCC)	-2216	0	-4893	0	0	0
	22(OCC)	5	-0	-77	0	0	0
	23(OCC)	4	-0	-57	0	0	0
	MAX	-4198/L11	-2577/L1	18291/L13			
810		TYPE=Rigid +Y;					
	1(HYD)	0	-7414	0	0	0	0
	2(OPE)	-40	-4027	-1207	0	0	0
	4(OPE)	-47	-4027	-1207	0	0	0
	6(OPE)	-71	-4023	1205	0	0	0
	8(SUS)	0	-4023	0	0	0	0
	9(SUS)	0	-4018	0	0	0	0
	10(OPE)	102	-4027	-1204	0	0	0
	11(OPE)	-224	-4027	-1187	0	0	0
	12(OPE)	-40	-3544	-1062	0	0	0
	13(OPE)	-46	-4026	-1207	0	0	0
	14(OPE)	-40	-4028	-1208	0	0	0
	15(OPE)	-44	-4027	-1207	0	0	0
	16(OPE)	-44	-4027	-1207	0	0	0
	17(OCC)	149	0	3	0	0	0
	18(OCC)	-178	-0	20	0	0	0
	19(OCC)	6	483	145	0	0	0
	20(OCC)	0	2	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	7	-1	-1	0	0	0
	22(OCC)	3	1	0	0	0	0
	23(OCC)	3	1	0	0	0	0
	MAX	-224/L11	-7414/L1	-1208/L14			
820		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-0	-6263	0	0	0	0
	2(OPE)	2036	-3384	-1012	0	0	0
	4(OPE)	2126	-3384	-1012	0	0	0
	6(OPE)	-77	-3402	1018	0	0	0
	8(SUS)	-0	-3400	0	0	0	0
	9(SUS)	-0	-3395	0	0	0	0
	10(OPE)	3481	-3385	-1012	0	0	0
	11(OPE)	997	-3384	-1012	0	0	0
	12(OPE)	2109	-2978	-890	0	0	0
	13(OPE)	2122	-3390	-1014	0	0	0
	14(OPE)	1978	-3378	-1010	0	0	0
	15(OPE)	2087	-3386	-1012	0	0	0
	16(OPE)	2095	-3386	-1012	0	0	0
	17(OCC)	1354	-1	-0	0	0	0
	18(OCC)	-1130	0	0	0	0	0
	19(OCC)	-18	406	121	0	0	0
	20(OCC)	-4	-6	-2	0	0	0
	21(OCC)	-148	6	2	0	0	0
	22(OCC)	-40	-2	-1	0	0	0
	23(OCC)	-32	-2	-1	0	0	0
	MAX	3481/L10	-6263/L1	1018/L6			
830		TYPE=Rigid +Y;					
	1(HYD)	0	-6746	0	0	0	0
	2(OPE)	193	-3717	-1098	0	0	0
	4(OPE)	198	-3718	-1098	0	0	0
	6(OPE)	21	-3650	1095	0	0	0
	8(SUS)	0	-3659	0	0	0	0
	9(SUS)	0	-3654	0	0	0	0
	10(OPE)	158	-3716	-1103	0	0	0
	11(OPE)	253	-3719	-1087	0	0	0
	12(OPE)	173	-3273	-967	0	0	0
	13(OPE)	196	-3694	-1091	0	0	0
	14(OPE)	188	-3739	-1106	0	0	0
	15(OPE)	194	-3709	-1096	0	0	0
	16(OPE)	195	-3710	-1096	0	0	0
	17(OCC)	-39	3	-6	0	0	0
	18(OCC)	55	-1	11	0	0	0
	19(OCC)	-25	445	131	0	0	0
	20(OCC)	-1	24	7	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	-9	-21	-8	0	0	0
	22(OCC)	-3	9	2	0	0	0
	23(OCC)	-3	8	2	0	0	0
	MAX	253/L11	-6746/L1	-1106/L14			
840		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-1	-5862	1	0	0	0
	2(OPE)	-11560	-2888	-866	0	0	0
	4(OPE)	-11902	-2880	-863	0	0	0
	6(OPE)	1188	-3243	933	0	0	0
	8(SUS)	-1	-3195	1	0	0	0
	9(SUS)	-1	-3191	1	0	0	0
	10(OPE)	-8079	-2894	-867	0	0	0
	11(OPE)	-16485	-2876	-862	0	0	0
	12(OPE)	-11795	-2530	-758	0	0	0
	13(OPE)	-11901	-3005	-901	0	0	0
	14(OPE)	-11411	-2768	-830	0	0	0
	15(OPE)	-11764	-2927	-877	0	0	0
	16(OPE)	-11791	-2921	-876	0	0	0
	17(OCC)	3823	-14	-4	0	0	0
	18(OCC)	-4583	3	1	0	0	0
	19(OCC)	108	350	105	0	0	0
	20(OCC)	2	-126	-38	0	0	0
	21(OCC)	492	111	33	0	0	0
	22(OCC)	138	-47	-14	0	0	0
	23(OCC)	112	-42	-13	0	0	0
	MAX	-16485/L11	-5862/L1	933/L6			
850		TYPE=Rigid +Y;					
	1(HYD)	-1	-4534	2	0	0	0
	2(OPE)	-253	-2611	-741	0	0	0
	4(OPE)	-260	-2614	-740	0	0	0
	6(OPE)	333	-2422	646	0	0	0
	8(SUS)	-1	-2449	1	0	0	0
	9(SUS)	-1	-2446	1	0	0	0
	10(OPE)	-192	-2602	-757	0	0	0
	11(OPE)	-340	-2621	-709	0	0	0
	12(OPE)	-226	-2297	-651	0	0	0
	13(OPE)	-251	-2530	-716	0	0	0
	14(OPE)	-254	-2689	-766	0	0	0
	15(OPE)	-253	-2581	-732	0	0	0
	16(OPE)	-254	-2586	-733	0	0	0
	17(OCC)	68	12	-17	0	0	0
	18(OCC)	-81	-7	31	0	0	0
	19(OCC)	34	317	89	0	0	0
	20(OCC)	9	84	24	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	6	-75	-26	0	0	0
	22(OCC)	7	33	8	0	0	0
	23(OCC)	6	28	7	0	0	0
	MAX	-340/L11	-4534/L1	-766/L14			
870		TYPE=Rigid +Y;					
	1(HYD)	0	-4930	0	0	0	0
	2(OPE)	0	-2929	0	0	0	0
	4(OPE)	0	-2940	0	0	0	0
	6(OPE)	0	-2648	0	0	0	0
	8(SUS)	0	-2679	0	0	0	0
	9(SUS)	0	-2675	0	0	0	0
	10(OPE)	0	-2945	0	0	0	0
	11(OPE)	0	-2922	0	0	0	0
	12(OPE)	0	-2613	0	0	0	0
	13(OPE)	0	-2908	0	0	0	0
	14(OPE)	0	-2966	0	0	0	0
	15(OPE)	0	-2932	0	0	0	0
	16(OPE)	0	-2930	0	0	0	0
	17(OCC)	0	-5	0	0	0	0
	18(OCC)	0	18	0	0	0	0
	19(OCC)	0	327	0	0	0	0
	20(OCC)	0	32	0	0	0	0
	21(OCC)	0	-25	0	0	0	0
	22(OCC)	0	8	0	0	0	0
	23(OCC)	0	10	0	0	0	0
	MAX		-4930/L1				
880		TYPE=Rigid +Y; Rigid Z;					
	1(HYD)	119	-7079	-26	0	0	0
	2(OPE)	-1030	-3434	-15411	0	0	0
	4(OPE)	-1024	-3412	-15578	0	0	0
	6(OPE)	1159	-3863	2277	0	0	0
	8(SUS)	76	-3824	-18	0	0	0
	9(SUS)	76	-3819	-18	0	0	0
	10(OPE)	1017	-3389	-15237	0	0	0
	11(OPE)	-1038	-3461	-16369	0	0	0
	12(OPE)	-883	-2942	-15447	0	0	0
	13(OPE)	-1019	-3396	-13364	0	0	0
	14(OPE)	-1030	-3435	-17743	0	0	0
	15(OPE)	-1019	-3395	-15391	0	0	0
	16(OPE)	-1021	-3404	-15415	0	0	0
	17(OCC)	2040	23	341	0	0	0
	18(OCC)	-15	-49	-791	0	0	0
	19(OCC)	141	470	131	0	0	0
	20(OCC)	5	16	2214	0	0	0
	21(OCC)	-7	-23	-2164	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	22(OCC)	5	17	188	0	0	0
	23(OCC)	2	8	164	0	0	0
	MAX	2040/L17	-7079/L1	-17743/L14			
920		TYPE=Rigid +Y;					
	1(HYD)	215	-9755	673	0	0	0
	2(OPE)	3915	-13052	68	0	0	0
	4(OPE)	3913	-13048	93	0	0	0
	6(OPE)	-1354	-4589	249	0	0	0
	8(SUS)	137	-5502	445	0	0	0
	9(SUS)	137	-5496	444	0	0	0
	10(OPE)	4089	-13634	-90	0	0	0
	11(OPE)	3672	-12472	719	0	0	0
	12(OPE)	3700	-12342	146	0	0	0
	13(OPE)	3907	-13166	578	0	0	0
	14(OPE)	3884	-13013	-388	0	0	0
	15(OPE)	3905	-13032	183	0	0	0
	16(OPE)	3899	-13011	178	0	0	0
	17(OCC)	176	-586	-183	0	0	0
	18(OCC)	-241	576	626	0	0	0
	19(OCC)	-213	705	53	0	0	0
	20(OCC)	-6	-118	485	0	0	0
	21(OCC)	-29	35	-482	0	0	0
	22(OCC)	-8	16	90	0	0	0
	23(OCC)	-14	37	85	0	0	0
	MAX	4089/L10	-13634/L10	719/L11			
940		TYPE=Rigid +Y; Rigid Z;					
	1(HYD)	0	-2501	57	0	0	0
	2(OPE)	0	-1874	-2327	0	0	0
	4(OPE)	0	-1918	-2352	0	0	0
	6(OPE)	0	-1360	507	0	0	0
	8(SUS)	0	-1396	40	0	0	0
	9(SUS)	0	-1395	40	0	0	0
	10(OPE)	0	-1956	-2447	0	0	0
	11(OPE)	0	-1829	-2697	0	0	0
	12(OPE)	0	-1791	-2207	0	0	0
	13(OPE)	0	-2006	-1044	0	0	0
	14(OPE)	0	-1819	-3577	0	0	0
	15(OPE)	0	-1976	-2127	0	0	0
	16(OPE)	0	-1955	-2120	0	0	0
	17(OCC)	0	-38	-96	0	0	0
	18(OCC)	0	89	-345	0	0	0
	19(OCC)	0	127	145	0	0	0
	20(OCC)	0	-88	1308	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	0	99	-1225	0	0	0
	22(OCC)	0	-58	224	0	0	0
	23(OCC)	0	-37	231	0	0	0
	MAX		-2501/L1	-3577/L14			
960		TYPE=Rigid +Y;					
	1(HYD)	0	-4756	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	-3374	0	0	0	0
	8(SUS)	0	-3806	0	0	0	0
	9(SUS)	0	-3797	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	-303	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	-715	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	-303	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	-715	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	MAX		-4756/L1				
1010		TYPE=Rigid +Y;					
	1(HYD)	-365	-3981	-1137	0	0	0
	2(OPE)	765	-2766	-321	0	0	0
	4(OPE)	938	-3146	-103	0	0	0
	6(OPE)	-690	-2689	-419	0	0	0
	8(SUS)	-411	-2880	-760	0	0	0
	9(SUS)	-409	-2873	-759	0	0	0
	10(OPE)	956	-3191	-56	0	0	0
	11(OPE)	-849	-3456	-595	0	0	0
	12(OPE)	754	-2521	-63	0	0	0
	13(OPE)	776	-2592	-53	0	0	0
	14(OPE)	1041	-3503	-145	0	0	0
	15(OPE)	846	-2830	-75	0	0	0
	16(OPE)	825	-2763	-79	0	0	0
	17(OCC)	17	-45	48	0	0	0
	18(OCC)	-1787	-310	-491	0	0	0
	19(OCC)	-184	625	41	0	0	0
	20(OCC)	-162	554	51	0	0	0
	21(OCC)	103	-357	-41	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	22(OCC)	-92	316	28	0	0	0
	23(OCC)	-113	383	25	0	0	0
	MAX	-1787/L18	-3981/L1	-1137/L1			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OPE) W+T2+P1+F2
17 (OCC) L17=L10-L4
18 (OCC) L18=L11-L4
19 (OCC) L19=L12-L4
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17+L8
25 (OCC) L25=L18+L8
26 (OCC) L26=L19+L8
27 (OCC) L27=L20+L8
28 (OCC) L28=L21+L8
29 (OCC) L29=L22+L8
30 (OCC) L30=L23+L8
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8
33 (EXP) L33=L2-L4
34 (EXP) L34=L6-L8
35 (EXP) L35=L2-L6
36 (EXP) L36=L4-L6

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 24 (OCC) L24=L17+L8
CASE 25 (OCC) L25=L18+L8
CASE 26 (OCC) L26=L19+L8
CASE 27 (OCC) L27=L20+L8
CASE 28 (OCC) L28=L21+L8
CASE 29 (OCC) L29=L22+L8
CASE 30 (OCC) L30=L23+L8
CASE 31 (EXP) L31=L2-L8
CASE 32 (EXP) L32=L4-L8
CASE 33 (EXP) L33=L2-L4
CASE 34 (EXP) L34=L6-L8
CASE 35 (EXP) L35=L2-L6
CASE 36 (EXP) L36=L4-L6

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	9.7	@Node	1000
Code Stress:	23463.8	Allowable Stress:	241316.5
Axial Stress:	6003.0	@Node	10
Bending Stress:	28751.8	@Node	1000
Torsion Stress:	3230.0	@Node	960
Hoop Stress:	12353.7	@Node	810
Max Stress Intensity:	30651.8	@Node	1000

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	23.9	@Node	510
Code Stress:	32895.7	Allowable Stress:	137895.1
Axial Stress:	12150.0	@Node	10
Bending Stress:	22319.1	@Node	510
Torsion Stress:	4670.6	@Node	960
Hoop Stress:	24443.4	@Node	810
Max Stress Intensity:	32910.9	@Node	510

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	17.0	@Node	510
Code Stress:	23502.4	Allowable Stress:	137895.1
Axial Stress:	1403.2	@Node	1010
Bending Stress:	22263.5	@Node	510
Torsion Stress:	4660.5	@Node	960

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Hoop Stress:                   0.0       @Node     20
Max Stress Intensity:      23502.4       @Node    510

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L17+L8

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L17+L8
Ratio (%):                    37.5       @Node    510
Code Stress:               68750.5       Allowable Stress:     183400.5
Axial Stress:              12924.4       @Node    880
Bending Stress:            54191.1       @Node    860
Torsion Stress:            13670.9       @Node    360
Hoop Stress:               24443.4       @Node    810
Max Stress Intensity:      77285.4       @Node    860

 CODE STRESS CHECK PASSED      : LOADCASE 25 (OCC) L25=L18+L8

Highest Stresses: (   KPa    ) LOADCASE 25 (OCC) L25=L18+L8
Ratio (%):                    60.3       @Node    510
Code Stress:              110639.2       Allowable Stress:     183400.5
Axial Stress:              12171.4       @Node    920
Bending Stress:            91967.6       @Node    510
Torsion Stress:            19260.7       @Node    360
Hoop Stress:               24443.4       @Node    810
Max Stress Intensity:     110654.4       @Node    510

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L19+L8

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L19+L8
Ratio (%):                    24.8       @Node    510
Code Stress:               45423.8       Allowable Stress:     183400.5
Axial Stress:              12304.9       @Node    810
Bending Stress:            32818.9       @Node    510
Torsion Stress:             5117.1       @Node    960
Hoop Stress:               24443.4       @Node    810
Max Stress Intensity:      45439.0       @Node    510

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L20+L8

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L20+L8
Ratio (%):                    33.0       @Node    510
Code Stress:               60439.4       Allowable Stress:     183400.5
Axial Stress:              12205.4       @Node     10
Bending Stress:            48890.4       @Node    510
Torsion Stress:             7285.7       @Node    960
Hoop Stress:               24443.4       @Node    810
Max Stress Intensity:      60454.6       @Node    510

 CODE STRESS CHECK PASSED      : LOADCASE 28 (OCC) L28=L21+L8

Highest Stresses: (   KPa    ) LOADCASE 28 (OCC) L28=L21+L8
Ratio (%):                    39.5       @Node    510
Code Stress:               72465.6       Allowable Stress:     183400.5
Axial Stress:              13838.6       @Node    800
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:27
Job:: BNK-GCS-CN-010-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Bending Stress:             61202.2       @Node    510
Torsion Stress:              4670.7       @Node    630
Hoop Stress:                24443.4       @Node    810
Max Stress Intensity:       72480.8       @Node    510

 CODE STRESS CHECK PASSED      : LOADCASE 29 (OCC) L29=L22+L8

Highest Stresses: (   KPa    ) LOADCASE 29 (OCC) L29=L22+L8
Ratio (%):                     27.1       @Node    510
Code Stress:                49698.3       Allowable Stress:     183400.5
Axial Stress:               12238.4       @Node     10
Bending Stress:             38413.8       @Node    510
Torsion Stress:              6143.7       @Node    960
Hoop Stress:                24443.4       @Node    810
Max Stress Intensity:       49713.5       @Node    510

 CODE STRESS CHECK PASSED      : LOADCASE 30 (OCC) L30=L23+L8

Highest Stresses: (   KPa    ) LOADCASE 30 (OCC) L30=L23+L8
Ratio (%):                     30.4       @Node    510
Code Stress:                55837.6       Allowable Stress:     183400.5
Axial Stress:               12201.7       @Node     10
Bending Stress:             44170.8       @Node    510
Torsion Stress:              6149.6       @Node    960
Hoop Stress:                24443.4       @Node    810
Max Stress Intensity:       55852.8       @Node    510

 CODE STRESS CHECK PASSED      : LOADCASE 31 (EXP) L31=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 31 (EXP) L31=L2-L8
Ratio (%):                     55.2       @Node    859
Code Stress:               174756.6       Allowable Stress:     316713.8
Axial Stress:                1826.5       @Node     39
Bending Stress:            173063.1       @Node    859
Torsion Stress:             22724.0       @Node     50
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      463699.1       @Node    859

 CODE STRESS CHECK PASSED      : LOADCASE 32 (EXP) L32=L4-L8

Highest Stresses: (   KPa    ) LOADCASE 32 (EXP) L32=L4-L8
Ratio (%):                     56.3       @Node    859
Code Stress:               178162.7       Allowable Stress:     316372.5
Axial Stress:                1832.8       @Node     39
Bending Stress:            176434.1       @Node    859
Torsion Stress:             22829.5       @Node     50
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      472737.1       @Node    859

 CODE STRESS CHECK PASSED      : LOADCASE 33 (EXP) L33=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 33 (EXP) L33=L2-L4
Ratio (%):                      4.5       @Node    360
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:27
Job:: BNK-GCS-CN-010-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Code Stress:	13376.8	Allowable Stress:	300415.6
Axial Stress:	235.2	@Node	360
Bending Stress:	12456.0	@Node	360
Torsion Stress:	2808.7	@Node	640
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	38203.8	@Node	360

CODE STRESS CHECK PASSED : LOADCASE 34 (EXP) L34=L6-L8

Highest Stresses: (KPa) LOADCASE 34 (EXP) L34=L6-L8			
Ratio (%):	7.3	@Node	859
Code Stress:	23764.5	Allowable Stress:	327034.8
Axial Stress:	805.1	@Node	810
Bending Stress:	23522.4	@Node	859
Torsion Stress:	2677.2	@Node	38
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	63058.2	@Node	859

CODE STRESS CHECK PASSED : LOADCASE 35 (EXP) L35=L2-L6

Highest Stresses: (KPa) LOADCASE 35 (EXP) L35=L2-L6			
Ratio (%):	62.7	@Node	859
Code Stress:	198521.1	Allowable Stress:	316713.8
Axial Stress:	2543.3	@Node	810
Bending Stress:	196585.5	@Node	859
Torsion Stress:	25042.7	@Node	50
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	526757.1	@Node	859

CODE STRESS CHECK PASSED : LOADCASE 36 (EXP) L36=L4-L6

Highest Stresses: (KPa) LOADCASE 36 (EXP) L36=L4-L6			
Ratio (%):	63.8	@Node	859
Code Stress:	201927.2	Allowable Stress:	316372.5
Axial Stress:	2549.0	@Node	810
Bending Stress:	199956.5	@Node	859
Torsion Stress:	25148.2	@Node	50
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	535795.1	@Node	859

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS..... 2
Nozzle Check : Multiple..... 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OPE) W+T2+P1+F2
17 (OCC) L17=L10-L4
18 (OCC) L18=L11-L4
19 (OCC) L19=L12-L4
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17+L8
25 (OCC) L25=L18+L8
26 (OCC) L26=L19+L8
27 (OCC) L27=L20+L8
28 (OCC) L28=L21+L8
29 (OCC) L29=L22+L8
30 (OCC) L30=L23+L8
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8
33 (EXP) L33=L2-L4
34 (EXP) L34=L6-L8
35 (EXP) L35=L2-L6
36 (EXP) L36=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:27
Job:: BNK-GCS-CN-010-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

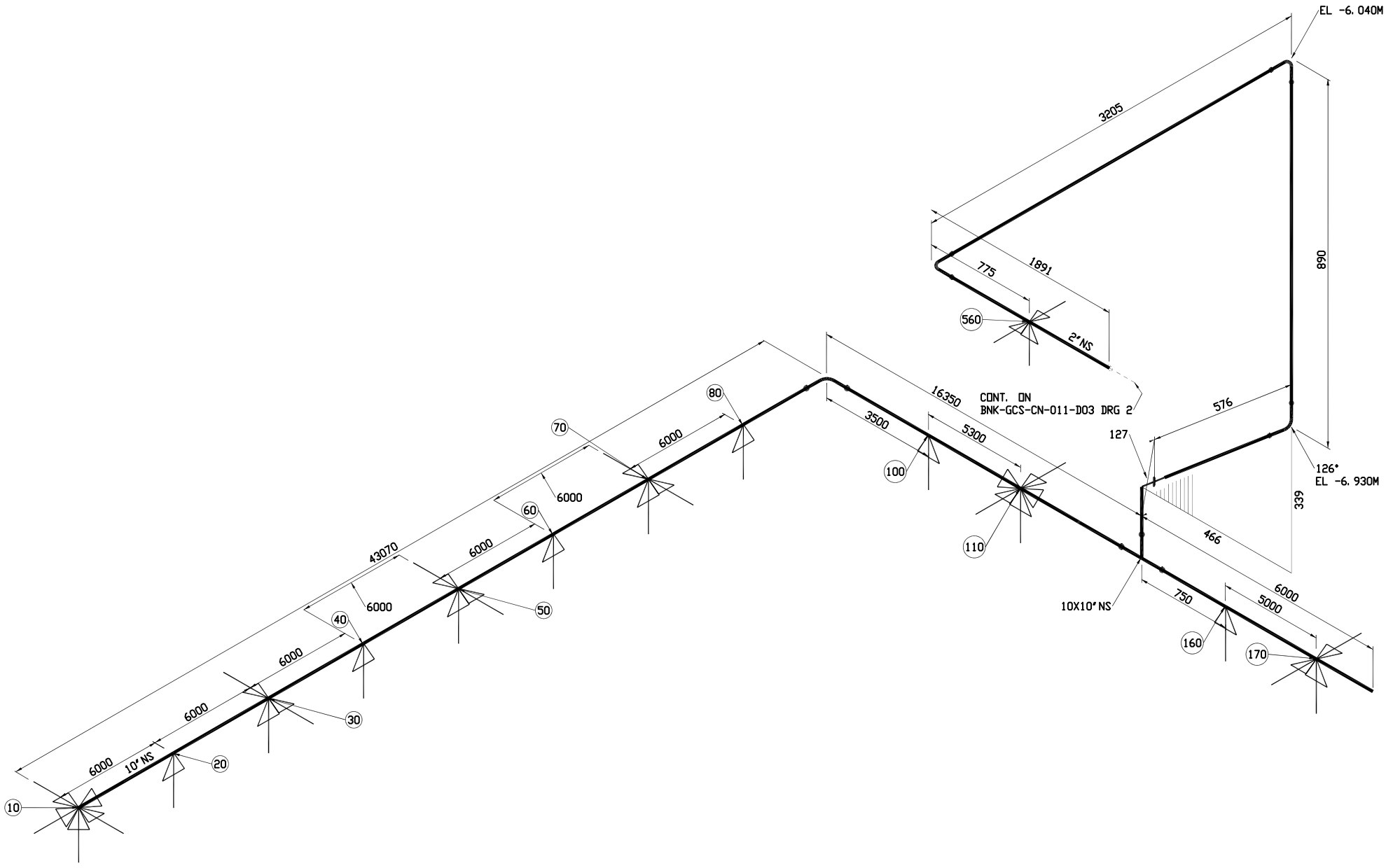
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
690		Absolute Method								
	Limits	8400	8400	6300		3780	2520	3280		
	2(OPE)	2762	-129	-1862	0.329	-2442	-2071	-3428	1.045	*
	4(OPE)	2605	-149	-2919	0.463	-3869	-2243	-3284	1.023	*
	6(OPE)	2460	8	658	0.293	899	-435	-3042	0.928	
	8(SUS)	2436	-4	82	0.290	144	-676	-3190	0.973	
	9(SUS)	2431	-4	82	0.289	143	-674	-3183	0.970	

BNK-GCS-CN-011

1. FLG-111-0011-AN07-2"-PT
2. FL-112-0033-AN07-2"-PT
3. FL-112-0034-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 3

REV.	CHANGE	DATE
		14 MAY 2024

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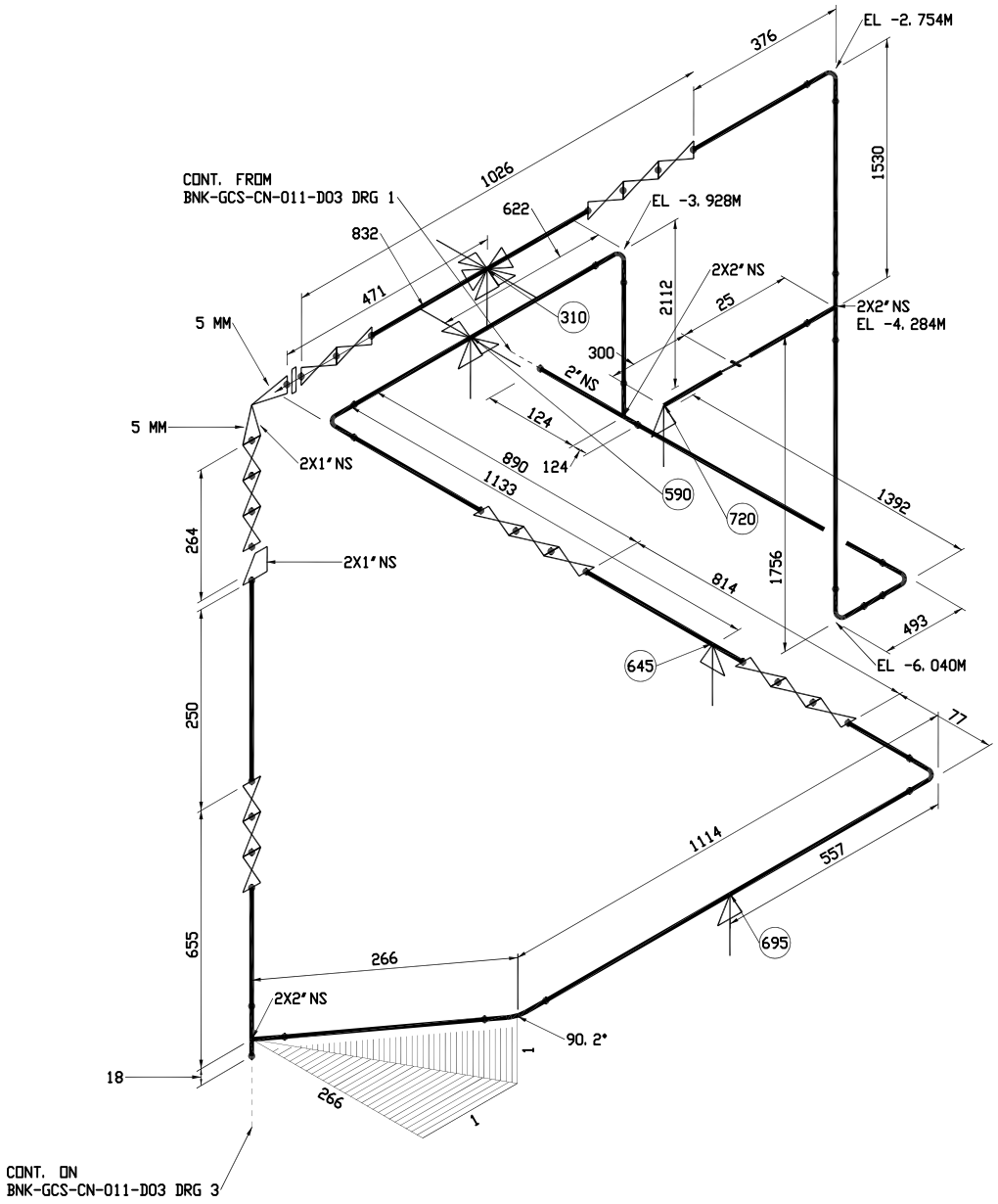

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

2 OF 3

REV.	CHANGE	DATE
		14 MAY 2024

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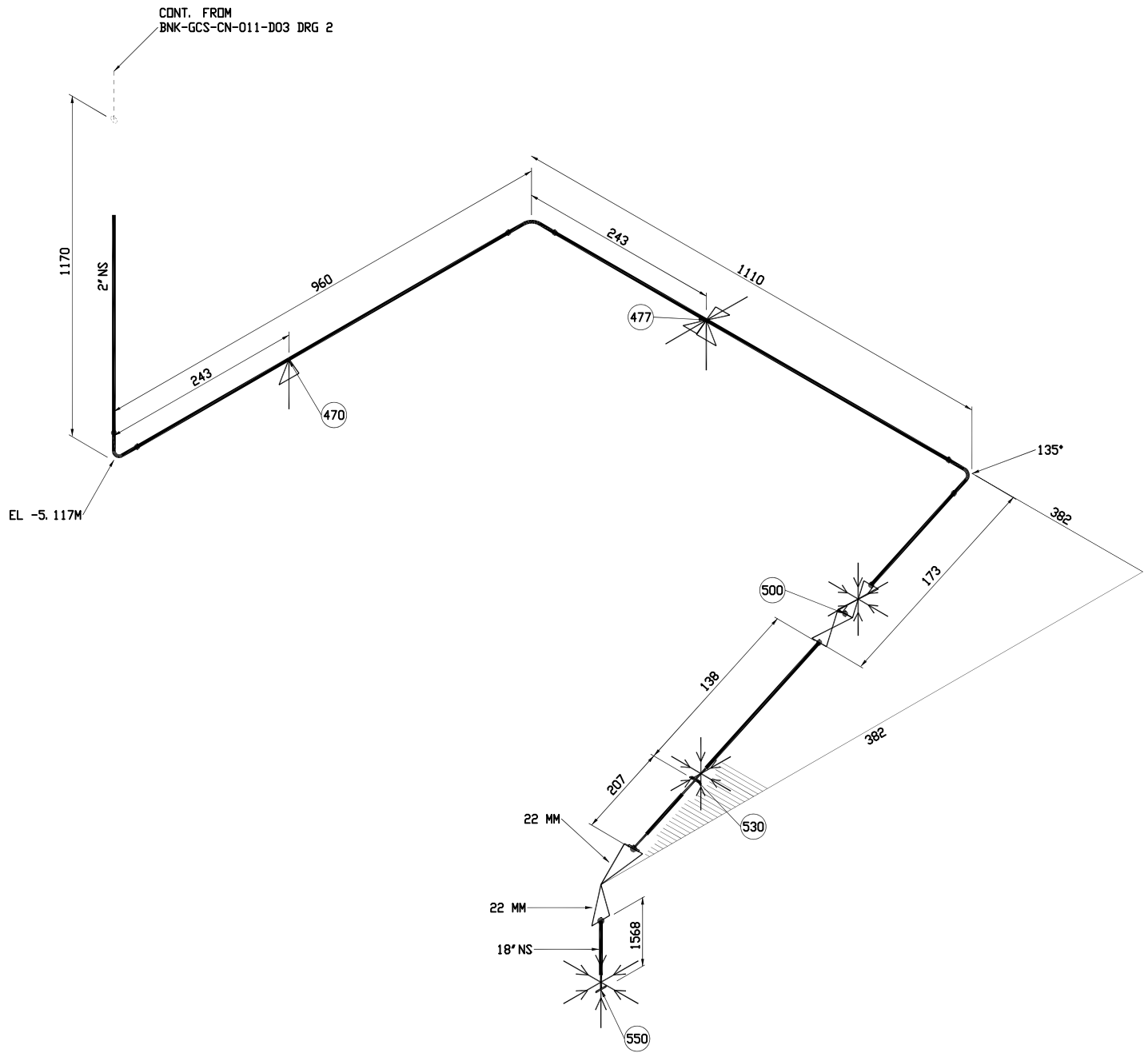

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

3 OF 3

REV.	CHANGE	DATE
		14 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

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3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:43
Job:: BNK-GCS-CN-011-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:43
Job:: BNK-GCS-CN-011-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 19,2024 15:44: 0

PIPE DATA

From 10 To 20 DZ= -6,000.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
GENERAL
T1= 270 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,483,936 KPa
EH2= 187,335,024 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RESTRAINTS
Node 20 +Y Mu = .30
Node 10 +Y Mu = .30
Node 10 X Gap= 3.000 mm. Mu = .30
Node 10 Z Gap= 3.000 mm. Mu = .30
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
SIF's & TEE's
Node 10 <No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 20 To 30 DZ= -6,000.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
GENERAL
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,483,936 KPa
EH2= 187,335,024 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm.
RESTRAINTS
Node 30 +Y Mu = .30
Node 30 X Gap= 3.000 mm. Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa

INPUT LISTING
```
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  30  To  40 DZ= -6,000.000 mm.
 GENERAL
    P2= .0000 KPa
 RESTRAINTS
    Node  40  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  40  To  50 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  50  +Y   Mu = .30
    Node  50  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  50  To  60 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  60  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  60  To  70 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  70  +Y   Mu = .30
    Node  70  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  70  To  80 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  80  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  80  To  90 DZ= -1,070.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 89
    Angle/Node @2= .00 88
 ---------------------------------------------------------------------------
 From  90  To  100  DX= 3,500.000 mm.
 RESTRAINTS
    Node  100  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  100  To  110  DX= 5,300.000 mm.
 RESTRAINTS
    Node  110  +Y   Mu = .30
    Node  110  Z   Gap= 3.000 mm.
    Node  110  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  110  To  120  DX= 4,300.000 mm.
 ---------------------------------------------------------------------------
 From  120  To  130  DX= 97.000 mm.
 ---------------------------------------------------------------------------
 From  130  To  140  DX= 3,153.000 mm.
 ---------------------------------------------------------------------------
 From  140  To  150 DY= 127.000 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
```

INPUT LISTING

```
    Node  150   Weldolet   Pad= 9.270 mm.
 ---------------------------------------------------------------------------
 From  140  To  160  DX= 750.000 mm.
 RESTRAINTS
    Node  160  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  160  To  170  DX= 5,000.000 mm.
 RESTRAINTS
    Node  170  +Y   Mu = .30
    Node  170  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  170  To  180  DX= 250.000 mm.
 ---------------------------------------------------------------------------
 From  150  To  190  DX= 466.000 mm.  DY= 339.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 53.965   Angle/Node @1= 26.98 189
    Angle/Node @2= .00 188
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  190  To  200 DY= 890.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 199
    Angle/Node @2= .00 198
 ---------------------------------------------------------------------------
 From  200  To  210 DZ= 3,205.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 209
    Angle/Node @2= .00 208
 ---------------------------------------------------------------------------
 From  210  To  560  DX= 775.000 mm.
 RESTRAINTS
    Node  560  +Y
    Node  560  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  560  To  570  DX= 1,240.000 mm.
 SIF's & TEE's
    Node  570   Welding Tee
 ---------------------------------------------------------------------------
 From  570  To  580 DY= 2,112.000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 579
    Angle/Node @2= .00 578
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
```

INPUT LISTING
```
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  580  To  590 DZ= 622.000 mm.
 RESTRAINTS
    Node  590  +Y   Mu = .30
    Node  590  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  590  To  600 DZ= 210.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 599
    Angle/Node @2= .00 598
 ------------------------------------------------------------------------------
 From  600  To  610  DX= 545.000 mm.
 ------------------------------------------------------------------------------
 From  610  To  620  DX= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  620  To  630  DX= 212.000 mm.
 RIGID  Weight= 271.34 N.
 ------------------------------------------------------------------------------
 From  630  To  640  DX= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  640  To  645  DX= 242.500 mm.
 RESTRAINTS
    Node  645  +Y
 ------------------------------------------------------------------------------
 From  645  To  650  DX= 251.500 mm.
 ------------------------------------------------------------------------------
 From  650  To  660  DX= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  660  To  670  DX= 187.000 mm.
 RIGID  Weight= 209.07 N.
 ------------------------------------------------------------------------------
 From  670  To  680  DX= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  680  To  690  DX= 77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 689
    Angle/Node @2= .00 688
 ------------------------------------------------------------------------------
 From  690  To  695 DZ= 557.000 mm.
 RESTRAINTS
    Node  695  +Y
 ------------------------------------------------------------------------------
 From  695  To  700 DZ= 557.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 89.848   Angle/Node @1= 44.92 699
    Angle/Node @2= .00 698
 ------------------------------------------------------------------------------
 From  700  To  440  DX= -265.700 mm.  DY= -.825 mm.  DZ= .703 mm.
 ------------------------------------------------------------------------------
 From  570  To  220  DX= 1,516.000 mm.
```

INPUT LISTING
```
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 219
    Angle/Node @2= .00 218
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  220  To  230 DZ= 493.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 229
    Angle/Node @2= .00 228
 ------------------------------------------------------------------------------
 From  230  To  240 DY= 1,756.000 mm.
 ------------------------------------------------------------------------------
 From  240  To  710 DZ= 25.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  710   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  240  To  250 DY= 530.000 mm.
 SIF's & TEE's
    Node  250   Welding Tee
 ------------------------------------------------------------------------------
 From  250  To  260 DY= 1,000.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 259
    Angle/Node @2= .00 258
 ------------------------------------------------------------------------------
 From  260  To  270 DZ= 376.000 mm.
 ------------------------------------------------------------------------------
 From  270  To  280 DZ= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  280  To  290 DZ= 178.000 mm.
 RIGID  Weight= 209.07 N.
 ------------------------------------------------------------------------------
 From  290  To  300 DZ= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  300  To  310 DZ= 290.500 mm.
 RESTRAINTS
    Node  310  +Y   Mu = .30
    Node  310  X   Gap= 3.000 mm.
    Node  310  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  310  To  320 DZ= 290.500 mm.
 ------------------------------------------------------------------------------
 From  320  To  330 DZ= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  330  To  340 DZ= 66.675 mm.
 GENERAL
```

INPUT LISTING
```
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Fluid Den= .0000058 kg./cu.cm.
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  340  To  350 DZ= 52.000 mm.
 RIGID  Weight= 31.14 N.
 FORCES & MOMENTS
    Node  350   FY1= 500.02 N.   FZ1= 1,000.05 N.
 ------------------------------------------------------------------------------
 From  350  To  360 DY= -56.000 mm.  DZ= .000 mm.
 PIPE
    Dia= 33.401 mm.   Wall= 9.093 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 15.57 N.
 ------------------------------------------------------------------------------
 From  360  To  370 DY= -58.737 mm.
 RIGID  Weight= 15.57 N.
 ------------------------------------------------------------------------------
 From  370  To  380 DY= -58.737 mm.
 RIGID  Weight= 15.57 N.
 ------------------------------------------------------------------------------
 From  380  To  390 DY= -96.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 8.738 mm.
 ------------------------------------------------------------------------------
 From  390  To  400 DY= -250.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  400  To  410 DY= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  410  To  420 DY= -187.000 mm.
 RIGID  Weight= 209.07 N.
 ------------------------------------------------------------------------------
 From  420  To  430 DY= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  430  To  440 DY= -335.000 mm.
 SIF's & TEE's
    Node  440   Weldolet
 ------------------------------------------------------------------------------
 From  440  To  450 DY= -351.000 mm.
 ------------------------------------------------------------------------------
 From  450  To  460 DY= -837.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 459
    Angle/Node @2= .00 458
 ------------------------------------------------------------------------------
 From  460  To  470  DX= .000 mm.  DZ= -243.000 mm.
```

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INPUT LISTING

```
 RESTRAINTS
    Node  470  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  470  To  475  DX= .000 mm.  DZ= -717.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 474
    Angle/Node @2= .00 473
 ------------------------------------------------------------------------------
 From  475  To  477  DX= 243.000 mm.
 RESTRAINTS
    Node  477  +Y
    Node  477  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  477  To  480  DX= 867.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 479
    Angle/Node @2= .00 478
 ------------------------------------------------------------------------------
 From  480  To  490  DX= 25.000 mm.  DZ= 25.000 mm.
 ------------------------------------------------------------------------------
 From  490  To  500  DX= 50.000 mm.  DZ= 50.000 mm.
 RIGID  Weight= 31.14 N.
 RESTRAINTS
    Node  500  ANC   Cnode  510
 ------------------------------------------------------------------------------
 From  510  To  520  DX= 47.146 mm.  DZ= 47.146 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  520  To  530  DX= 97.581 mm.  DZ= 97.581 mm.
 RESTRAINTS
    Node  530  ANC   Cnode  531
 EQUIPMENT LIMITS
    Nozzle Node = 530   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 2,800.14 N.
    FB= 2,800.14 N.   FC= 2,100.10 N.   MA= 420.02 N.m.   MB= 280.01 N.m.
    MC= 360.02 N.m.   Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------------
 From  531  To  540  DX= 161.927 mm.  DZ= 161.927 mm.
 PIPE
    Dia= 457.200 mm.   Wall= 8.738 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  540  To  550 DY= -1,590.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  550  ANC
 ------------------------------------------------------------------------------
 From  710  To  720 DZ= 300.000 mm.
 PIPE
    Dia= 48.260 mm.   Wall= 3.683 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
```

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INPUT LISTING
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000000 kg./cu.cm.
Insul Thk= .000 mm.
RESTRAINTS
Node 720 +Y Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa
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MATERIAL Changes:

10	20	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
20	30	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
710	720	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.

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ALLOWABLE STRESS Changes

10	20	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
20	30	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
30	40	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
150	190	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
570	580	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa

INPUT LISTING

```
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   570              220           B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   330              340           B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   710              720           B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
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 BEND ELEMENTS
    80               90           Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 89
                                  Angle/Node @2= .00 88
   150              190           Radius= 76.200 mm. (LONG)
                                  Bend Angle= 53.965   Angle/Node @1= 26.98
                                 189   Angle/Node @2= .00 188
   190              200           Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 199   Angle/Node @2= .00 198
   200              210           Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 209   Angle/Node @2= .00 208
   570              580           Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 579   Angle/Node @2= .00 578
   590              600           Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 599   Angle/Node @2= .00 598
   680              690           Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 689   Angle/Node @2= .00 688
   695              700           Radius= 76.200 mm. (LONG)
                                  Bend Angle= 89.848   Angle/Node @1= 44.92
                                 699   Angle/Node @2= .00 698
   570              220           Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
```

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INPUT LISTING

```
                                  219   Angle/Node @2= .00 218
   220             230              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  229   Angle/Node @2= .00 228
   250             260              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  259   Angle/Node @2= .00 258
   450             460              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  459   Angle/Node @2= .00 458
   470             475              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  474   Angle/Node @2= .00 473
   477             480              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50
                                  479   Angle/Node @2= .00 478
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RIGIDS
   140             150          RIGID  Weight= .00 N.
   610             620          RIGID  Weight= 31.14 N.
   620             630          RIGID  Weight= 271.34 N.
   630             640          RIGID  Weight= 31.14 N.
   650             660          RIGID  Weight= 31.14 N.
   660             670          RIGID  Weight= 209.07 N.
   670             680          RIGID  Weight= 31.14 N.
   240             710          RIGID  Weight= .00 N.
   270             280          RIGID  Weight= 31.14 N.
   280             290          RIGID  Weight= 209.07 N.
   290             300          RIGID  Weight= 31.14 N.
   320             330          RIGID  Weight= 31.14 N.
   330             340          RIGID  Weight= 31.14 N.
   340             350          RIGID  Weight= 31.14 N.
   350             360          RIGID  Weight= 15.57 N.
   360             370          RIGID  Weight= 15.57 N.
   370             380          RIGID  Weight= 15.57 N.
   400             410          RIGID  Weight= 31.14 N.
   410             420          RIGID  Weight= 209.07 N.
   420             430          RIGID  Weight= 31.14 N.
   490             500          RIGID  Weight= 31.14 N.
   510             520          RIGID  Weight= 31.14 N.
   531             540          RIGID  Weight= .00 N.
   540             550          RIGID  Weight= .00 N.
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SIF's & TEE's
    10              20            Node  10   <No Type Specified>
                                  SIF(in)= 2.080   SIF(out)= 2.460
   140             150            Node  150   Weldolet   Pad= 9.270 mm.
   560             570            Node  570   Welding Tee
   240             710            Node  710   Unreinforced Tee
   240             250            Node  250   Welding Tee
```

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INPUT LISTING
430 440 Node 440 Weldolet
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REDUCERS
380 390 Diam2= 60.325 mm. Wall2= 8.738 mm.
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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
20	+Y				.30	.000	1.000	.000
10	+Y				.30	.000	1.000	.000
10	X			3.00	.30	1.000	.000	.000
10	Z			3.00	.30	.000	.000	1.000
30	+Y				.30	.000	1.000	.000
30	X			3.00	.30	1.000	.000	.000
40	+Y				.30	.000	1.000	.000
50	+Y				.30	.000	1.000	.000
50	X			3.00	.30	1.000	.000	.000
60	+Y				.30	.000	1.000	.000
70	+Y				.30	.000	1.000	.000
70	X			3.00	.30	1.000	.000	.000
80	+Y				.30	.000	1.000	.000
100	+Y				.30	.000	1.000	.000
110	+Y				.30	.000	1.000	.000
110	Z			3.00		.000	.000	1.000
110	X			3.00		1.000	.000	.000
160	+Y				.30	.000	1.000	.000
170	+Y				.30	.000	1.000	.000
170	Z			3.00		.000	.000	1.000
560	+Y					.000	1.000	.000
560	Z			3.00	.30	.000	.000	1.000
590	+Y				.30	.000	1.000	.000
590	X			3.00		1.000	.000	.000
645	+Y					.000	1.000	.000
695	+Y					.000	1.000	.000
310	+Y				.30	.000	1.000	.000
310	X			3.00		1.000	.000	.000
310	Z			3.00	.30	.000	.000	1.000
470	+Y				.30	.000	1.000	.000
477	+Y					.000	1.000	.000
477	Z			3.00	.30	.000	.000	1.000
500	ANC	510				.000	.000	.000
530	ANC	531				.000	.000	.000
550	ANC					.000	.000	.000
720	+Y				.30	.000	1.000	.000

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EQUIPMENT LIMITS
520 530 Nozzle Node = 530

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INPUT LISTING

```
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 2,800.14 N.   FB= 2,800.14 N.
    FC= 2,100.10 N.   MA= 420.02 N.m.   MB= 280.01 N.m.   MC= 360.02 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
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 FORCES AND MOMENTS
   340             350              Node  350   FY1= 500.02 N.
                                    FZ1= 1,000.05 N.
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 UNIFORM LOAD Changes
    10              20             Vector1 in G-s
                                   X1 Dir = .26 g's  Y1 Dir = .00 g's
                                   Z1 Dir = .00 g's
                                   Vector2 in G-s
                                   X2 Dir = .00 g's  Y2 Dir = .12 g's
                                   Z2 Dir = .00 g's
                                   Vector3 in G-s
                                   X3 Dir = .00 g's  Y3 Dir = .00 g's
                                   Z3 Dir = .26 g's
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 INPUT UNITS USED...

 UNITS=    SI (m NOM/SCH INPUT= ON
       LENGTH             inches        x     25.400   =   mm.
       FORCE              pounds        x      4.448   =    N.
       MASS(dynamics)     pounds        x      0.454   =   Kg.
       MOMENTS(INPUT)     inch-pounds   x      0.113   =    N.m.
       MOMENTS(OUTPUT)    inch-pounds   x      0.113   =    N.m.
       STRESS             lbs./sq.in.   x      6.895   =      KPa
       TEMP. SCALE        degrees F.    x      0.556   =   C
       PRESSURE           psig          x      6.895   =      KPa
       ELASTIC MODULUS    lbs./sq.in.   x      6.895   =      KPa
       PIPE DENSITY       lbs./cu.in.   x      0.028   =   kg./cu.cm.
       INSULATION DENS.   lbs./cu.in.   x      0.028   =   kg./cu.cm.
       FLUID DENSITY      lbs./cu.in.   x      0.028   =   kg./cu.cm.
       TRANSL. STIF       lbs./in.      x      1.751   =   N./cm.
       ROTATIONAL STIF    in.lb./deg.   x      0.113   =    N.m./deg
       UNIFORM LOAD       lb./in.       x      1.751   =   N./cm.
       G LOAD             g's           x      1.000   =   g's
       WIND LOAD          lbs./sq.in.   x      6.895   =      KPa
       ELEVATION          inches        x      0.025   =    m.
       COMPOUND LENGTH    inches        x     25.400   =   mm.
       DIAMETER           inches        x     25.400   =   mm.
       WALL THICKNESS     inches        x     25.400   =   mm.
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 SETUP FILE PARAMETERS
 ------------------------------------------------------------------------------
```

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INPUT LISTING

```
  CONNECT GEOMETRY THRU CNODES =    YES
  MIN ALLOWED BEND ANGLE =            5.00000
  MAX ALLOWED BEND ANGLE =            95.0000
  BEND LENGTH ATTACHMENT PERCENT =    1.00000
  MIN ANGLE TO ADJACENT BEND PT =     5.00000
  LOOP CLOSURE TOLERANCE =            25.4000     mm.
  THERMAL BOWING HORZ TOLERANCE =    0.100000E-03
  AUTO NODE NUMBER INCREMENT=         10.0000
  Z AXIS UP=                         NO
  USE PRESSURE STIFFENING =         DEFAULT
  ALPHA TOLERANCE =                  0.500000E-01
  RESLD-FORCE =                      NO
  HGR DEF RESWGT STIF =              0.175127E+13 N./cm.
  DECOMP SNG TOL =                   0.100000E+11
  BEND AXIAL SHAPE =                YES
  FRICT STIF =                       0.175127E+07 N./cm.
  FRICT NORM FORCE VAR =             0.150000
  FRICT ANGLE VAR =                   15.0000
  FRICT SLIDE MULT =                  1.00000
  ROD TOLERANCE =                     1.00000
  ROD INC =                           2.00000
  INCORE NUMERICAL CHECK =           NO
  OUTCORE NUMERICAL CHECK =          NO
  DEFAULT TRANS RESTRAINT STIFF=     0.175127E+13    N./cm.
  DEFAULT ROT RESTRAINT STIFF=       0.112985E+12  N.m./deg
  IGNORE SPRING HANGER STIFFNESS =   NO
  MISSING MASS ZPA =                EXTRACTED
  MIN WALL MILL TOLERANCE =           12.5000
  WRC-107 VERSION =                 MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =           LAST VALUE
  DEFAULT AMBIENT TEMPERATURE=        21.1111       C
  BOURDON PRESSURE=                 NONE
  COEFFICIENT OF FRICTION (MU) =         0.000000
  INCLUDE SPRG STIF IN HGR OPE =    NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =            B31.1(POST1980)
  USE WRC329                        NO
  NO REDUCED SIF FOR RFT AND WLT    NO
  B31.1 REDUCED Z FIX =             YES
  CLASS 1 BRANCH FLEX               NO
  ALL STRESS CASES CORRODED =       NO
  ADD TORSION IN SL STRESS =        DEFAULT
  ADD F/A IN STRESS =               DEFAULT
  OCCASIONAL LOAD FACTOR =               0.000000
  DEFAULT CODE =                    B31.3
  B31.3 SUS CASE SIF FACTOR =            0.000000
  ALLOW USERS BEND SIF =            NO
  USE SCHNEIDER                     NO
  YIELD CRITERION STRESS =          MAX 3D SHEAR
  USE PD/4T                          NO
  BASE HOOP STRESS ON ? =            ID
  EN13480 USE IN OUTPLANE SIFS=      NO
  LIBERAL EXPANSION ALLOWABLE=      YES
  B31.3 SEC 319.2.3C SAXIAL=        Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
```

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INPUT LISTING

```
  IMPLEMENT B313 APP-P                NO
  IMPLEMENT B313 CODE CASE 178       YES
  IGNORE B31.1/B31.3 Wc FACTOR=      YES
  USE FRP SIF =                      YES
  USE FRP FLEX =                     YES
  BS 7159 Pressure Stiffening=       Design Strain
  FRP Property Data File=            CAESAR.FRP
  FRP Emod (axial) =                  0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =       0.250000
  FRP Ea/Eh*Vh/a =                    0.152730
  FRP Laminate Type =                THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                       0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =    NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
    Uniform Load Option ........    1.000

    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
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 COORDINATE REPORT
          /--------------------(mm.)----------------------/
  NODE           X              Y              Z
    10    -15700.080     -7395.683      7324.219
    20    -15700.080     -7395.683      1324.219
    30    -15700.080     -7395.683     -4675.781
    40    -15700.080     -7395.683    -10675.781
    50    -15700.080     -7395.683    -16675.781
    60    -15700.080     -7395.683    -22675.781
    70    -15700.080     -7395.683    -28675.781
    80    -15700.080     -7395.683    -34675.781
    90    -15700.080     -7395.683    -35745.781
   100    -12200.080     -7395.683    -35745.781
   110     -6900.080     -7395.683    -35745.781
   120     -2600.080     -7395.683    -35745.781
   130     -2503.080     -7395.683    -35745.781
```

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INPUT LISTING

140	649.920	-7395.683	-35745.781
150	649.920	-7268.683	-35745.781
140	649.920	-7395.683	-35745.781
160	1399.920	-7395.683	-35745.781
170	6399.920	-7395.683	-35745.781
180	6649.920	-7395.683	-35745.781
150	649.920	-7268.683	-35745.781
190	1115.920	-6929.683	-35745.781
200	1115.920	-6039.683	-35745.781
210	1115.920	-6039.683	-32540.781
560	1890.920	-6039.683	-32540.781
570	3130.920	-6039.683	-32540.781
580	3130.920	-3927.683	-32540.781
590	3130.920	-3927.683	-31918.781
600	3130.920	-3927.683	-31708.781
610	3675.920	-3927.683	-31708.781
620	3742.595	-3927.683	-31708.781
630	3954.595	-3927.683	-31708.781
640	4021.270	-3927.683	-31708.781
645	4263.770	-3927.683	-31708.781
650	4515.270	-3927.683	-31708.781
660	4581.945	-3927.683	-31708.781
670	4768.945	-3927.683	-31708.781
680	4835.620	-3927.683	-31708.781
690	4912.620	-3927.683	-31708.781
695	4912.620	-3927.683	-31151.781
700	4912.620	-3927.683	-30594.781
440	4646.920	-3928.508	-30594.078
570	3130.920	-6039.683	-32540.781
220	4646.920	-6039.683	-32540.781
230	4646.920	-6039.683	-32047.781
240	4646.920	-4283.683	-32047.781
710	4646.920	-4283.683	-32022.381
240	4646.920	-4283.683	-32047.781
250	4646.920	-3753.683	-32047.781
260	4646.920	-2753.683	-32047.781
270	4646.920	-2753.683	-31671.781
280	4646.920	-2753.683	-31605.105
290	4646.920	-2753.683	-31427.105
300	4646.920	-2753.683	-31360.430
310	4646.920	-2753.683	-31069.930
320	4646.920	-2753.683	-30779.430
330	4646.920	-2753.683	-30712.754
340	4646.920	-2753.683	-30646.078
350	4646.920	-2753.683	-30594.078
360	4646.920	-2809.683	-30594.078
370	4646.920	-2868.421	-30594.078
380	4646.920	-2927.158	-30594.078
390	4646.920	-3023.158	-30594.078
400	4646.920	-3273.158	-30594.078
410	4646.920	-3339.833	-30594.078
420	4646.920	-3526.833	-30594.078
430	4646.920	-3593.508	-30594.078
440	4646.920	-3928.508	-30594.078
450	4646.920	-4279.508	-30594.078
460	4646.920	-5116.508	-30594.078

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INPUT LISTING

470	4646.920	-5116.508	-30837.078
475	4646.920	-5116.508	-31554.078
477	4889.920	-5116.508	-31554.078
480	5756.920	-5116.508	-31554.078
490	5781.920	-5116.508	-31529.078
500	5831.920	-5116.508	-31479.078
520	5879.066	-5116.508	-31431.932
530	5976.647	-5116.508	-31334.352
540	6138.574	-5116.508	-31172.424
550	6138.574	-6706.508	-31172.424
710	4646.920	-4283.683	-32022.381
720	4646.920	-4283.683	-31722.381

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1+U3
CASE 14 (OPE) W+T2+P1-U3
CASE 15 (OPE) W+T2+P1+F1
CASE 16 (OCC) L16=L10-L4
CASE 17 (OCC) L17=L11-L4
CASE 18 (OCC) L18=L12-L4
CASE 19 (OCC) L19=L13-L4
CASE 20 (OCC) L20=L14-L4
CASE 21 (OCC) L21=L15-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	-0	-2578	0	0	0	0
	2(OPE)	-6	-1399	19330	0	0	0
	4(OPE)	-6	-1399	19436	0	0	0
	6(OPE)	-2815	-1399	-9105	0	0	0
	8(SUS)	-0	-1399	0	0	0	0
	9(SUS)	-0	-1397	0	0	0	0
	10(OPE)	5968	-1399	20174	0	0	0
	11(OPE)	-648	-1399	20445	0	0	0
	12(OPE)	-10	-1231	18449	0	0	0
	13(OPE)	-6	-1399	26546	0	0	0
	14(OPE)	3653	-1399	12574	0	0	0
	15(OPE)	-6	-1399	19436	0	0	0
	16(OCC)	5974	0	738	0	0	0
	17(OCC)	-642	-0	1009	0	0	0
	18(OCC)	-3	168	-987	0	0	0
	19(OCC)	0	0	7110	0	0	0
	20(OCC)	3660	-0	-6862	0	0	0
	21(OCC)	-0	-0	0	0	0	0
	MAX	5974/L16	-2578/L1	26546/L13			
20		TYPE=Rigid +Y;					
	1(HYD)	0	-7403	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	-59	-4019	-1204	0	0	0
	4(OPE)	-60	-4019	-1204	0	0	0
	6(OPE)	-204	-4018	1188	0	0	0
	8(SUS)	0	-4018	0	0	0	0
	9(SUS)	0	-4013	0	0	0	0
	10(OPE)	244	-4019	-1181	0	0	0
	11(OPE)	-187	-4019	-1191	0	0	0
	12(OPE)	-56	-3536	-1059	0	0	0
	13(OPE)	-60	-4019	-1204	0	0	0
	14(OPE)	-58	-4018	-1204	0	0	0
	15(OPE)	-60	-4019	-1204	0	0	0
	16(OCC)	304	0	24	0	0	0
	17(OCC)	-127	0	13	0	0	0
	18(OCC)	3	482	145	0	0	0
	19(OCC)	-0	-0	-0	0	0	0
	20(OCC)	2	0	-0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	304/L16	-7403/L1	-1204/L14			
30		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-0	-6305	0	0	0	0
	2(OPE)	-38	-3419	-1025	0	0	0
	4(OPE)	-39	-3419	-1025	0	0	0
	6(OPE)	59	-3422	1025	0	0	0
	8(SUS)	-0	-3422	0	0	0	0
	9(SUS)	-0	-3417	0	0	0	0
	10(OPE)	1451	-3419	-1432	0	0	0
	11(OPE)	-2188	-3419	-1653	0	0	0
	12(OPE)	-36	-3008	-902	0	0	0
	13(OPE)	-39	-3418	-1025	0	0	0
	14(OPE)	-39	-3419	-1025	0	0	0
	15(OPE)	-39	-3419	-1025	0	0	0
	16(OCC)	1490	-0	-408	0	0	0
	17(OCC)	-2149	-0	-628	0	0	0
	18(OCC)	3	411	123	0	0	0
	19(OCC)	-0	0	0	0	0	0
	20(OCC)	0	-0	-0	0	0	0
	21(OCC)	0	-0	-0	0	0	0
	MAX	-2188/L11	-6305/L1	-1653/L11			
40		TYPE=Rigid +Y;					
	1(HYD)	0	-6588	0	0	0	0
	2(OPE)	-12	-3586	-1076	0	0	0
	4(OPE)	-12	-3586	-1076	0	0	0
	6(OPE)	-20	-3575	1072	0	0	0
	8(SUS)	0	-3575	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(SUS)	0	-3571	0	0	0	0
	10(OPE)	43	-3586	-1075	0	0	0
	11(OPE)	-86	-3586	-1072	0	0	0
	12(OPE)	-12	-3157	-947	0	0	0
	13(OPE)	-12	-3587	-1076	0	0	0
	14(OPE)	-12	-3586	-1076	0	0	0
	15(OPE)	-12	-3586	-1076	0	0	0
	16(OCC)	55	0	1	0	0	0
	17(OCC)	-74	0	3	0	0	0
	18(OCC)	1	429	129	0	0	0
	19(OCC)	-0	-1	-0	0	0	0
	20(OCC)	0	1	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-86/L11	-6588/L1	-1076/L13			
50		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-0	-6541	0	0	0	0
	2(OPE)	1365	-3509	-1449	0	0	0
	4(OPE)	1383	-3508	-1454	0	0	0
	6(OPE)	-42	-3551	1065	0	0	0
	8(SUS)	-0	-3550	0	0	0	0
	9(SUS)	-0	-3546	0	0	0	0
	10(OPE)	3550	-3509	-2104	0	0	0
	11(OPE)	-18	-3509	-1052	0	0	0
	12(OPE)	1381	-3082	-1327	0	0	0
	13(OPE)	1384	-3505	-1453	0	0	0
	14(OPE)	1381	-3511	-1454	0	0	0
	15(OPE)	1383	-3508	-1454	0	0	0
	16(OCC)	2168	-0	-650	0	0	0
	17(OCC)	-1401	-0	402	0	0	0
	18(OCC)	-2	426	127	0	0	0
	19(OCC)	1	3	1	0	0	0
	20(OCC)	-2	-3	-0	0	0	0
	21(OCC)	-0	-0	-0	0	0	0
	MAX	3550/L10	-6541/L1	-2104/L10			
60		TYPE=Rigid +Y;					
	1(HYD)	0	-6447	0	0	0	0
	2(OPE)	88	-3655	-1093	0	0	0
	4(OPE)	89	-3656	-1093	0	0	0
	6(OPE)	17	-3493	1048	0	0	0
	8(SUS)	0	-3497	0	0	0	0
	9(SUS)	0	-3492	0	0	0	0
	10(OPE)	92	-3655	-1093	0	0	0
	11(OPE)	53	-3654	-1095	0	0	0
	12(OPE)	79	-3236	-968	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	89	-3668	-1097	0	0	0
	14(OPE)	88	-3646	-1090	0	0	0
	15(OPE)	89	-3656	-1093	0	0	0
	16(OCC)	4	1	1	0	0	0
	17(OCC)	-35	2	-2	0	0	0
	18(OCC)	-10	420	126	0	0	0
	19(OCC)	0	-12	-4	0	0	0
	20(OCC)	-0	10	3	0	0	0
	21(OCC)	-0	0	0	0	0	0
	MAX	92/L10	-6447/L1	-1097/L13			
70		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-0	-6875	0	0	0	0
	2(OPE)	-8495	-3140	-3483	0	0	0
	4(OPE)	-8580	-3136	-3507	0	0	0
	6(OPE)	940	-3752	1330	0	0	0
	8(SUS)	-0	-3739	0	0	0	0
	9(SUS)	-0	-3734	0	0	0	0
	10(OPE)	-7102	-3140	-3065	0	0	0
	11(OPE)	-10611	-3143	-4118	0	0	0
	12(OPE)	-8559	-2690	-3368	0	0	0
	13(OPE)	-8589	-3092	-3497	0	0	0
	14(OPE)	-8569	-3174	-3515	0	0	0
	15(OPE)	-8579	-3137	-3507	0	0	0
	16(OCC)	1477	-4	442	0	0	0
	17(OCC)	-2031	-6	-611	0	0	0
	18(OCC)	20	447	139	0	0	0
	19(OCC)	-9	45	11	0	0	0
	20(OCC)	11	-38	-8	0	0	0
	21(OCC)	0	-1	-0	0	0	0
	MAX	-10611/L11	-6875/L1	-4118/L11			
80		TYPE=Rigid +Y;					
	1(HYD)	0	-5530	0	0	0	0
	2(OPE)	-201	-3301	-970	0	0	0
	4(OPE)	-201	-3303	-970	0	0	0
	6(OPE)	284	-2990	851	0	0	0
	8(SUS)	0	-2998	0	0	0	0
	9(SUS)	0	-2994	0	0	0	0
	10(OPE)	-200	-3300	-970	0	0	0
	11(OPE)	-200	-3301	-970	0	0	0
	12(OPE)	-179	-2943	-865	0	0	0
	13(OPE)	-202	-3326	-977	0	0	0
	14(OPE)	-199	-3284	-965	0	0	0
	15(OPE)	-201	-3303	-970	0	0	0
	16(OCC)	1	3	1	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OCC)	1	2	1	0	0	0
	18(OCC)	22	361	106	0	0	0
	19(OCC)	-2	-22	-7	0	0	0
	20(OCC)	1	19	6	0	0	0
	21(OCC)	0	1	0	0	0	0
	MAX	284/L6	-5530/L1	-977/L13			
100		TYPE=Rigid +Y;					
	1(HYD)	2	-4383	-0	0	0	0
	2(OPE)	-132	-2649	-784	0	0	0
	4(OPE)	-132	-2651	-784	0	0	0
	6(OPE)	225	-2369	674	0	0	0
	8(SUS)	2	-2373	-0	0	0	0
	9(SUS)	2	-2370	-0	0	0	0
	10(OPE)	-132	-2654	-785	0	0	0
	11(OPE)	-132	-2644	-782	0	0	0
	12(OPE)	-118	-2365	-700	0	0	0
	13(OPE)	-134	-2673	-791	0	0	0
	14(OPE)	-131	-2632	-778	0	0	0
	15(OPE)	-132	-2651	-784	0	0	0
	16(OCC)	-0	-4	-1	0	0	0
	17(OCC)	0	7	2	0	0	0
	18(OCC)	14	286	85	0	0	0
	19(OCC)	-1	-22	-6	0	0	0
	20(OCC)	1	19	6	0	0	0
	21(OCC)	-0	-0	-0	0	0	0
	MAX	225/L6	-4383/L1	-791/L13			
110		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	1(HYD)	3	-8158	1	0	0	0
	2(OPE)	4923	-4389	-12796	0	0	0
	4(OPE)	4985	-4389	-12908	0	0	0
	6(OPE)	620	-4429	1418	0	0	0
	8(SUS)	3	-4433	1	0	0	0
	9(SUS)	3	-4428	1	0	0	0
	10(OPE)	9013	-4376	-12910	0	0	0
	11(OPE)	1375	-4398	-12932	0	0	0
	12(OPE)	5149	-3858	-12890	0	0	0
	13(OPE)	5060	-4382	-10916	0	0	0
	14(OPE)	4950	-4395	-14903	0	0	0
	15(OPE)	5001	-4388	-12904	0	0	0
	16(OCC)	4027	13	-1	0	0	0
	17(OCC)	-3610	-9	-24	0	0	0
	18(OCC)	164	531	18	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OCC)	74	6	1992	0	0	0
	20(OCC)	-35	-6	-1995	0	0	0
	21(OCC)	16	1	4	0	0	0
	MAX	9013/L10	-8158/L1	-14903/L14			
160		TYPE=Rigid +Y;					
	1(HYD)	7	-8738	47	0	0	0
	2(OPE)	1415	-5389	782	0	0	0
	4(OPE)	1415	-5393	785	0	0	0
	6(OPE)	-1412	-4855	-357	0	0	0
	8(SUS)	5	-4876	41	0	0	0
	9(SUS)	5	-4870	41	0	0	0
	10(OPE)	1415	-5397	788	0	0	0
	11(OPE)	1413	-5386	783	0	0	0
	12(OPE)	1257	-4806	706	0	0	0
	13(OPE)	1388	-5426	851	0	0	0
	14(OPE)	1449	-5379	710	0	0	0
	15(OPE)	1415	-5393	785	0	0	0
	16(OCC)	-0	-4	3	0	0	0
	17(OCC)	-1	6	-1	0	0	0
	18(OCC)	-158	587	-79	0	0	0
	19(OCC)	-27	-33	66	0	0	0
	20(OCC)	35	14	-75	0	0	0
	21(OCC)	0	-1	0	0	0	0
	MAX	1449/L14	-8738/L1	851/L13			
170		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	4	-1895	-1	0	0	0
	2(OPE)	279	-933	863	0	0	0
	4(OPE)	279	-932	878	0	0	0
	6(OPE)	-307	-1029	-29	0	0	0
	8(SUS)	3	-1024	-1	0	0	0
	9(SUS)	3	-1022	-1	0	0	0
	10(OPE)	281	-940	889	0	0	0
	11(OPE)	278	-928	870	0	0	0
	12(OPE)	242	-809	925	0	0	0
	13(OPE)	278	-927	1599	0	0	0
	14(OPE)	280	-935	118	0	0	0
	15(OPE)	279	-933	880	0	0	0
	16(OCC)	2	-8	11	0	0	0
	17(OCC)	-1	4	-8	0	0	0
	18(OCC)	-37	123	47	0	0	0
	19(OCC)	-1	5	720	0	0	0
	20(OCC)	1	-4	-760	0	0	0
	21(OCC)	0	-1	2	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-307/L6	-1895/L1	1599/L13			
310		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	5	-1064	-124	0	0	0
	2(OPE)	26	27	125	0	0	0
	4(OPE)	38	35	173	0	0	0
	6(OPE)	-48	-745	-218	0	0	0
	8(SUS)	4	-980	-109	0	0	0
	9(SUS)	4	-979	-109	0	0	0
	10(OPE)	317	19	157	0	0	0
	11(OPE)	-68	29	242	0	0	0
	12(OPE)	41	36	181	0	0	0
	13(OPE)	79	165	608	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	23	338	1130	0	0	0
	16(OCC)	279	-16	-16	0	0	0
	17(OCC)	-106	-6	69	0	0	0
	18(OCC)	3	1	8	0	0	0
	19(OCC)	41	129	435	0	0	0
	20(OCC)	-38	-35	-173	0	0	0
	21(OCC)	-15	303	957	0	0	0
	MAX	317/L10	-1064/L1	1130/L15			
470		TYPE=Rigid +Y;					
	1(HYD)	-4	-15	-1	0	0	0
	2(OPE)	-169	-962	234	0	0	0
	4(OPE)	9	-798	146	0	0	0
	6(OPE)	-135	-456	25	0	0	0
	8(SUS)	-9	-32	-0	0	0	0
	9(SUS)	-9	-32	-0	0	0	0
	10(OPE)	125	-574	119	0	0	0
	11(OPE)	-224	-1020	208	0	0	0
	12(OPE)	21	-672	147	0	0	0
	13(OPE)	60	-784	227	0	0	0
	14(OPE)	-19	-182	-51	0	0	0
	15(OPE)	-16	-645	193	0	0	0
	16(OCC)	116	224	-28	0	0	0
	17(OCC)	-233	-222	62	0	0	0
	18(OCC)	13	126	0	0	0	0
	19(OCC)	52	14	81	0	0	0
	20(OCC)	-27	616	-198	0	0	0
	21(OCC)	-25	153	47	0	0	0
	MAX	-233/L17	-1020/L11	234/L2			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
477		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	0	-155	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	0	-134	0	0	0	0
	9(SUS)	0	-134	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	-43	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	-43	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX		-155/L1				
500		TYPE=Rigid ANC;					
	1(HYD)	3	-67	2	-1	0	1
	2(OPE)	345	-154	-159	92	-45	3
	4(OPE)	177	-68	-86	56	-40	-65
	6(OPE)	56	-123	-37	-9	-17	50
	8(SUS)	7	-62	-0	-1	-0	0
	9(SUS)	7	-62	-0	-1	-0	0
	10(OPE)	323	-131	-69	55	-5	-47
	11(OPE)	165	19	-73	49	-32	-78
	12(OPE)	174	-66	-86	55	-39	-60
	13(OPE)	121	-38	46	61	48	-82
	14(OPE)	240	-230	-235	-10	-146	83
	15(OPE)	175	-59	-53	48	-17	-56
	16(OCC)	146	-63	17	-1	34	18
	17(OCC)	-13	88	13	-7	8	-13
	18(OCC)	-3	2	0	-1	0	5
	19(OCC)	-57	30	132	5	88	-16
	20(OCC)	63	-162	-149	-65	-107	148
	21(OCC)	-3	9	33	-7	22	9
	MAX	345/L2	-230/L14	-235/L14	92/L2	-146/L14	148/L20
530		TYPE=Rigid ANC;					
	1(HYD)	3	-116	2	-16	0	15
	2(OPE)	345	-200	-159	65	-118	29

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	177	-114	-86	41	-78	-51
	6(OPE)	56	-169	-37	-31	-30	72
	8(SUS)	7	-108	-0	-15	-2	14
	9(SUS)	7	-108	-0	-15	-2	14
	10(OPE)	335	-177	-69	32	-63	-24
	11(OPE)	153	-27	-73	47	-65	-76
	12(OPE)	174	-107	-86	41	-77	-47
	13(OPE)	121	-84	58	51	39	-72
	14(OPE)	240	-276	-247	-47	-216	121
	15(OPE)	175	-106	-53	35	-50	-43
	16(OCC)	158	-63	17	-10	15	27
	17(OCC)	-25	88	13	6	13	-25
	18(OCC)	-3	7	0	-0	1	4
	19(OCC)	-57	30	144	10	117	-21
	20(OCC)	63	-162	-161	-89	-139	172
	21(OCC)	-3	9	33	-6	28	8
	MAX	345/L2	-276/L14	-247/L14	-89/L20	-216/L14	172/L20
550		TYPE=Rigid ANC;					
	1(HYD)	3	-116	2	-31	0	30
	2(OPE)	345	-200	-159	-221	-200	-486
	4(OPE)	177	-114	-86	-114	-120	-314
	6(OPE)	56	-169	-37	-117	-45	11
	8(SUS)	7	-108	-0	-33	-3	20
	9(SUS)	7	-108	-0	-33	-3	20
	10(OPE)	335	-177	-69	-106	-129	-528
	11(OPE)	153	-27	-73	-73	-101	-314
	12(OPE)	174	-107	-86	-113	-119	-307
	13(OPE)	121	-84	58	130	29	-250
	14(OPE)	240	-276	-247	-484	-295	-217
	15(OPE)	175	-106	-53	-65	-87	-304
	16(OCC)	158	-63	17	7	-8	-214
	17(OCC)	-25	88	13	41	19	-0
	18(OCC)	-3	7	0	1	1	8
	19(OCC)	-57	30	144	244	149	65
	20(OCC)	63	-162	-161	-371	-175	98
	21(OCC)	-3	9	33	48	33	11
	MAX	345/L2	-276/L14	-247/L14	-484/L14	-295/L14	-528/L10
560		TYPE=Rigid Z w/gap; Rigid +Y;					
	1(HYD)	0	-554	0	0	0	0
	2(OPE)	-837	-461	2790	0	0	0
	4(OPE)	-838	-482	2794	0	0	0
	6(OPE)	0	-405	0	0	0	0
	8(SUS)	0	-489	0	0	0	0
	9(SUS)	0	-488	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(OPE)	825	-436	2751	0	0	0
	11(OPE)	-87	-584	2749	0	0	0
	12(OPE)	-834	-417	2780	0	0	0
	13(OPE)	-992	-405	3308	0	0	0
	14(OPE)	-698	-485	2326	0	0	0
	15(OPE)	-835	-503	2784	0	0	0
	16(OCC)	1664	45	-42	0	0	0
	17(OCC)	751	-103	-45	0	0	0
	18(OCC)	4	65	-14	0	0	0
	19(OCC)	-154	77	514	0	0	0
	20(OCC)	140	-3	-468	0	0	0
	21(OCC)	3	-21	-10	0	0	0
	MAX	1664/L16	-584/L11	3308/L13			
590		TYPE=Rigid X w/gap; Rigid +Y;					
	1(HYD)	4	-382	-60	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	111	-432	-16	0	0	0
	8(SUS)	6	-348	-52	0	0	0
	9(SUS)	6	-348	-52	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	-135	-110	-26	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	-29	-107	-14	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	-135	-110	-26	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	-29	-107	-14	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-135/L11	-432/L6	-60/L1			
645		TYPE=Rigid +Y;					
	1(HYD)	0	-602	0	0	0	0
	2(OPE)	0	-255	0	0	0	0
	4(OPE)	0	-167	0	0	0	0
	6(OPE)	0	-671	0	0	0	0
	8(SUS)	0	-580	0	0	0	0
	9(SUS)	0	-580	0	0	0	0
	10(OPE)	0	-104	0	0	0	0
	11(OPE)	0	-135	0	0	0	0
	12(OPE)	0	-41	0	0	0	0
	13(OPE)	0	-199	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	0	-161	0	0	0	0
	15(OPE)	0	-239	0	0	0	0
	16(OCC)	0	64	0	0	0	0
	17(OCC)	0	32	0	0	0	0
	18(OCC)	0	127	0	0	0	0
	19(OCC)	0	-32	0	0	0	0
	20(OCC)	0	6	0	0	0	0
	21(OCC)	0	-71	0	0	0	0
	MAX		-671/L6				
695		TYPE=Rigid +Y;					
	1(HYD)	0	-340	0	0	0	0
	2(OPE)	0	-29	0	0	0	0
	4(OPE)	0	-259	0	0	0	0
	6(OPE)	0	-182	0	0	0	0
	8(SUS)	0	-316	0	0	0	0
	9(SUS)	0	-316	0	0	0	0
	10(OPE)	0	-482	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	-276	0	0	0	0
	13(OPE)	0	-220	0	0	0	0
	14(OPE)	0	-554	0	0	0	0
	15(OPE)	0	-48	0	0	0	0
	16(OCC)	0	-223	0	0	0	0
	17(OCC)	0	259	0	0	0	0
	18(OCC)	0	-16	0	0	0	0
	19(OCC)	0	39	0	0	0	0
	20(OCC)	0	-295	0	0	0	0
	21(OCC)	0	211	0	0	0	0
	MAX		-554/L14				
720		TYPE=Rigid +Y;					
	1(HYD)	-57	-492	136	0	0	0
	2(OPE)	255	-1061	-190	0	0	0
	4(OPE)	253	-1155	-237	0	0	0
	6(OPE)	-51	-386	104	0	0	0
	8(SUS)	-50	-440	122	0	0	0
	9(SUS)	-50	-440	122	0	0	0
	10(OPE)	308	-1183	-177	0	0	0
	11(OPE)	170	-1097	-282	0	0	0
	12(OPE)	229	-1053	-218	0	0	0
	13(OPE)	297	-1267	-237	0	0	0
	14(OPE)	188	-1249	-324	0	0	0
	15(OPE)	257	-1202	-253	0	0	0
	16(OCC)	55	-28	60	0	0	0
	17(OCC)	-83	57	-45	0	0	0
	18(OCC)	-25	102	18	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OCC)	44	-112	-1	0	0	0
	20(OCC)	-65	-94	-88	0	0	0
	21(OCC)	4	-48	-16	0	0	0
	MAX	308/L10	-1267/L13	-324/L14			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:43
Job:: BNK-GCS-CN-011-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 22 (OCC) L22=L16+L8
CASE 23 (OCC) L23=L17+L8
CASE 24 (OCC) L24=L18+L8
CASE 25 (OCC) L25=L19+L8
CASE 26 (OCC) L26=L20+L8
CASE 27 (OCC) L27=L21+L8
CASE 28 (EXP) L28=L2-L8
CASE 29 (EXP) L29=L4-L8
CASE 30 (EXP) L30=L2-L4

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	15.8	@Node	710
Code Stress:	38087.6	Allowable Stress:	241316.5
Axial Stress:	5960.4	@Node	120
Bending Stress:	50429.8	@Node	710
Torsion Stress:	2147.4	@Node	689
Hoop Stress:	12353.7	@Node	20
Max Stress Intensity:	50695.0	@Node	710

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	36.3	@Node	150
Code Stress:	46995.8	Allowable Stress:	129365.3
Axial Stress:	12075.0	@Node	120
Bending Stress:	58576.3	@Node	150
Torsion Stress:	4553.6	@Node	689
Hoop Stress:	24443.4	@Node	20
Max Stress Intensity:	62261.7	@Node	150

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	34.7	@Node	150
Code Stress:	44916.9	Allowable Stress:	129365.3
Axial Stress:	1240.6	@Node	380
Bending Stress:	58563.5	@Node	150
Torsion Stress:	4552.8	@Node	689
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	59407.4	@Node	150

CODE STRESS CHECK PASSED : LOADCASE 22 (OCC) L22=L16+L8

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:43
Job:: BNK-GCS-CN-011-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L16+L8
Ratio (%):                41.2       @Node    150
Code Stress:             70968.4       Allowable Stress:     172055.9
Axial Stress:            12871.0       @Node    110
Bending Stress:          89878.8       @Node    150
Torsion Stress:           8879.9       @Node    380
Hoop Stress:             24443.4       @Node     20
Max Stress Intensity:    93977.7       @Node    150

 CODE STRESS CHECK PASSED      : LOADCASE 23 (OCC) L23=L17+L8

Highest Stresses: (   KPa    ) LOADCASE 23 (OCC) L23=L17+L8
Ratio (%):                35.0       @Node    150
Code Stress:             60259.7       Allowable Stress:     172055.9
Axial Stress:            12569.8       @Node    110
Bending Stress:          75805.0       @Node    150
Torsion Stress:           8422.1       @Node    689
Hoop Stress:             24443.4       @Node     20
Max Stress Intensity:    79774.0       @Node    150

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L18+L8

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L18+L8
Ratio (%):                30.7       @Node    150
Code Stress:             52839.1       Allowable Stress:     172055.9
Axial Stress:            12429.5       @Node     20
Bending Stress:          66295.2       @Node    150
Torsion Stress:           3945.6       @Node    689
Hoop Stress:             24443.4       @Node     20
Max Stress Intensity:    70032.8       @Node    150

 CODE STRESS CHECK PASSED      : LOADCASE 25 (OCC) L25=L19+L8

Highest Stresses: (   KPa    ) LOADCASE 25 (OCC) L25=L19+L8
Ratio (%):                50.6       @Node    150
Code Stress:             87022.4       Allowable Stress:     172055.9
Axial Stress:            12074.8       @Node    170
Bending Stress:         108769.6       @Node    150
Torsion Stress:           5495.2       @Node    689
Hoop Stress:             24443.4       @Node     20
Max Stress Intensity:   114286.5       @Node    150

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L20+L8

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L20+L8
Ratio (%):                48.8       @Node    150
Code Stress:             83968.9       Allowable Stress:     172055.9
Axial Stress:            14548.6       @Node     10
Bending Stress:         105796.6       @Node    150
Torsion Stress:          10559.8       @Node    700
Hoop Stress:             24443.4       @Node     20
Max Stress Intensity:   110673.8       @Node    150
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L21+L8

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L21+L8
Ratio (%):                28.9       @Node    150
Code Stress:           49680.4       Allowable Stress:     172055.9
Axial Stress:          12080.9       @Node    120
Bending Stress:        61976.0       @Node    150
Torsion Stress:         6331.8       @Node    689
Hoop Stress:           24443.4       @Node     20
Max Stress Intensity:  65765.8       @Node    150

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L2-L8
Ratio (%):                94.3       @Node    150
Code Stress:          269336.7       Allowable Stress:     285639.1
Axial Stress:           2516.0       @Node     20
Bending Stress:       254055.7       @Node    150
Torsion Stress:        42490.3       @Node    188
Hoop Stress:               0.0       @Node     20
Max Stress Intensity: 632593.1       @Node    150

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L4-L8

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L4-L8
Ratio (%):                95.0       @Node    150
Code Stress:          270908.9       Allowable Stress:     285297.8
Axial Stress:           2529.8       @Node     20
Bending Stress:       255482.1       @Node    150
Torsion Stress:        42812.7       @Node    188
Hoop Stress:               0.0       @Node     20
Max Stress Intensity: 636278.4       @Node    150

 CODE STRESS CHECK PASSED      : LOADCASE 30 (EXP) L30=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 30 (EXP) L30=L2-L4
Ratio (%):                 4.9       @Node    380
Code Stress:           15251.1       Allowable Stress:     312464.3
Axial Stress:            176.1       @Node    450
Bending Stress:        15058.7       @Node    380
Torsion Stress:         2276.8       @Node    480
Hoop Stress:               0.0       @Node     20
Max Stress Intensity:  26163.3       @Node    380
```

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:43
Job:: BNK-GCS-CN-011-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

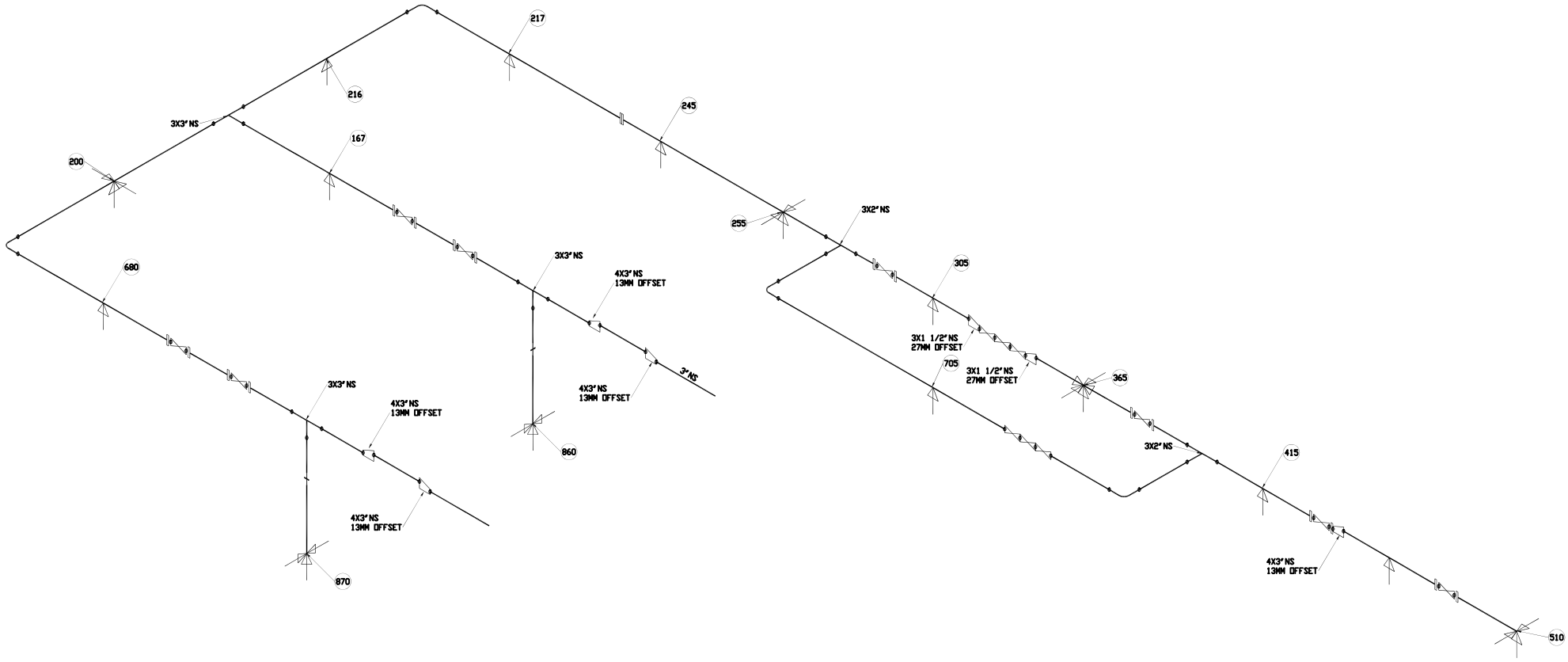
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
530		Absolute Method								
	Limits	2800	2800	2100		420	280	360		
	2(OPE)	131	-200	-356	0.170	67	-118	-25	0.421	
	4(OPE)	65	-114	-186	0.089	-7	-78	-65	0.277	
	6(OPE)	14	-169	-65	0.060	29	-30	73	0.203	
	8(SUS)	5	-108	-5	0.039	-1	-2	20	0.056	
	9(SUS)	5	-108	-5	0.039	-1	-2	20	0.056	

BNK-GCS-CN-014

1. CDH-112-0012-CN05-3"-PT
2. CDH-112-0013-CN05-3"-PT
3. CDH-112-0014-CN05-3"-PT
4. CDH-112-0015-CN07-4"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 3

REV.	CHANGE	DATE
		14 MAY 2024

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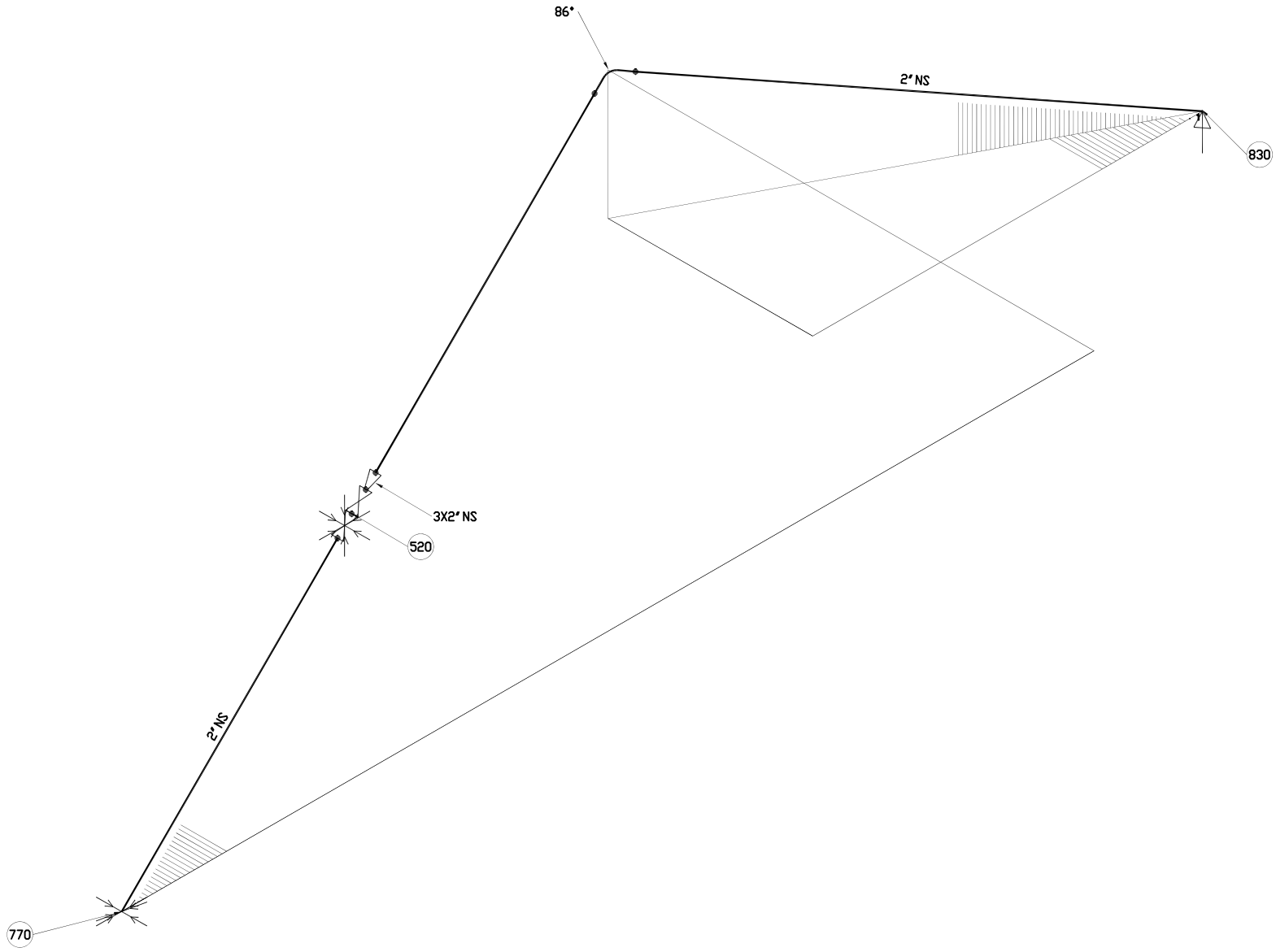

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

2 OF 3

REV.	CHANGE	DATE
		14 MAY 2024

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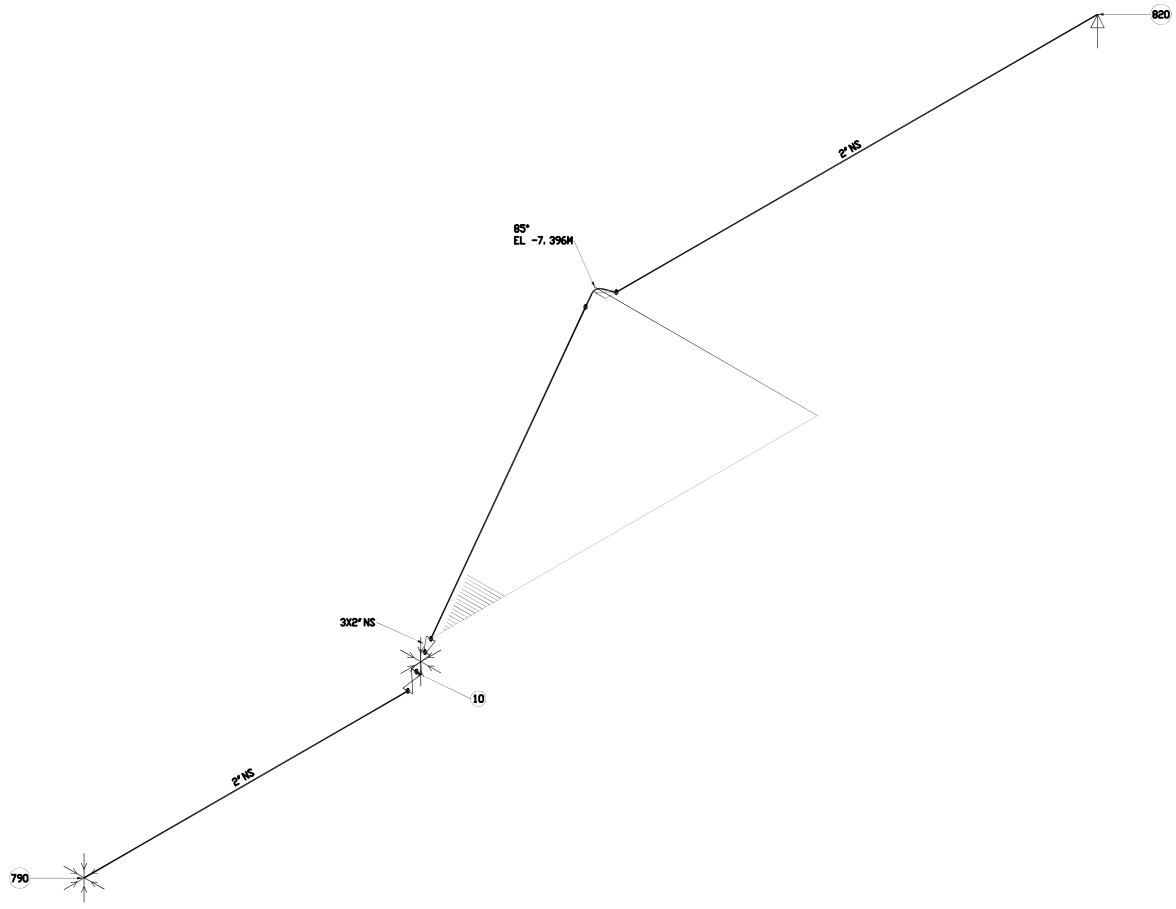

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 3 OF 3

REV.	CHANGE	DATE
		14 MAY 2024

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Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (SUS) W+P1
7 (SUS) WNC
8 (OPE) W+T2+P1+U1
9 (OPE) W+T2+P1-U1
10 (OPE) W+T2+P1+U2
11 (OPE) W+T2+P1+U3
12 (OPE) W+T2+P1-U3
13 (OCC) L13=L8-L4
14 (OCC) L14=L9-L4
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13+L6
19 (OCC) L19=L14+L6
20 (OCC) L20=L15+L6
21 (OCC) L21=L16+L6
22 (OCC) L22=L17+L6
23 (EXP) L23=L2-L6
24 (EXP) L24=L4-L6
25 (EXP) L25=L2-L4

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:38
Job:: BNK-GCS-CN-014-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:38
Job:: BNK-GCS-CN-014-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 19,2024 14:38:50

PIPE DATA

From 10 To 20 DZ= -73.025 mm.
PIPE
Dia= 60.325 mm. Wall= 5.537 mm. Cor= 3.0000 mm.
GENERAL
T1= 85 C T2= 50 C P1= 2,330.0530 KPa PHyd= 3,495.0798 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 199,086,608 KPa
EH2= 201,258,288 KPa EH3= 203,401,232 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0010020 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RIGID Weight= 44.48 N.
RESTRAINTS
Node 10 ANC Cnode 11
UNIFORM LOAD
Vector1 in G-s X1 Dir = -.26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = -.26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa
EQUIPMENT LIMITS
Nozzle Node = 10 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 1,779.29 N.
FB= 1,423.43 N. FC= 1,156.54 N. MA= 460.98 N.m. MB= .00 N.m.
MC= 921.96 N.m. Equipment Major Direction Vector= 1.0000 .0000 .0000
Interact. Mtd= Absolute

From 20 To 30 DZ= -89.000 mm.
REDUCER
Diam2= 88.900 mm. Wall2= 5.486 mm.

From 30 To 40 DZ= -344.000 mm.
PIPE
Dia= 88.900 mm. Wall= 5.486 mm.
Insul Thk= .000 mm.
BEND at "TO" end
Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 39
Angle/Node @2= .00 38

From 40 To 45 DX= -307.500 mm.

From 40 To 800 DY= -26.941 mm. DZ= -26.941 mm.

INPUT LISTING

```
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  800   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  45  To  50  DX= -307.500 mm.
 ------------------------------------------------------------------------------
 From  50  To  60  DX= -102.000 mm.  DY= 12.700 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 6.020 mm.
 ------------------------------------------------------------------------------
 From  60  To  70  DX= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  70  To  80  DX= -101.600 mm.  DY= -12.700 mm.
 REDUCER
    Diam2= 88.900 mm.   Wall2= 5.486 mm.
 ------------------------------------------------------------------------------
 From  80  To  85  DX= -248.500 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  85  To  840 DY= -38.100 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  840   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  85  To  90  DX= -248.500 mm.
 ------------------------------------------------------------------------------
 From  90  To  100  DX= -82.550 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  100  To  110  DX= -327.000 mm.
 RIGID  Weight= 653.89 N.
 ------------------------------------------------------------------------------
 From  110  To  120  DX= -82.550 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  120  To  130  DX= -200.000 mm.
 ------------------------------------------------------------------------------
 From  130  To  140  DX= -82.550 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  140  To  150  DX= -310.000 mm.
 RIGID  Weight= 622.75 N.
 ------------------------------------------------------------------------------
 From  150  To  160  DX= -82.550 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  160  To  165  DX= -333.600 mm.
 ------------------------------------------------------------------------------
 From  165  To  167  DX= -244.000 mm.
 RESTRAINTS
    Node  167  +Y   Mu = .30
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  167  To  170  DX= -89.600 mm.
 ---------------------------------------------------------------------------
 From  170  To  180  DX= -333.600 mm.  DY= .000 mm.
 ---------------------------------------------------------------------------
 From  180  To  190  DX= -333.600 mm.  DZ= .000 mm.
 ---------------------------------------------------------------------------
 From  190  To  195  DX= -333.600 mm.  DY= .000 mm.
 SIF's & TEE's
    Node  195   Welding Tee
 ---------------------------------------------------------------------------
 From  195  To  200 DY= .000 mm.  DZ= 1,440.000 mm.
 ---------------------------------------------------------------------------
 From  195  To  216 DZ= -1,033.500 mm.
 RESTRAINTS
    Node  216  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  216  To  215 DZ= -1,033.500 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 214
    Angle/Node @2= .00 213
 ---------------------------------------------------------------------------
 From  215  To  217  DX= 870.000 mm.
 RESTRAINTS
    Node  217  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  217  To  220  DX= 1,744.000 mm.
 ---------------------------------------------------------------------------
 From  220  To  230  DX= 82.550 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  230  To  240  DX= 82.550 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  240  To  245  DX= 200.000 mm.
 RESTRAINTS
    Node  245  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  245  To  250  DX= 670.667 mm.
 ---------------------------------------------------------------------------
 From  250  To  255  DX= 1,470.667 mm.
 RESTRAINTS
    Node  255  +Y   Mu = .30
    Node  255  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  255  To  260  DX= 270.000 mm.
 SIF's & TEE's
    Node  260   Welding Tee
 ---------------------------------------------------------------------------
 From  260  To  700 DZ= 400.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 699
    Angle/Node @2= .00 698
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  700  To  705  DX= 1,827.000 mm.
 RESTRAINTS
    Node  705  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  705  To  710  DX= 200.000 mm.
 ---------------------------------------------------------------------------
 From  710  To  720  DX= 82.550 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  720  To  730  DX= 327.000 mm.
 RIGID  Weight= 742.85 N.
 ---------------------------------------------------------------------------
 From  730  To  740  DX= 73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 6.0000 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  740  To  750  DX= 222.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 749
 ---------------------------------------------------------------------------
 From  750  To  410  DX= .000 mm.  DY= .320 mm.  DZ= -400.000 mm.
 ---------------------------------------------------------------------------
 From  260  To  270  DX= 86.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= 3.0000 mm.
    Insul Thk= .000 mm.
 ---------------------------------------------------------------------------
 From  270  To  280  DX= 82.550 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  280  To  290  DX= 292.000 mm.
 RIGID  Weight= 622.75 N.
 ---------------------------------------------------------------------------
 From  290  To  300  DX= 82.550 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  300  To  305  DX= 179.500 mm.
 RESTRAINTS
    Node  305  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  305  To  310  DX= 179.500 mm.
 ---------------------------------------------------------------------------
 From  310  To  320  DX= 101.000 mm.  DY= -27.000 mm.
 REDUCER
    Diam2= 48.260 mm.   Wall2= 7.137 mm.
 ---------------------------------------------------------------------------
 From  320  To  330  DX= 71.438 mm.
 PIPE
    Dia= 48.260 mm.   Wall= 7.137 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 40.03 N.
 ---------------------------------------------------------------------------
 From  330  To  340  DX= 209.000 mm.
```

INPUT LISTING

```
 RIGID  Weight= 84.52 N.
 ------------------------------------------------------------------------------
 From  340  To  350  DX= 71.438 mm.
 RIGID  Weight= 40.03 N.
 ------------------------------------------------------------------------------
 From  350  To  360  DX= 101.000 mm.  DY= 27.000 mm.
 REDUCER
    Diam2= 88.900 mm.   Wall2= 5.486 mm.
 ------------------------------------------------------------------------------
 From  360  To  365  DX= 320.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  365  +Y   Mu = .30
    Node  365  X   Gap= 3.000 mm.   Mu = .30
    Node  365  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  365  To  370  DX= 320.000 mm.
 ------------------------------------------------------------------------------
 From  370  To  380  DX= 82.550 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  380  To  390  DX= 292.000 mm.
 RIGID  Weight= 622.75 N.
 ------------------------------------------------------------------------------
 From  390  To  400  DX= 82.550 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 11.125 mm.   Cor= 6.0000 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  400  To  410  DX= 178.499 mm.  DY= .320 mm.  DZ= .000 mm.
 SIF's & TEE's
    Node  410   Welding Tee
 ------------------------------------------------------------------------------
 From  410  To  415  DX= 317.500 mm.
 RESTRAINTS
    Node  415  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  415  To  420  DX= 317.500 mm.
 ------------------------------------------------------------------------------
 From  420  To  430  DX= 82.550 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  430  To  440  DX= 229.000 mm.
 RIGID  Weight= 146.79 N.
 ------------------------------------------------------------------------------
 From  440  To  450  DX= 82.550 mm.
 GENERAL
    T1= 85 C   T2= 21 C   P1= 550.0125 KPa   PHyd= 825.0188 KPa
 RIGID  Weight= 71.17 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
```

INPUT LISTING
```
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  450  To  460  DX= 101.200 mm.  DY= 12.700 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 11.125 mm.
 ---------------------------------------------------------------------------
 From  460  To  465  DX= 300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 11.125 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  465  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  465  To  470  DX= 300.000 mm.
 ---------------------------------------------------------------------------
 From  470  To  480  DX= 88.900 mm.
 RIGID  Weight= 115.65 N.
 ---------------------------------------------------------------------------
 From  480  To  490  DX= 314.000 mm.
 RIGID  Weight= 965.26 N.
 ---------------------------------------------------------------------------
 From  490  To  500  DX= 88.900 mm.
 RIGID  Weight= 115.65 N.
 ---------------------------------------------------------------------------
 From  500  To  510  DX= 495.000 mm.
 RESTRAINTS
    Node  510  +Y   Mu = .30
    Node  510  Z   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  520  To  530 DZ= -73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 85 C   T2= 50 C   P1= 2,330.0530 KPa   PHyd= 3,495.0798 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 199,086,608 KPa
    EH2= 201,258,288 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0010020 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= 44.48 N.
 RESTRAINTS
    Node  520  ANC   Cnode  521
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 EQUIPMENT LIMITS
    Nozzle Node = 520   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 1,779.29 N.
    FB= 1,423.43 N.   FC= 1,156.54 N.   MA= 460.98 N.m.   MB= .00 N.m.
    MC= 921.96 N.m.   Equipment Major Direction Vector= 1.0000  .0000  .0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  530  To  540 DZ= -89.000 mm.
 REDUCER
```

INPUT LISTING
```
    Diam2= 88.900 mm.   Wall2= 5.486 mm.
 ------------------------------------------------------------------------------
 From  540  To  550 DZ= -365.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 549
    Angle/Node @2= .00 548
 ------------------------------------------------------------------------------
 From  550  To  555  DX= -307.500 mm.
 ------------------------------------------------------------------------------
 From  550  To  810 DY= -26.941 mm.  DZ= -26.941 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  810   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  555  To  560  DX= -307.500 mm.
 ------------------------------------------------------------------------------
 From  560  To  570  DX= -102.000 mm.  DY= 12.700 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 6.020 mm.
 ------------------------------------------------------------------------------
 From  570  To  580  DX= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  580  To  590  DX= -101.600 mm.  DY= -12.700 mm.
 REDUCER
    Diam2= 88.900 mm.   Wall2= 5.486 mm.
 ------------------------------------------------------------------------------
 From  590  To  595  DX= -248.500 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  595  To  850 DY= -38.100 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  850   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  595  To  600  DX= -248.500 mm.
 ------------------------------------------------------------------------------
 From  600  To  610  DX= -82.550 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  610  To  620  DX= -327.000 mm.
 RIGID  Weight= 653.89 N.
 ------------------------------------------------------------------------------
 From  620  To  630  DX= -82.550 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  630  To  640  DX= -200.000 mm.
 ------------------------------------------------------------------------------
 From  640  To  650  DX= -82.550 mm.
```

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INPUT LISTING

```
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  650  To  660  DX= -310.000 mm.
 RIGID  Weight= 622.75 N.
 ------------------------------------------------------------------------------
 From  660  To  670  DX= -82.550 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  670  To  680  DX= -577.333 mm.
 RESTRAINTS
    Node  680  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  680  To  690  DX= -577.333 mm.  DY= .000 mm.  DZ= .000 mm.
 ------------------------------------------------------------------------------
 From  690  To  210  DX= -577.333 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 209
    Angle/Node @2= .00 208
 ------------------------------------------------------------------------------
 From  210  To  200 DZ= -1,440.000 mm.
 RESTRAINTS
    Node  200  +Y   Mu = .30
    Node  200  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  521  To  760 DZ= 73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  760  To  770 DZ= 252.000 mm.
 RESTRAINTS
    Node  770  ANC
 ------------------------------------------------------------------------------
 From  11  To  780 DZ= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  780  To  790 DZ= 252.000 mm.
 RESTRAINTS
    Node  790  ANC
 ------------------------------------------------------------------------------
 From  800  To  820 DZ= -500.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 3.912 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   P1= .0000 KPa   Mat= (102)A53 Grade B
    E= 203,401,232 KPa   EH1= 203,401,232 KPa   EH2= 203,401,232 KPa
    EH3= 203,401,232 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000000 kg./cu.cm.   Insul Thk= .000 mm.
 RESTRAINTS
    Node  820  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
```

INPUT LISTING
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 810 To 830 DZ= -500.000 mm.
RESTRAINTS
Node 830 +Y Mu = .30

From 840 To 860 DY= -500.000 mm.
RESTRAINTS
Node 860 +Y Mu = .30
Node 860 Z Gap= 3.000 mm. Mu = .30

From 850 To 870 DY= -500.000 mm.
RESTRAINTS
Node 870 +Y Mu = .30
Node 870 Z Gap= 3.000 mm. Mu = .30
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MATERIAL Changes:

10	20	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
520	530	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
800	820	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.

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ALLOWABLE STRESS Changes

10	20	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
440	450	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
520	530	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
800	820	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa

INPUT LISTING

```
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
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 BEND ELEMENTS
    30              40              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 39
                                    Angle/Node @2= .00 38
   216             215              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   214   Angle/Node @2= .00 213
   260             700              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   699   Angle/Node @2= .00 698
   740             750              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   749
   540             550              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   549   Angle/Node @2= .00 548
   690             210              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   209   Angle/Node @2= .00 208
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 RIGIDS
    10              20          RIGID  Weight= 44.48 N.
    40             800          RIGID  Weight= .00 N.
    85             840          RIGID  Weight= .00 N.
    90             100          RIGID  Weight= 71.17 N.
   100             110          RIGID  Weight= 653.89 N.
   110             120          RIGID  Weight= 71.17 N.
   130             140          RIGID  Weight= 71.17 N.
   140             150          RIGID  Weight= 622.75 N.
   150             160          RIGID  Weight= 71.17 N.
   220             230          RIGID  Weight= 71.17 N.
   230             240          RIGID  Weight= 71.17 N.
   710             720          RIGID  Weight= 71.17 N.
   720             730          RIGID  Weight= 742.85 N.
   730             740          RIGID  Weight= 44.48 N.
   270             280          RIGID  Weight= 71.17 N.
   280             290          RIGID  Weight= 622.75 N.
   290             300          RIGID  Weight= 71.17 N.
   320             330          RIGID  Weight= 40.03 N.
   330             340          RIGID  Weight= 84.52 N.
   340             350          RIGID  Weight= 40.03 N.
   370             380          RIGID  Weight= 71.17 N.
   380             390          RIGID  Weight= 622.75 N.
   390             400          RIGID  Weight= 71.17 N.
   420             430          RIGID  Weight= 71.17 N.
   430             440          RIGID  Weight= 146.79 N.
```

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INPUT LISTING

440	450	RIGID	Weight= 71.17 N.
470	480	RIGID	Weight= 115.65 N.
480	490	RIGID	Weight= 965.26 N.
490	500	RIGID	Weight= 115.65 N.
520	530	RIGID	Weight= 44.48 N.
550	810	RIGID	Weight= .00 N.
595	850	RIGID	Weight= .00 N.
600	610	RIGID	Weight= 71.17 N.
610	620	RIGID	Weight= 653.89 N.
620	630	RIGID	Weight= 71.17 N.
640	650	RIGID	Weight= 71.17 N.
650	660	RIGID	Weight= 622.75 N.
660	670	RIGID	Weight= 71.17 N.
521	760	RIGID	Weight= 44.48 N.
11	780	RIGID	Weight= 44.48 N.

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SIF's & TEE's

40	800	Node	800	Unreinforced Tee
85	840	Node	840	Unreinforced Tee
190	195	Node	195	Welding Tee
255	260	Node	260	Welding Tee
400	410	Node	410	Welding Tee
550	810	Node	810	Unreinforced Tee
595	850	Node	850	Unreinforced Tee

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REDUCERS

20	30	Diam2= 88.900 mm.	Wall2= 5.486 mm.
50	60	Diam2= 114.300 mm.	Wall2= 6.020 mm.
70	80	Diam2= 88.900 mm.	Wall2= 5.486 mm.
310	320	Diam2= 48.260 mm.	Wall2= 7.137 mm.
350	360	Diam2= 88.900 mm.	Wall2= 5.486 mm.
450	460	Diam2= 114.300 mm.	Wall2= 11.125 mm.
530	540	Diam2= 88.900 mm.	Wall2= 5.486 mm.
560	570	Diam2= 114.300 mm.	Wall2= 6.020 mm.
580	590	Diam2= 88.900 mm.	Wall2= 5.486 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
10	ANC	11				.000	.000	.000
167	+Y				.30	.000	1.000	.000
216	+Y				.30	.000	1.000	.000
217	+Y				.30	.000	1.000	.000
245	+Y				.30	.000	1.000	.000
255	+Y				.30	.000	1.000	.000
255	Z			3.00	.30	.000	.000	1.000
705	+Y				.30	.000	1.000	.000
305	+Y				.30	.000	1.000	.000

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INPUT LISTING

```
     365   +Y                                        .30    .000  1.000   .000
     365   X                              3.00       .30   1.000   .000   .000
     365   Z                              3.00       .30    .000   .000  1.000
     415   +Y                                        .30    .000  1.000   .000
     465   +Y                                        .30    .000  1.000   .000
     510   +Y                                        .30    .000  1.000   .000
     510   Z                              3.00       .30    .000   .000  1.000
     520   ANC      521                                    .000   .000   .000
     680   +Y                                        .30    .000  1.000   .000
     200   +Y                                        .30    .000  1.000   .000
     200   X                              3.00       .30   1.000   .000   .000
     770   ANC                                         .000   .000   .000
     790   ANC                                         .000   .000   .000
     820   +Y                                        .30    .000  1.000   .000
     830   +Y                                        .30    .000  1.000   .000
     860   +Y                                        .30    .000  1.000   .000
     860   Z                              3.00       .30    .000   .000  1.000
     870   +Y                                        .30    .000  1.000   .000
     870   Z                              3.00       .30    .000   .000  1.000
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 EQUIPMENT LIMITS
    10             20             Nozzle Node = 10


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 1,779.29 N.   FB= 1,423.43 N.
    FC= 1,156.54 N.   MA= 460.98 N.m.   MB= .00 N.m.   MC= 921.96 N.m.
    Equipment Major Direction Vector= 1.0000  .0000  .0000
    Interact. Mtd= Absolute
   520            530             Nozzle Node = 520


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 1,779.29 N.   FB= 1,423.43 N.
    FC= 1,156.54 N.   MA= 460.98 N.m.   MB= .00 N.m.   MC= 921.96 N.m.
    Equipment Major Direction Vector= 1.0000  .0000  .0000
    Interact. Mtd= Absolute
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 UNIFORM LOAD Changes
    10             20            Vector1 in G-s
                                 X1 Dir = -.26 g's  Y1 Dir = .00 g's
                                 Z1 Dir = .00 g's
                                 Vector2 in G-s
                                 X2 Dir = .00 g's  Y2 Dir = .12 g's
                                 Z2 Dir = .00 g's
                                 Vector3 in G-s
                                 X3 Dir = .00 g's  Y3 Dir = .00 g's
                                 Z3 Dir = -.26 g's
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 INPUT UNITS USED...
```

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INPUT LISTING

```
 UNITS=    SI (m NOM/SCH INPUT= ON
       LENGTH             inches        x     25.400   =   mm.
       FORCE              pounds        x      4.448   =    N.
       MASS(dynamics)     pounds        x      0.454   =   Kg.
       MOMENTS(INPUT)     inch-pounds   x      0.113   =    N.m.
       MOMENTS(OUTPUT)    inch-pounds   x      0.113   =    N.m.
       STRESS             lbs./sq.in.   x      6.895   =      KPa
       TEMP. SCALE        degrees F.    x      0.556   =   C
       PRESSURE           psig          x      6.895   =      KPa
       ELASTIC MODULUS    lbs./sq.in.   x      6.895   =      KPa
       PIPE DENSITY       lbs./cu.in.   x      0.028   =   kg./cu.cm.
       INSULATION DENS.   lbs./cu.in.   x      0.028   =   kg./cu.cm.
       FLUID DENSITY      lbs./cu.in.   x      0.028   =   kg./cu.cm.
       TRANSL. STIF       lbs./in.      x      1.751   =   N./cm.
       ROTATIONAL STIF    in.lb./deg.   x      0.113   =    N.m./deg
       UNIFORM LOAD       lb./in.       x      1.751   =   N./cm.
       G LOAD             g's           x      1.000   =   g's
       WIND LOAD          lbs./sq.in.   x      6.895   =      KPa
       ELEVATION          inches        x      0.025   =    m.
       COMPOUND LENGTH    inches        x     25.400   =   mm.
       DIAMETER           inches        x     25.400   =   mm.
       WALL THICKNESS     inches        x     25.400   =   mm.
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 SETUP FILE PARAMETERS
 ------------------------------------------------------------------------------
  CONNECT GEOMETRY THRU CNODES =    YES
  MIN ALLOWED BEND ANGLE =            5.00000
  MAX ALLOWED BEND ANGLE =            95.0000
  BEND LENGTH ATTACHMENT PERCENT =    1.00000
  MIN ANGLE TO ADJACENT BEND PT =     5.00000
  LOOP CLOSURE TOLERANCE =            25.4000     mm.
  THERMAL BOWING HORZ TOLERANCE =    0.100000E-03
  AUTO NODE NUMBER INCREMENT=         10.0000
  Z AXIS UP=                         NO
  USE PRESSURE STIFFENING =         DEFAULT
  ALPHA TOLERANCE =                  0.500000E-01
  RESLD-FORCE =                      NO
  HGR DEF RESWGT STIF =              0.175127E+13 N./cm.
  DECOMP SNG TOL =                   0.100000E+11
  BEND AXIAL SHAPE =                YES
  FRICT STIF =                       0.175127E+07 N./cm.
  FRICT NORM FORCE VAR =             0.150000
  FRICT ANGLE VAR =                   15.0000
  FRICT SLIDE MULT =                  1.00000
  ROD TOLERANCE =                     1.00000
  ROD INC =                           2.00000
  INCORE NUMERICAL CHECK =           NO
  OUTCORE NUMERICAL CHECK =          NO
  DEFAULT TRANS RESTRAINT STIFF=     0.175127E+13    N./cm.
  DEFAULT ROT RESTRAINT STIFF=       0.112985E+12  N.m./deg
  IGNORE SPRING HANGER STIFFNESS =   NO
  MISSING MASS ZPA =                EXTRACTED
  MIN WALL MILL TOLERANCE =           12.5000
  WRC-107 VERSION =                 MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =           LAST VALUE
```

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INPUT LISTING

```
  DEFAULT AMBIENT TEMPERATURE=        21.1111       C
  BOURDON PRESSURE=                  NONE
  COEFFICIENT OF FRICTION (MU) =          0.000000
  INCLUDE SPRG STIF IN HGR OPE =     NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =             B31.1(POST1980)
  USE WRC329                         NO
  NO REDUCED SIF FOR RFT AND WLT     NO
  B31.1 REDUCED Z FIX =              YES
  CLASS 1 BRANCH FLEX                NO
  ALL STRESS CASES CORRODED =        NO
  ADD TORSION IN SL STRESS =         DEFAULT
  ADD F/A IN STRESS =                DEFAULT
  OCCASIONAL LOAD FACTOR =                0.000000
  DEFAULT CODE =                     B31.3
  B31.3 SUS CASE SIF FACTOR =             0.000000
  ALLOW USERS BEND SIF =             NO
  USE SCHNEIDER                      NO
  YIELD CRITERION STRESS =           MAX 3D SHEAR
  USE PD/4T                           NO
  BASE HOOP STRESS ON ? =             ID
  EN13480 USE IN OUTPLANE SIFS=       NO
  LIBERAL EXPANSION ALLOWABLE=       YES
  B31.3 SEC 319.2.3C SAXIAL=         Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=    DEFAULT
  IMPLEMENT B313 APP-P                NO
  IMPLEMENT B313 CODE CASE 178       YES
  IGNORE B31.1/B31.3 Wc FACTOR=      YES
  USE FRP SIF =                      YES
  USE FRP FLEX =                     YES
  BS 7159 Pressure Stiffening=       Design Strain
  FRP Property Data File=            CAESAR.FRP
  FRP Emod (axial) =                  0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =       0.250000
  FRP Ea/Eh*Vh/a =                    0.152730
  FRP Laminate Type =                THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                       0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =    NO
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```

EXECUTION CONTROL PARAMETERS

```
   Rigid/ExpJt Print Flag .....    1.000
   Bourdon Option .............     .000
   Loop Closure Flag ..........    2.000
   Thermal Bowing Delta Temp ..     .000 C
   Liberal Allowable Flag .....    1.000
   Uniform Load Option ........    1.000

   Ambient Temperature ........   20.997 C
   Plastic (FRP) Alpha ........   21.600
   Plastic (FRP) GMOD/EMODa ...     .250
```

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```
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
```

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COORDINATE REPORT

NODE	X	Y	Z
10	-15700.080	-7395.683	7324.219
20	-15700.080	-7395.683	7251.194
30	-15700.080	-7395.683	7162.194
40	-15700.080	-7395.683	6818.194
45	-16007.580	-7395.683	6818.194
40	-15700.080	-7395.683	6818.194
800	-15700.080	-7422.624	6791.253
45	-16007.580	-7395.683	6818.194
50	-16315.080	-7395.683	6818.194
60	-16417.080	-7382.983	6818.194
70	-16717.080	-7382.983	6818.194
80	-16818.680	-7395.683	6818.194
85	-17067.180	-7395.683	6818.194
840	-17067.180	-7433.783	6818.194
85	-17067.180	-7395.683	6818.194
90	-17315.680	-7395.683	6818.194
100	-17398.230	-7395.683	6818.194
110	-17725.230	-7395.683	6818.194
120	-17807.781	-7395.683	6818.194
130	-18007.781	-7395.683	6818.194
140	-18090.332	-7395.683	6818.194
150	-18400.332	-7395.683	6818.194
160	-18482.883	-7395.683	6818.194
165	-18816.482	-7395.683	6818.194
167	-19060.482	-7395.683	6818.194
170	-19150.082	-7395.683	6818.194
180	-19483.682	-7395.683	6818.194
190	-19817.281	-7395.683	6818.194
195	-20150.881	-7395.683	6818.194
200	-20150.881	-7395.683	8258.194
195	-20150.881	-7395.683	6818.194
216	-20150.881	-7395.683	5784.694
215	-20150.881	-7395.683	4751.194
217	-19280.881	-7395.683	4751.194
220	-17536.881	-7395.683	4751.194
230	-17454.330	-7395.683	4751.194
240	-17371.779	-7395.683	4751.194
245	-17171.779	-7395.683	4751.194
250	-16501.113	-7395.683	4751.194
255	-15030.446	-7395.683	4751.194
260	-14760.446	-7395.683	4751.194
700	-14760.446	-7395.683	5151.194
705	-12933.446	-7395.683	5151.194

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INPUT LISTING

710	-12733.446	-7395.683	5151.194
720	-12650.896	-7395.683	5151.194
730	-12323.896	-7395.683	5151.194
740	-12250.871	-7395.683	5151.194
750	-12028.871	-7395.683	5151.194
410	-12028.871	-7395.363	4751.194
260	-14760.446	-7395.683	4751.194
270	-14674.446	-7395.683	4751.194
280	-14591.896	-7395.683	4751.194
290	-14299.896	-7395.683	4751.194
300	-14217.347	-7395.683	4751.194
305	-14037.847	-7395.683	4751.194
310	-13858.347	-7395.683	4751.194
320	-13757.347	-7422.683	4751.194
330	-13685.908	-7422.683	4751.194
340	-13476.908	-7422.683	4751.194
350	-13405.470	-7422.683	4751.194
360	-13304.470	-7395.683	4751.194
365	-12984.470	-7395.683	4751.194
370	-12664.470	-7395.683	4751.194
380	-12581.920	-7395.683	4751.194
390	-12289.920	-7395.683	4751.194
400	-12207.370	-7395.683	4751.194
410	-12028.871	-7395.363	4751.194
415	-11711.371	-7395.363	4751.194
420	-11393.871	-7395.363	4751.194
430	-11311.321	-7395.363	4751.194
440	-11082.321	-7395.363	4751.194
450	-10999.771	-7395.363	4751.194
460	-10898.571	-7382.663	4751.194
465	-10598.571	-7382.663	4751.194
470	-10298.571	-7382.663	4751.194
480	-10209.671	-7382.663	4751.194
490	-9895.671	-7382.663	4751.194
500	-9806.771	-7382.663	4751.194
510	-9311.771	-7382.663	4751.194
520	-15636.076	-7395.683	10225.220
530	-15636.076	-7395.683	10152.194
540	-15636.076	-7395.683	10063.194
550	-15636.076	-7395.683	9698.194
555	-15943.576	-7395.683	9698.194
550	-15636.076	-7395.683	9698.194
810	-15636.076	-7422.624	9671.253
555	-15943.576	-7395.683	9698.194
560	-16251.076	-7395.683	9698.194
570	-16353.076	-7382.983	9698.194
580	-16653.076	-7382.983	9698.194
590	-16754.676	-7395.683	9698.194
595	-17003.176	-7395.683	9698.194
850	-17003.176	-7433.783	9698.194
595	-17003.176	-7395.683	9698.194
600	-17251.676	-7395.683	9698.194
610	-17334.227	-7395.683	9698.194
620	-17661.227	-7395.683	9698.194
630	-17743.777	-7395.683	9698.194
640	-17943.777	-7395.683	9698.194

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INPUT LISTING

650	-18026.328	-7395.683	9698.194
660	-18336.328	-7395.683	9698.194
670	-18418.879	-7395.683	9698.194
680	-18996.213	-7395.683	9698.194
690	-19573.547	-7395.683	9698.194
210	-20150.881	-7395.683	9698.194
200	-20150.881	-7395.683	8258.194
520	-15636.076	-7395.683	10225.220
760	-15636.076	-7395.683	10298.245
770	-15636.076	-7395.683	10550.245
10	-15700.080	-7395.683	7324.219
780	-15700.080	-7395.683	7397.244
790	-15700.080	-7395.683	7649.244
800	-15700.080	-7422.624	6791.253
820	-15700.080	-7422.624	6291.253
810	-15636.076	-7422.624	9671.253
830	-15636.076	-7422.624	9171.253
840	-17067.180	-7433.783	6818.194
860	-17067.180	-7933.783	6818.194
850	-17003.176	-7433.783	9698.194
870	-17003.176	-7933.783	9698.194

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (SUS) W+P1
7 (SUS) WNC
8 (OPE) W+T2+P1+U1
9 (OPE) W+T2+P1-U1
10 (OPE) W+T2+P1+U2
11 (OPE) W+T2+P1+U3
12 (OPE) W+T2+P1-U3
13 (OCC) L13=L8-L4
14 (OCC) L14=L9-L4
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13+L6
19 (OCC) L19=L14+L6
20 (OCC) L20=L15+L6
21 (OCC) L21=L16+L6
22 (OCC) L22=L17+L6
23 (EXP) L23=L2-L6
24 (EXP) L24=L4-L6
25 (EXP) L25=L2-L4

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (SUS) W+P1
CASE 7 (SUS) WNC
CASE 8 (OPE) W+T2+P1+U1
CASE 9 (OPE) W+T2+P1-U1
CASE 10 (OPE) W+T2+P1+U2
CASE 11 (OPE) W+T2+P1+U3
CASE 12 (OPE) W+T2+P1-U3
CASE 13 (OCC) L13=L8-L4
CASE 14 (OCC) L14=L9-L4
CASE 15 (OCC) L15=L10-L4
CASE 16 (OCC) L16=L11-L4
CASE 17 (OCC) L17=L12-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid ANC;					
	1(HYD)	-1	-91	5	8	0	-6
	2(OPE)	318	7	132	7	-43	-17
	4(OPE)	299	-28	112	6	-45	-12
	6(SUS)	-1	-88	5	8	0	-6
	7(SUS)	-2	-60	4	9	0	-6
	8(OPE)	-182	-29	9	10	45	-13
	9(OPE)	699	-58	180	2	-118	-8
	10(OPE)	284	-17	107	5	-42	-12
	11(OPE)	59	27	-58	-3	-67	-16
	12(OPE)	302	-95	164	44	9	1
	13(OCC)	-481	-0	-102	4	90	-1
	14(OCC)	401	-29	68	-4	-73	5
	15(OCC)	-14	12	-4	-1	3	1
	16(OCC)	-240	55	-170	-9	-22	-4
	17(OCC)	4	-67	52	39	54	13
	MAX	699/L9	-95/L12	180/L9	44/L12	-118/L9	-17/L2
167		TYPE=Rigid +Y;					
	1(HYD)	-84	-996	1	0	0	0
	2(OPE)	-317	-1071	-50	0	0	0
	4(OPE)	-307	-1039	-54	0	0	0
	6(SUS)	-85	-996	1	0	0	0
	7(SUS)	-88	-912	1	0	0	0
	8(OPE)	-325	-1087	-26	0	0	0
	9(OPE)	-278	-952	-68	0	0	0
	10(OPE)	-273	-923	-46	0	0	0
	11(OPE)	-126	-1030	-282	0	0	0
	12(OPE)	-166	-1080	278	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OCC)	-18	-47	28	0	0	0
	14(OCC)	29	87	-14	0	0	0
	15(OCC)	34	117	8	0	0	0
	16(OCC)	181	10	-228	0	0	0
	17(OCC)	141	-41	332	0	0	0
	MAX	-325/L8	-1087/L8	332/L17			
200		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-1	-324	-1	0	0	0
	2(OPE)	-86	-304	32	0	0	0
	4(OPE)	-88	-314	34	0	0	0
	6(SUS)	-1	-324	-1	0	0	0
	7(SUS)	-1	-193	0	0	0	0
	8(OPE)	-87	-305	29	0	0	0
	9(OPE)	-91	-330	39	0	0	0
	10(OPE)	-76	-274	30	0	0	0
	11(OPE)	-54	-314	-77	0	0	0
	12(OPE)	-40	-308	83	0	0	0
	13(OCC)	1	9	-6	0	0	0
	14(OCC)	-3	-16	5	0	0	0
	15(OCC)	11	40	-4	0	0	0
	16(OCC)	34	-0	-112	0	0	0
	17(OCC)	47	6	49	0	0	0
	MAX	-91/L9	-330/L9	-112/L16			
216		TYPE=Rigid +Y;					
	1(HYD)	-1	-323	-0	0	0	0
	2(OPE)	-98	-331	-19	0	0	0
	4(OPE)	-96	-329	-21	0	0	0
	6(SUS)	-1	-323	-0	0	0	0
	7(SUS)	-1	-213	-0	0	0	0
	8(OPE)	-94	-318	-13	0	0	0
	9(OPE)	-91	-342	-47	0	0	0
	10(OPE)	-85	-290	-18	0	0	0
	11(OPE)	-61	-350	-86	0	0	0
	12(OPE)	-61	-290	62	0	0	0
	13(OCC)	2	12	8	0	0	0
	14(OCC)	5	-13	-25	0	0	0
	15(OCC)	11	39	3	0	0	0
	16(OCC)	36	-21	-64	0	0	0
	17(OCC)	35	39	83	0	0	0
	MAX	-98/L2	-350/L11	-86/L11			
217		TYPE=Rigid +Y;					
	1(HYD)	0	-283	-0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	-79	-283	-31	0	0	0
	4(OPE)	-79	-284	-31	0	0	0
	6(SUS)	1	-283	-0	0	0	0
	7(SUS)	0	-197	-0	0	0	0
	8(OPE)	-82	-285	-24	0	0	0
	9(OPE)	-64	-280	-54	0	0	0
	10(OPE)	-70	-250	-27	0	0	0
	11(OPE)	-50	-281	-68	0	0	0
	12(OPE)	-73	-288	46	0	0	0
	13(OCC)	-3	-2	7	0	0	0
	14(OCC)	15	3	-23	0	0	0
	15(OCC)	9	34	4	0	0	0
	16(OCC)	30	2	-38	0	0	0
	17(OCC)	7	-4	77	0	0	0
	MAX	-82/L8	-288/L12	77/L17			
245		TYPE=Rigid +Y;					
	1(HYD)	1	-465	-0	0	0	0
	2(OPE)	-132	-466	-47	0	0	0
	4(OPE)	-135	-466	-37	0	0	0
	6(SUS)	1	-465	-0	0	0	0
	7(SUS)	0	-362	-0	0	0	0
	8(OPE)	-136	-465	-29	0	0	0
	9(OPE)	8	-467	-61	0	0	0
	10(OPE)	-118	-410	-34	0	0	0
	11(OPE)	-78	-467	-117	0	0	0
	12(OPE)	-110	-463	85	0	0	0
	13(OCC)	-2	1	8	0	0	0
	14(OCC)	142	-1	-24	0	0	0
	15(OCC)	17	56	3	0	0	0
	16(OCC)	57	-1	-79	0	0	0
	17(OCC)	25	3	123	0	0	0
	MAX	142/L14	-467/L11	123/L17			
255		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	2	-601	3	0	0	0
	2(OPE)	-175	-592	-32	0	0	0
	4(OPE)	-177	-594	-17	0	0	0
	6(SUS)	2	-602	3	0	0	0
	7(SUS)	1	-505	3	0	0	0
	8(OPE)	-179	-599	-12	0	0	0
	9(OPE)	179	-599	11	0	0	0
	10(OPE)	-156	-522	-17	0	0	0
	11(OPE)	-94	-594	-151	0	0	0
	12(OPE)	-118	-600	136	0	0	0
	13(OCC)	-2	-5	6	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OCC)	356	-5	29	0	0	0
	15(OCC)	21	71	0	0	0	0
	16(OCC)	83	0	-134	0	0	0
	17(OCC)	59	-7	153	0	0	0
	MAX	356/L14	-602/L6	153/L17			
305		TYPE=Rigid +Y;					
	1(HYD)	3	-546	-10	0	0	0
	2(OPE)	-167	-560	-20	0	0	0
	4(OPE)	-167	-557	-6	0	0	0
	6(SUS)	3	-546	-10	0	0	0
	7(SUS)	1	-518	-10	0	0	0
	8(OPE)	-165	-549	-6	0	0	0
	9(OPE)	165	-551	2	0	0	0
	10(OPE)	-147	-491	-7	0	0	0
	11(OPE)	-57	-556	-157	0	0	0
	12(OPE)	-70	-549	149	0	0	0
	13(OCC)	2	8	0	0	0	0
	14(OCC)	332	6	9	0	0	0
	15(OCC)	20	67	-1	0	0	0
	16(OCC)	110	1	-150	0	0	0
	17(OCC)	97	8	156	0	0	0
	MAX	332/L14	-560/L2	-157/L11			
365		TYPE=Rigid Z w/gap; Rigid +Y; Rigid X w/gap;					
	1(HYD)	-4	-590	23	0	0	0
	2(OPE)	-31	-581	-112	0	0	0
	4(OPE)	-33	-590	-35	0	0	0
	6(SUS)	-4	-590	23	0	0	0
	7(SUS)	-2	-547	23	0	0	0
	8(OPE)	-177	-591	-4	0	0	0
	9(OPE)	176	-588	-1	0	0	0
	10(OPE)	-9	-519	-36	0	0	0
	11(OPE)	7	-589	-176	0	0	0
	12(OPE)	7	-591	177	0	0	0
	13(OCC)	-144	-1	30	0	0	0
	14(OCC)	209	1	33	0	0	0
	15(OCC)	24	71	-2	0	0	0
	16(OCC)	40	1	-142	0	0	0
	17(OCC)	40	-1	212	0	0	0
	MAX	209/L14	-591/L8	212/L17			
415		TYPE=Rigid +Y;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	1(HYD)	-4	-918	-67	0	0	0
	2(OPE)	285	-950	-8	0	0	0
	4(OPE)	276	-919	-13	0	0	0
	6(SUS)	-4	-918	-67	0	0	0
	7(SUS)	-3	-876	-65	0	0	0
	8(OPE)	-275	-921	-23	0	0	0
	9(OPE)	275	-918	-5	0	0	0
	10(OPE)	242	-809	-11	0	0	0
	11(OPE)	137	-916	-238	0	0	0
	12(OPE)	146	-920	235	0	0	0
	13(OCC)	-551	-1	-11	0	0	0
	14(OCC)	-0	2	8	0	0	0
	15(OCC)	-33	110	2	0	0	0
	16(OCC)	-138	4	-225	0	0	0
	17(OCC)	-130	-1	247	0	0	0
	MAX	-551/L13	-950/L2	247/L17			
465		TYPE=Rigid +Y;					
	1(HYD)	-0	-1190	79	0	0	0
	2(OPE)	345	-1148	-2	0	0	0
	4(OPE)	355	-1185	-0	0	0	0
	6(SUS)	-0	-1190	79	0	0	0
	7(SUS)	1	-1111	77	0	0	0
	8(OPE)	9	-1185	18	0	0	0
	9(OPE)	357	-1188	-2	0	0	0
	10(OPE)	313	-1043	-1	0	0	0
	11(OPE)	212	-1188	-286	0	0	0
	12(OPE)	205	-1187	291	0	0	0
	13(OCC)	-346	-1	18	0	0	0
	14(OCC)	1	-4	-2	0	0	0
	15(OCC)	-43	142	-0	0	0	0
	16(OCC)	-143	-3	-286	0	0	0
	17(OCC)	-151	-2	292	0	0	0
	MAX	357/L9	-1190/L6	292/L17			
510		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-0	-591	-29	0	0	0
	2(OPE)	181	-604	-1	0	0	0
	4(OPE)	177	-591	-1	0	0	0
	6(SUS)	-0	-591	-29	0	0	0
	7(SUS)	0	-554	-28	0	0	0
	8(OPE)	-18	-591	-6	0	0	0
	9(OPE)	177	-591	-1	0	0	0
	10(OPE)	156	-520	-1	0	0	0
	11(OPE)	93	-591	-151	0	0	0
	12(OPE)	86	-591	155	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OCC)	-195	-0	-5	0	0	0
	14(OCC)	0	-0	-0	0	0	0
	15(OCC)	-21	71	0	0	0	0
	16(OCC)	-84	0	-150	0	0	0
	17(OCC)	-91	-0	156	0	0	0
	MAX	-195/L13	-604/L2	156/L17			
520		TYPE=Rigid ANC;					
	1(HYD)	-1	-93	6	8	0	-6
	2(OPE)	707	-6	140	9	-107	-16
	4(OPE)	376	-49	81	7	-63	-10
	6(SUS)	-1	-90	7	8	0	-6
	7(SUS)	-2	-60	7	8	0	-6
	8(OPE)	47	-36	14	11	3	-13
	9(OPE)	667	-65	136	2	-121	-7
	10(OPE)	362	-39	77	6	-59	-10
	11(OPE)	224	34	-10	-3	-73	-16
	12(OPE)	400	-123	151	53	-8	6
	13(OCC)	-330	13	-67	4	66	-3
	14(OCC)	291	-15	55	-4	-58	3
	15(OCC)	-14	10	-4	-1	4	1
	16(OCC)	-153	84	-91	-10	-10	-6
	17(OCC)	23	-74	69	47	55	17
	MAX	707/L2	-123/L12	151/L12	53/L12	-121/L9	17/L17
680		TYPE=Rigid +Y;					
	1(HYD)	-84	-991	1	0	0	0
	2(OPE)	-265	-1048	169	0	0	0
	4(OPE)	-262	-1003	147	0	0	0
	6(SUS)	-85	-992	1	0	0	0
	7(SUS)	-91	-875	-1	0	0	0
	8(OPE)	-289	-1064	135	0	0	0
	9(OPE)	-232	-937	158	0	0	0
	10(OPE)	-230	-888	135	0	0	0
	11(OPE)	-178	-973	-231	0	0	0
	12(OPE)	-121	-1102	308	0	0	0
	13(OCC)	-27	-61	-12	0	0	0
	14(OCC)	30	65	11	0	0	0
	15(OCC)	33	115	-13	0	0	0
	16(OCC)	84	30	-379	0	0	0
	17(OCC)	141	-99	160	0	0	0
	MAX	-289/L8	-1102/L12	-379/L16			
705		TYPE=Rigid +Y;					
	1(HYD)	3	-992	1	0	0	0
	2(OPE)	-48	-993	155	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	45	-993	77	0	0	0
	6(SUS)	3	-992	1	0	0	0
	7(SUS)	3	-945	1	0	0	0
	8(OPE)	-297	-993	28	0	0	0
	9(OPE)	297	-994	20	0	0	0
	10(OPE)	37	-874	76	0	0	0
	11(OPE)	17	-996	-298	0	0	0
	12(OPE)	12	-991	297	0	0	0
	13(OCC)	-341	0	-49	0	0	0
	14(OCC)	253	-0	-57	0	0	0
	15(OCC)	-8	119	-1	0	0	0
	16(OCC)	-27	-2	-376	0	0	0
	17(OCC)	-32	2	220	0	0	0
	MAX	-341/L13	-996/L11	-376/L16			
770		TYPE=Rigid ANC;					
	1(HYD)	-1	-162	6	-39	1	-6
	2(OPE)	707	-75	140	-9	-337	-16
	4(OPE)	376	-118	81	-25	-185	-10
	6(SUS)	-1	-159	7	-38	1	-6
	7(SUS)	-2	-123	7	-26	1	-6
	8(OPE)	29	-105	14	-17	-8	-13
	9(OPE)	685	-134	136	-35	-342	-7
	10(OPE)	362	-100	77	-21	-177	-10
	11(OPE)	224	-35	-28	-8	-146	-16
	12(OPE)	400	-192	169	-3	-138	6
	13(OCC)	-348	13	-67	9	177	-3
	14(OCC)	309	-15	55	-9	-157	3
	15(OCC)	-14	19	-4	5	8	1
	16(OCC)	-153	84	-109	17	39	-6
	17(OCC)	23	-74	87	23	47	17
	MAX	707/L2	-192/L12	169/L12	-39/L1	-342/L9	17/L17
790		TYPE=Rigid ANC;					
	1(HYD)	-1	-160	5	-38	1	-6
	2(OPE)	318	-62	132	-7	-146	-17
	4(OPE)	299	-97	112	-19	-142	-12
	6(SUS)	-1	-157	5	-37	1	-6
	7(SUS)	-2	-123	4	-26	1	-6
	8(OPE)	-200	-98	9	-15	109	-13
	9(OPE)	717	-127	180	-33	-350	-8
	10(OPE)	284	-78	107	-15	-135	-12
	11(OPE)	59	-42	-76	-10	-86	-16
	12(OPE)	302	-164	182	-3	-89	1
	13(OCC)	-499	-0	-102	4	251	-1
	14(OCC)	418	-29	68	-14	-208	5
	15(OCC)	-14	20	-4	5	7	1

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OCC)	-240	55	-188	9	56	-4
	17(OCC)	4	-67	70	17	53	13
	MAX	717/L9	-164/L12	-188/L16	-38/L1	-350/L9	-17/L2
820		TYPE=Rigid +Y;					
	1(HYD)	-4	-55	-3	0	0	0
	2(OPE)	4	-60	-18	0	0	0
	4(OPE)	11	-63	-15	0	0	0
	6(SUS)	-4	-48	-4	0	0	0
	7(SUS)	-3	-30	-2	0	0	0
	8(OPE)	-5	-21	-4	0	0	0
	9(OPE)	30	-110	-15	0	0	0
	10(OPE)	9	-56	-14	0	0	0
	11(OPE)	31	-133	-25	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OCC)	-16	42	12	0	0	0
	14(OCC)	18	-47	1	0	0	0
	15(OCC)	-2	7	1	0	0	0
	16(OCC)	20	-69	-10	0	0	0
	17(OCC)	-11	63	15	0	0	0
	MAX	31/L11	-133/L11	-25/L11			
830		TYPE=Rigid +Y;					
	1(HYD)	-4	-56	-5	0	0	0
	2(OPE)	8	-46	-11	0	0	0
	4(OPE)	13	-63	-13	0	0	0
	6(SUS)	-4	-49	-5	0	0	0
	7(SUS)	-3	-32	-8	0	0	0
	8(OPE)	-2	-18	-5	0	0	0
	9(OPE)	29	-108	-14	0	0	0
	10(OPE)	11	-53	-12	0	0	0
	11(OPE)	34	-144	-27	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OCC)	-15	45	8	0	0	0
	14(OCC)	16	-45	-1	0	0	0
	15(OCC)	-2	10	2	0	0	0
	16(OCC)	20	-81	-14	0	0	0
	17(OCC)	-13	63	13	0	0	0
	MAX	34/L11	-144/L11	-27/L11			
860		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	90	-1301	-2	0	0	0
	2(OPE)	-348	-1310	-182	0	0	0
	4(OPE)	-132	-1298	-118	0	0	0
	6(SUS)	91	-1289	-2	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	7(SUS)	94	-1192	-2	0	0	0
	8(OPE)	-388	-1302	-46	0	0	0
	9(OPE)	271	-1293	-158	0	0	0
	10(OPE)	-157	-1144	-116	0	0	0
	11(OPE)	-79	-1295	-380	0	0	0
	12(OPE)	-285	-1258	247	0	0	0
	13(OCC)	-255	-4	72	0	0	0
	14(OCC)	403	5	-40	0	0	0
	15(OCC)	-25	154	2	0	0	0
	16(OCC)	53	3	-262	0	0	0
	17(OCC)	-153	40	365	0	0	0
	MAX	403/L14	-1310/L2	-380/L11			
870		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	89	-1299	-2	0	0	0
	2(OPE)	-375	-1316	-122	0	0	0
	4(OPE)	-36	-1299	-80	0	0	0
	6(SUS)	90	-1287	-2	0	0	0
	7(SUS)	96	-1203	2	0	0	0
	8(OPE)	-391	-1305	-27	0	0	0
	9(OPE)	284	-1294	-135	0	0	0
	10(OPE)	-64	-1145	-73	0	0	0
	11(OPE)	-65	-1310	-388	0	0	0
	12(OPE)	-210	-1228	303	0	0	0
	13(OCC)	-355	-6	54	0	0	0
	14(OCC)	320	6	-55	0	0	0
	15(OCC)	-28	154	8	0	0	0
	16(OCC)	-29	-11	-307	0	0	0
	17(OCC)	-174	71	383	0	0	0
	MAX	-391/L8	-1316/L2	-388/L11			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (SUS) W+P1
7 (SUS) WNC
8 (OPE) W+T2+P1+U1
9 (OPE) W+T2+P1-U1
10 (OPE) W+T2+P1+U2
11 (OPE) W+T2+P1+U3
12 (OPE) W+T2+P1-U3
13 (OCC) L13=L8-L4
14 (OCC) L14=L9-L4
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13+L6
19 (OCC) L19=L14+L6
20 (OCC) L20=L15+L6
21 (OCC) L21=L16+L6
22 (OCC) L22=L17+L6
23 (EXP) L23=L2-L6
24 (EXP) L24=L4-L6
25 (EXP) L25=L2-L4

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 6 (SUS) W+P1
CASE 7 (SUS) WNC
CASE 18 (OCC) L18=L13+L6
CASE 19 (OCC) L19=L14+L6
CASE 20 (OCC) L20=L15+L6
CASE 21 (OCC) L21=L16+L6
CASE 22 (OCC) L22=L17+L6
CASE 23 (EXP) L23=L2-L6
CASE 24 (EXP) L24=L4-L6
CASE 25 (EXP) L25=L2-L4

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	10.1	@Node	130
Code Stress:	24254.2	Allowable Stress:	241316.5
Axial Stress:	14027.0	@Node	60
Bending Stress:	17106.2	@Node	840
Torsion Stress:	3623.4	@Node	750
Hoop Stress:	29686.1	@Node	60
Max Stress Intensity:	35025.8	@Node	60

CODE STRESS CHECK PASSED : LOADCASE 6 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 6 (SUS) W+P1			
Ratio (%):	32.1	@Node	130
Code Stress:	44320.3	Allowable Stress:	137895.1
Axial Stress:	20334.2	@Node	60
Bending Stress:	27391.2	@Node	705
Torsion Stress:	10174.4	@Node	410
Hoop Stress:	41766.4	@Node	60
Max Stress Intensity:	45486.4	@Node	130

CODE STRESS CHECK PASSED : LOADCASE 7 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 7 (SUS) WNC			
Ratio (%):	18.7	@Node	705
Code Stress:	25825.4	Allowable Stress:	137895.1
Axial Stress:	1735.9	@Node	870
Bending Stress:	25745.2	@Node	705
Torsion Stress:	9813.0	@Node	410
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	25825.4	@Node	705

CODE STRESS CHECK PASSED : LOADCASE 18 (OCC) L18=L13+L6

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Highest Stresses: (   KPa    ) LOADCASE 18 (OCC) L18=L13+L6
Ratio (%):                31.9       @Node    850
Code Stress:             58424.7       Allowable Stress:     183400.5
Axial Stress:            20746.1       @Node     60
Bending Stress:          75462.8       @Node    850
Torsion Stress:          10165.8       @Node    410
Hoop Stress:             41766.4       @Node     60
Max Stress Intensity:    77290.4       @Node    850

 CODE STRESS CHECK PASSED      : LOADCASE 19 (OCC) L19=L14+L6

Highest Stresses: (   KPa    ) LOADCASE 19 (OCC) L19=L14+L6
Ratio (%):                39.2       @Node    840
Code Stress:             71806.2       Allowable Stress:     183400.5
Axial Stress:            20148.2       @Node    365
Bending Stress:          93302.8       @Node    840
Torsion Stress:          10185.7       @Node    410
Hoop Stress:             41766.4       @Node     60
Max Stress Intensity:    95131.9       @Node    840

 CODE STRESS CHECK PASSED      : LOADCASE 20 (OCC) L20=L15+L6

Highest Stresses: (   KPa    ) LOADCASE 20 (OCC) L20=L15+L6
Ratio (%):                25.8       @Node    130
Code Stress:             47285.5       Allowable Stress:     183400.5
Axial Stress:            20348.2       @Node     60
Bending Stress:          30687.3       @Node    705
Torsion Stress:           8950.0       @Node    410
Hoop Stress:             41766.4       @Node     60
Max Stress Intensity:    48451.6       @Node    130

 CODE STRESS CHECK PASSED      : LOADCASE 21 (OCC) L21=L16+L6

Highest Stresses: (   KPa    ) LOADCASE 21 (OCC) L21=L16+L6
Ratio (%):                30.9       @Node    130
Code Stress:             56663.3       Allowable Stress:     183400.5
Axial Stress:            20541.5       @Node     60
Bending Stress:          65197.4       @Node    850
Torsion Stress:          10233.3       @Node    410
Hoop Stress:             41766.4       @Node     60
Max Stress Intensity:    67031.9       @Node    850

 CODE STRESS CHECK PASSED      : LOADCASE 22 (OCC) L22=L17+L6

Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L17+L6
Ratio (%):                36.7       @Node    850
Code Stress:             67365.7       Allowable Stress:     183400.5
Axial Stress:            20340.6       @Node     60
Bending Stress:          87258.7       @Node    850
Torsion Stress:          10116.3       @Node    410
Hoop Stress:             41766.4       @Node     60
Max Stress Intensity:    89180.4       @Node    850
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

CODE STRESS CHECK PASSED : LOADCASE 23 (EXP) L23=L2-L6

Highest Stresses: (KPa) LOADCASE 23 (EXP) L23=L2-L6			
Ratio (%):	24.8	@Node	850
Code Stress:	81661.1	Allowable Stress:	329400.0
Axial Stress:	892.7	@Node	350
Bending Stress:	81516.2	@Node	850
Torsion Stress:	1120.1	@Node	560
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	81557.9	@Node	850

CODE STRESS CHECK PASSED : LOADCASE 24 (EXP) L24=L4-L6

Highest Stresses: (KPa) LOADCASE 24 (EXP) L24=L4-L6			
Ratio (%):	14.4	@Node	840
Code Stress:	47635.3	Allowable Stress:	329723.3
Axial Stress:	787.4	@Node	350
Bending Stress:	47591.3	@Node	840
Torsion Stress:	795.1	@Node	50
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	47603.9	@Node	840

CODE STRESS CHECK PASSED : LOADCASE 25 (EXP) L25=L2-L4

Highest Stresses: (KPa) LOADCASE 25 (EXP) L25=L2-L4			
Ratio (%):	16.9	@Node	850
Code Stress:	55541.0	Allowable Stress:	329400.0
Axial Stress:	230.8	@Node	590
Bending Stress:	55455.5	@Node	850
Torsion Stress:	450.4	@Node	350
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	55480.1	@Node	850

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (SUS) W+P1
7 (SUS) WNC
8 (OPE) W+T2+P1+U1
9 (OPE) W+T2+P1-U1
10 (OPE) W+T2+P1+U2
11 (OPE) W+T2+P1+U3
12 (OPE) W+T2+P1-U3
13 (OCC) L13=L8-L4
14 (OCC) L14=L9-L4
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13+L6
19 (OCC) L19=L14+L6
20 (OCC) L20=L15+L6
21 (OCC) L21=L16+L6
22 (OCC) L22=L17+L6
23 (EXP) L23=L2-L6
24 (EXP) L24=L4-L6
25 (EXP) L25=L2-L4

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:38
Job:: BNK-GCS-CN-014-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

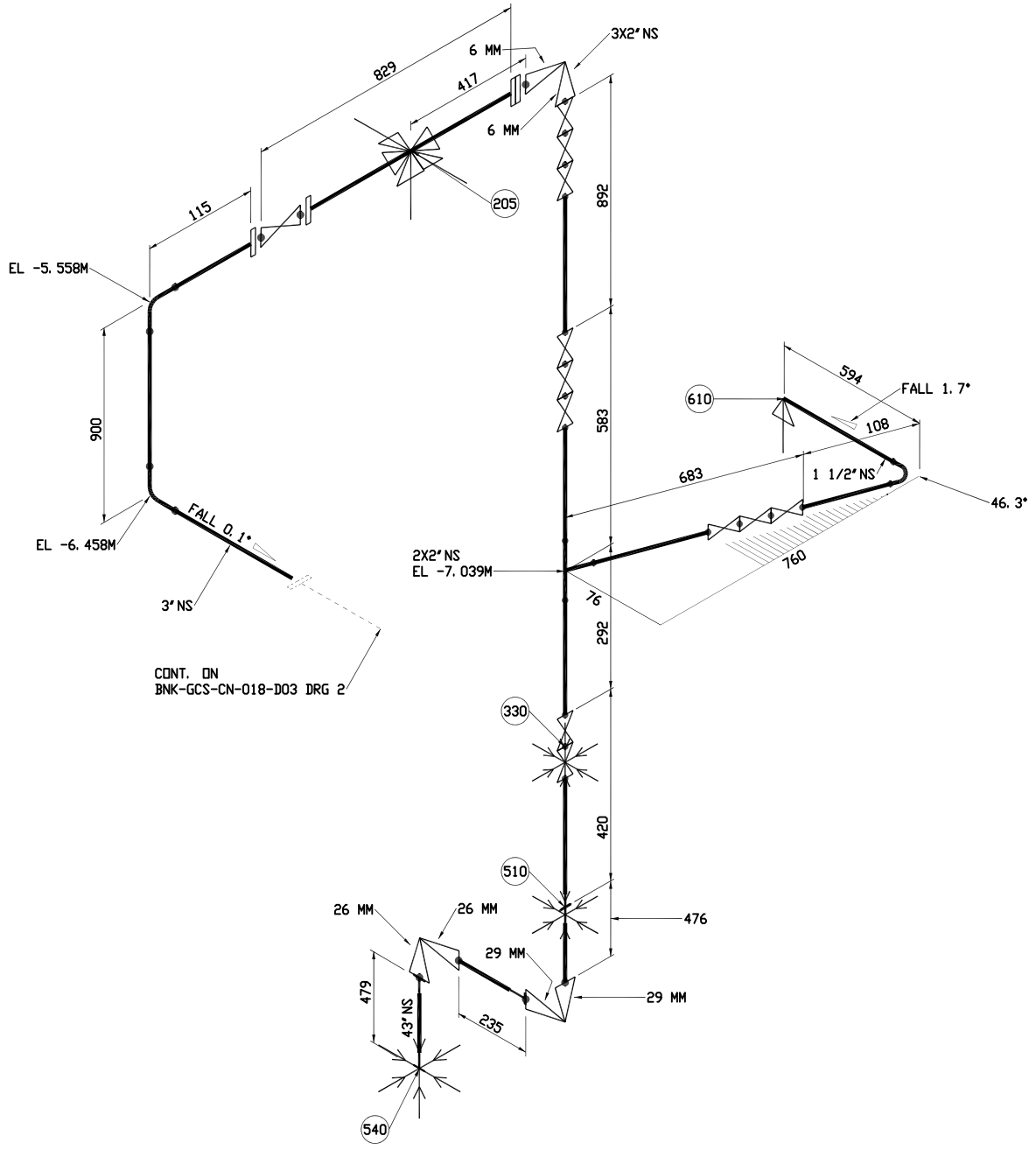
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (SUS) W+P1
CASE 7 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
10		Absolute Method								
	Limits	1779	1423	1157		461	0	922		
	2(OPE)	-132	318	-7	0.223	17	7	43	0.047	
	4(OPE)	-112	299	28	0.210	12	6	45	0.049	
	6(SUS)	-5	-1	88	0.076	6	8	-0	0.012	
	7(SUS)	-4	-2	60	0.052	6	9	-0	0.013	
520		Absolute Method								
	Limits	1779	1423	1157		461	0	922		
	2(OPE)	-140	707	6	0.497	16	9	107	0.116	
	4(OPE)	-81	376	49	0.264	10	7	63	0.068	
	6(SUS)	-7	-1	90	0.078	6	8	-0	0.012	
	7(SUS)	-7	-2	60	0.052	6	8	-0	0.013	

BNK-GCS-CN-018

1. FL-112-0001-AN07-10"-PT
2. FL-112-0128-AN07-3"-PT
3. TEG-111-0113-AN04-2"-PT
4. FL-112-0127-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 5

REV.	CHANGE	DATE
		14 MAY 2024

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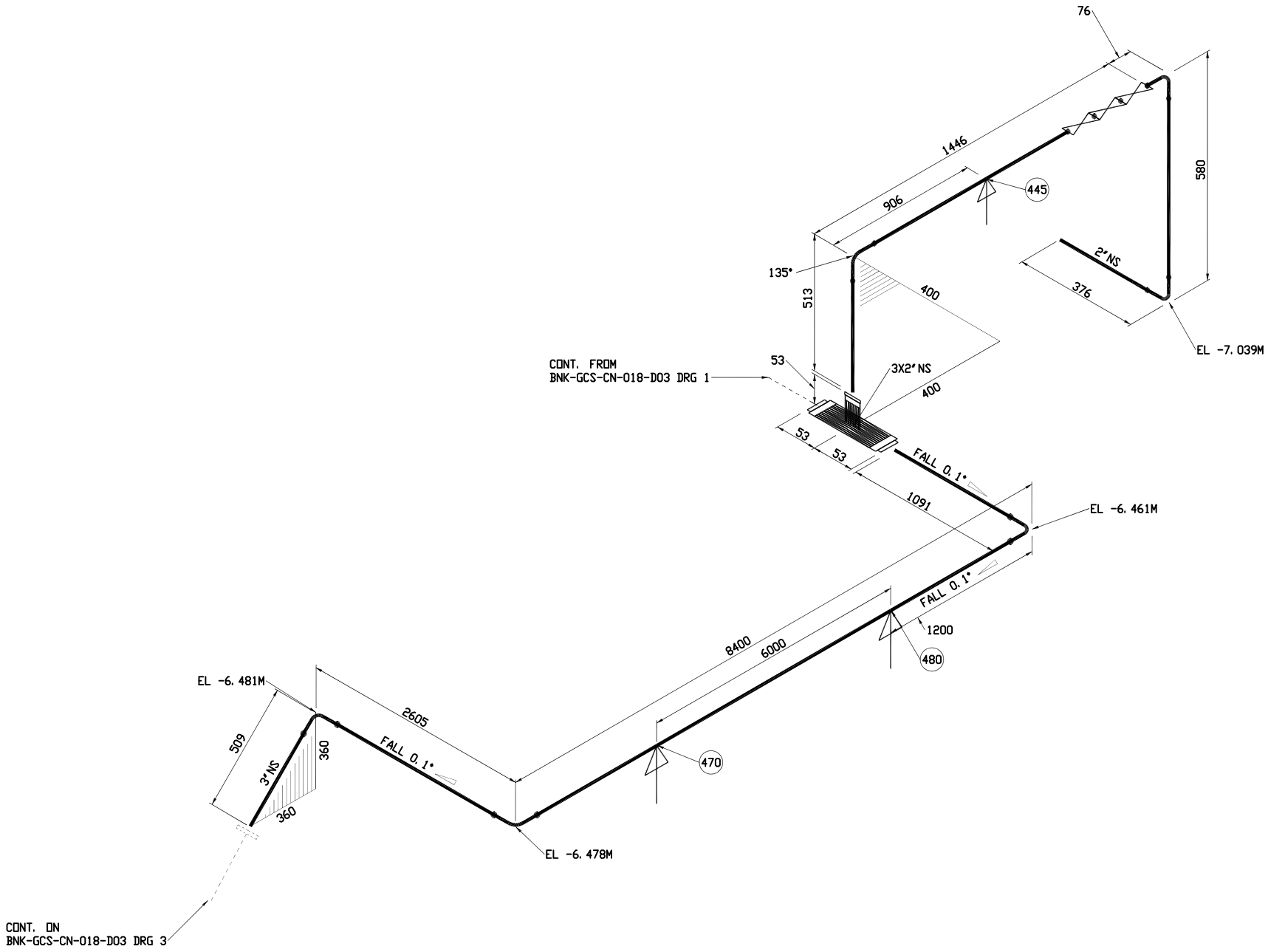

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

2 OF 5

REV.	CHANGE	DATE
		14 MAY 2024

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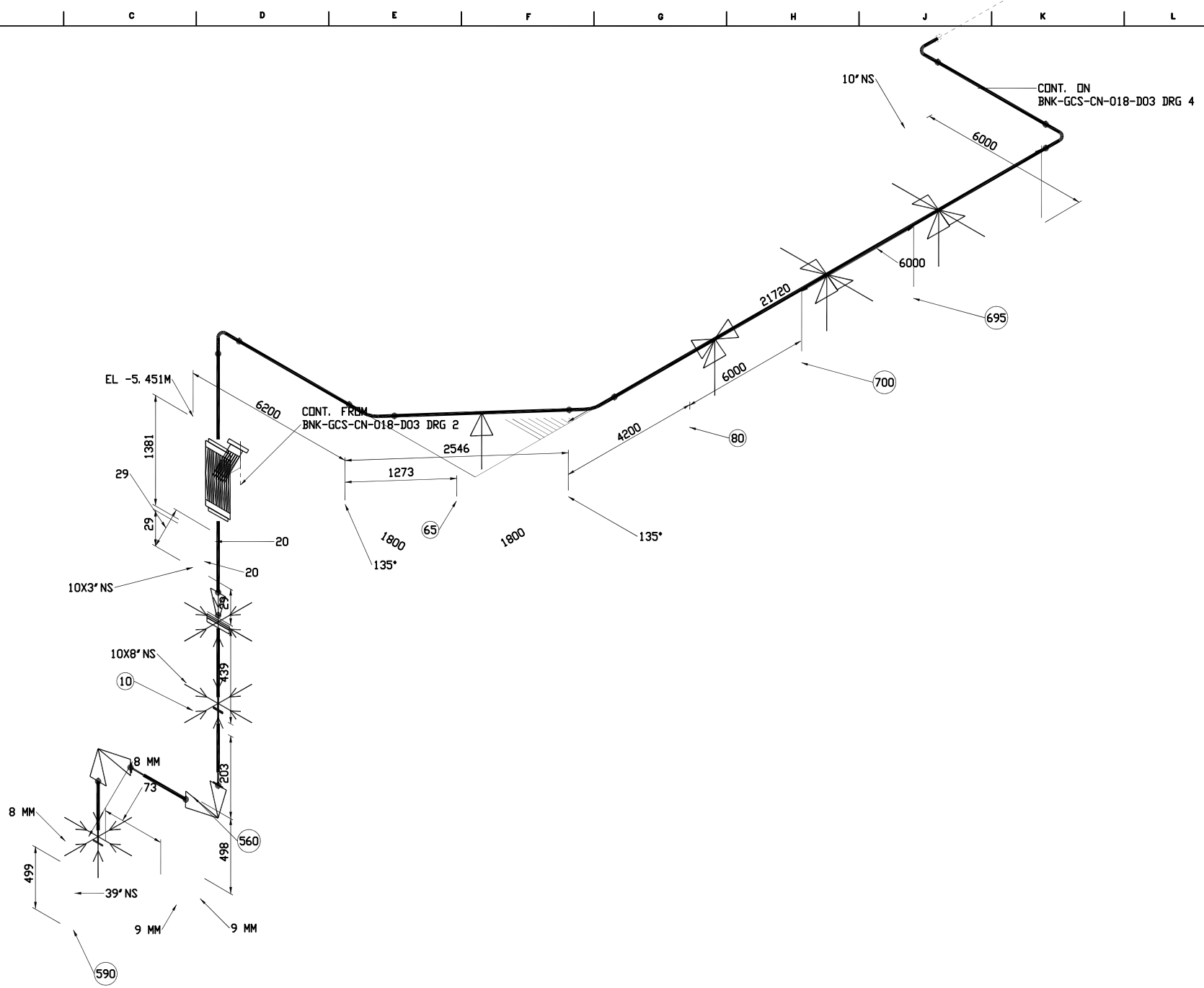

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

3 OF 5

REV.	CHANGE	DATE
		14 MAY 2024

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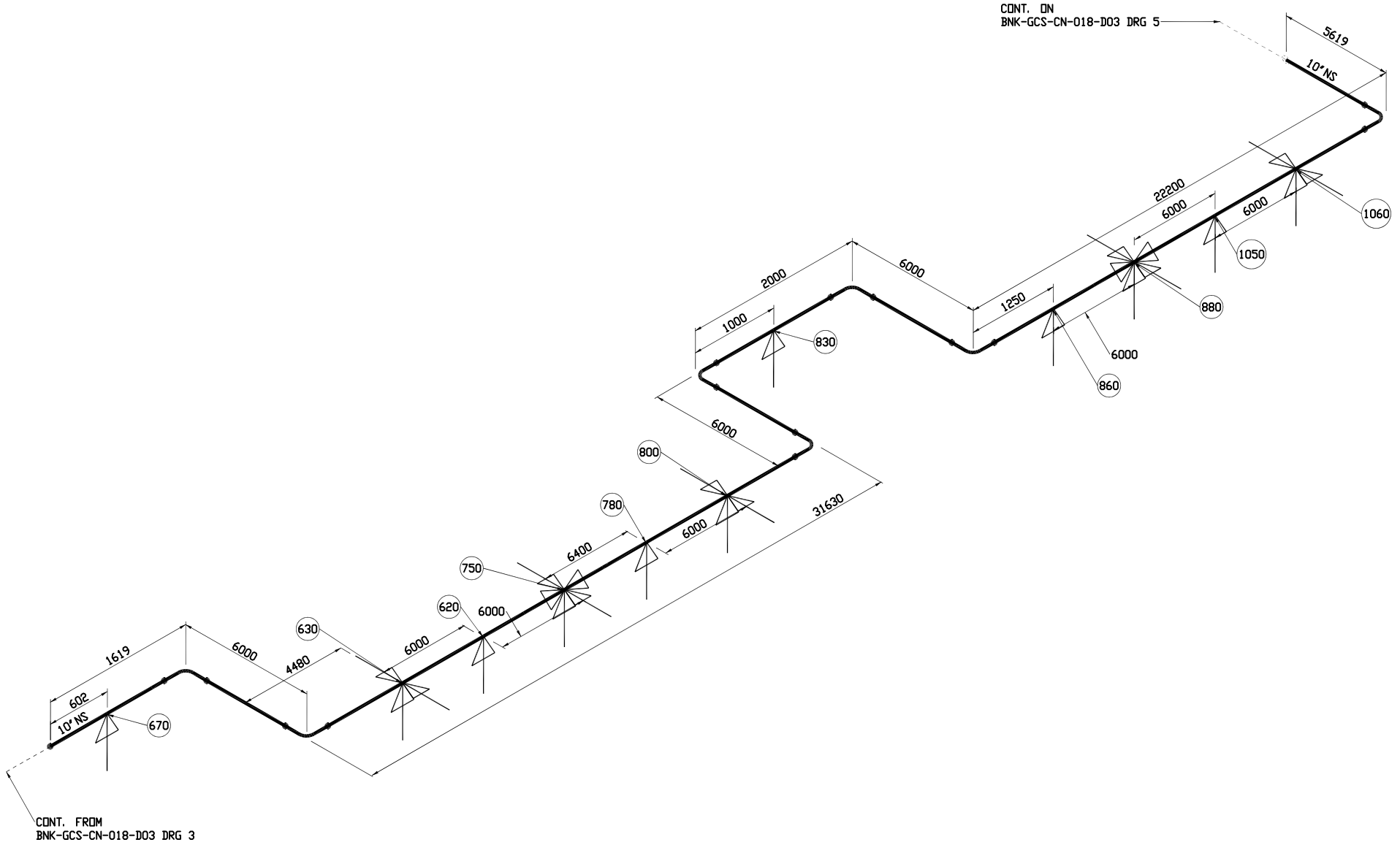

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

4 OF 5

REV.	CHANGE	DATE
		14 MAY 2024

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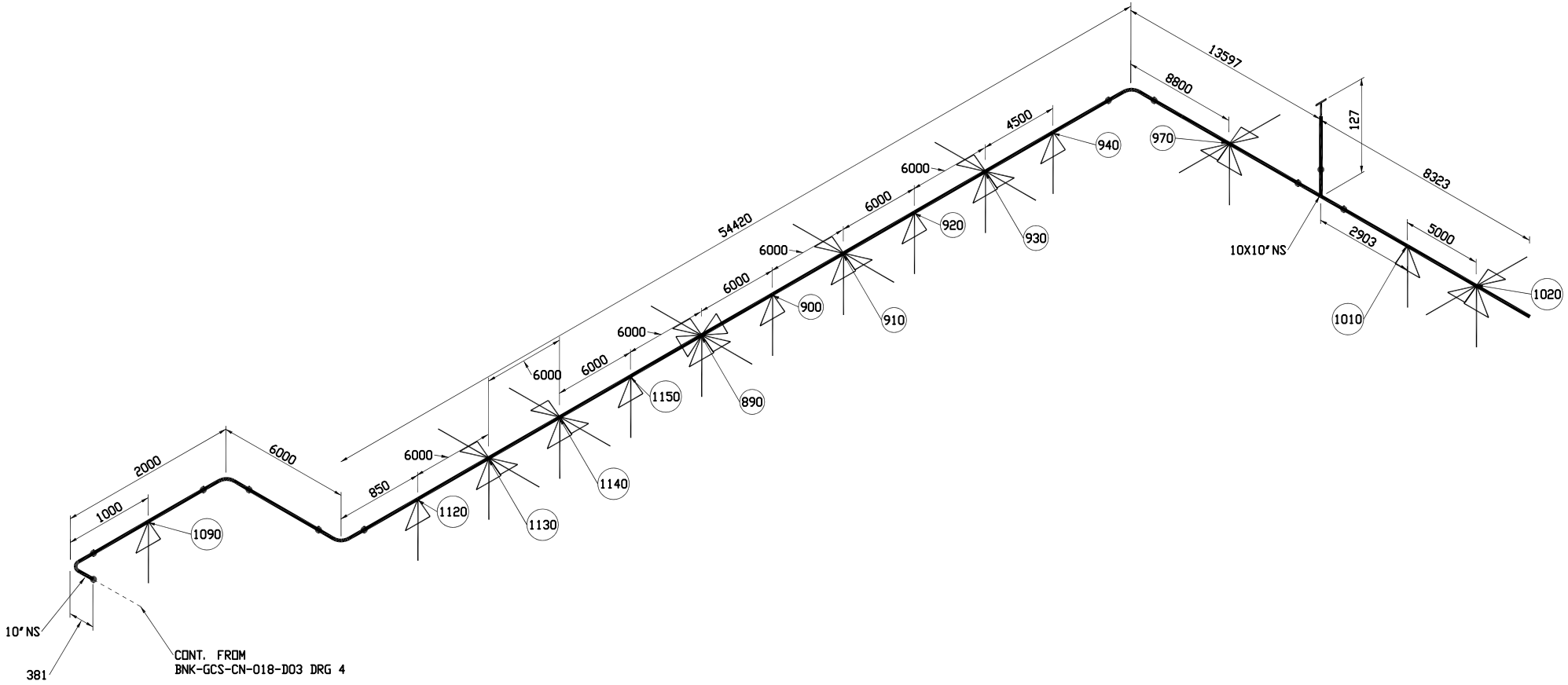

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

5 OF 5

REV.	CHANGE	DATE
		14 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:40
Job:: BNK-GCS-CN-018-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 19,2024 14:40:16

PIPE DATA

From 10 To 20 DY= 66.675 mm.
PIPE
Dia= 219.075 mm. Wall= 10.312 mm. Cor= 6.0000 mm.
GENERAL
T1= 270 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,483,936 KPa
EH2= 187,335,024 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RIGID Weight= 31.14 N.
RESTRAINTS
Node 10 ANC Cnode 11
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa
EQUIPMENT LIMITS
Nozzle Node = 10 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 11,200.56 N.
FB= 11,200.56 N. FC= 8,400.42 N. MA= 6,720.29 N.m. MB= 4,480.19 N.m.
MC= 5,820.25 N.m. Equipment Major Direction Vector= 1.0000 .0000 .0000
Interact. Mtd= Absolute

From 20 To 30 DY= 178.000 mm.
REDUCER
Diam2= 273.050 mm. Wall2= 9.271 mm.

From 30 To 40 DY= 290.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm.
Insul Thk= .000 mm.
SIF's & TEE's
Node 40 Weldolet

From 40 To 50 DY= 1,410.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 49
Angle/Node @2= .00 48

INPUT LISTING

```
 ------------------------------------------------------------------------------
 From  50  To  60  DX= 6,200.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 59
    Angle/Node @2= .00 58
 ------------------------------------------------------------------------------
 From  60  To  65  DX= 900.000 mm.  DZ= -900.000 mm.
 RESTRAINTS
    Node  65  +Y   Mu = .30
 SIF's & TEE's
    Node  65
 ------------------------------------------------------------------------------
 From  65  To  70  DX= 900.000 mm.  DZ= -900.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 69
    Angle/Node @2= .00 68
 ------------------------------------------------------------------------------
 From  70  To  80 DZ= -4,200.000 mm.
 RESTRAINTS
    Node  80  +Y   Mu = .30
    Node  80  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  40  To  110 DY= 380.423 mm.  DZ= -380.423 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 89.959   Angle/Node @1= 44.98 109
    Angle/Node @2= .00 108
 ------------------------------------------------------------------------------
 From  110  To  120  DX= 2,605.000 mm.  DY= 2.610 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 119
    Angle/Node @2= .00 118
 ------------------------------------------------------------------------------
 From  120  To  470 DY= 2.347 mm.  DZ= -1,199.998 mm.
 RESTRAINTS
    Node  470  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  470  To  480 DY= 11.806 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  480  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  480  To  130 DY= 2.347 mm.  DZ= -1,199.998 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 129
    Angle/Node @2= .00 128
 ------------------------------------------------------------------------------
 From  130  To  140  DX= -1,144.000 mm.  DY= 2.110 mm.
 SIF's & TEE's
    Node  140   Welding Tee
 ------------------------------------------------------------------------------
 From  140  To  150  DX= -852.000 mm.  DY= 1.300 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 89.913   Angle/Node @1= 44.96 149
    Angle/Node @2= .00 148
```

INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  150  To  160 DY= 900.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 159
    Angle/Node @2= .00 158
 ----------------------------------------------------------------------------
 From  160  To  170 DZ= -115.000 mm.
 ----------------------------------------------------------------------------
 From  170  To  180 DZ= -73.025 mm.
 RIGID  Weight= 54.49 N.
 ----------------------------------------------------------------------------
 From  180  To  190 DZ= -203.000 mm.
 RIGID  Weight= 447.05 N.
 ----------------------------------------------------------------------------
 From  190  To  200 DZ= -73.025 mm.
 RIGID  Weight= 54.49 N.
 ----------------------------------------------------------------------------
 From  200  To  205 DZ= -276.000 mm.
 RESTRAINTS
    Node  205  +Y   Mu = .30
    Node  205  X   Gap= .000 mm.
    Node  205  Z   Gap= 3.000 mm.
 ----------------------------------------------------------------------------
 From  205  To  210 DZ= -277.000 mm.
 ----------------------------------------------------------------------------
 From  210  To  220 DZ= -73.025 mm.
 RIGID  Weight= 54.49 N.
 ----------------------------------------------------------------------------
 From  220  To  230 DZ= -73.025 mm.
 PIPE
    Cor= 3.0000 mm.
 GENERAL
    T1= 85 C   T2= 21 C   T3= 21 C   P1= 350.0080 KPa
    Fluid Den= .0001150 kg./cu.cm.
 RIGID  Weight= 54.49 N.
 FORCES & MOMENTS
    Node  230   FX1= .00 N.   FY1= 1,500.07 N.   FZ1= -1,500.07 N.
    MX1= .00 N.m.   MY1= .00 N.m.   MZ1= .00 N.m.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  230  To  240 DY= -66.675 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Cor= 3.0000 mm.
 GENERAL
    P1= 350.0080 KPa   PHyd= 525.0120 KPa   Fluid Den= .0011150 kg./cu.cm.
    Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  240  To  250 DY= -66.675 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ---------------------------------------------------------------------------
 From  250  To  260 DY= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ---------------------------------------------------------------------------
 From  260  To  280 DY= -698.000 mm.
 ---------------------------------------------------------------------------
 From  280  To  290 DY= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ---------------------------------------------------------------------------
 From  290  To  300 DY= -187.000 mm.
 RIGID  Weight= 209.07 N.
 ---------------------------------------------------------------------------
 From  300  To  310 DY= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ---------------------------------------------------------------------------
 From  310  To  315 DY= -263.000 mm.
    PHyd= 525.0120 KPa
 ---------------------------------------------------------------------------
 From  315  To  320 DY= -292.000 mm.
 ---------------------------------------------------------------------------
 From  320  To  330 DY= -66.675 mm.
 RIGID  Weight= 31.14 N.
 RESTRAINTS
    Node  330  ANC   Cnode  331
 EQUIPMENT LIMITS
    Nozzle Node = 330   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 2,800.14 N.
    FB= 2,800.14 N.   FC= 2,100.10 N.   MA= 420.02 N.m.   MB= 280.01 N.m.
    MC= 360.02 N.m.   Equipment Major Direction Vector= 1.0000  .0000  .0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  315  To  340 DZ= -363.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  340  To  350 DZ= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ---------------------------------------------------------------------------
 From  350  To  360 DZ= -187.000 mm.
 RIGID  Weight= 271.34 N.
 ---------------------------------------------------------------------------
 From  360  To  370 DZ= -66.675 mm.
 RIGID  Weight= 31.14 N.
```

INPUT LISTING

```
 ------------------------------------------------------------------------------
 From  370  To  380 DZ= -77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 379
    Angle/Node @2= .00 378
 ------------------------------------------------------------------------------
 From  380  To  385  DX= 326.000 mm.
 ------------------------------------------------------------------------------
 From  380  To  460  DX= -17.961 mm.  DY= -17.961 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  460   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  385  To  390  DX= 126.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 389
    Angle/Node @2= .00 388
 ------------------------------------------------------------------------------
 From  390  To  400 DY= 580.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 399
    Angle/Node @2= .00 398
 ------------------------------------------------------------------------------
 From  400  To  410 DZ= 77.000 mm.
 ------------------------------------------------------------------------------
 From  410  To  420 DZ= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  420  To  430 DZ= 207.000 mm.
 RIGID  Weight= 266.89 N.
 ------------------------------------------------------------------------------
 From  430  To  440 DZ= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  440  To  445 DZ= 200.000 mm.
 RESTRAINTS
    Node  445  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  445  To  450 DZ= 906.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 44.993   Angle/Node @1= 22.50 449
    Angle/Node @2= .00 448
 ------------------------------------------------------------------------------
 From  450  To  140  DX= 400.000 mm.  DY= .074 mm.  DZ= 400.100 mm.
 ------------------------------------------------------------------------------
 From  331  To  500 DY= -66.675 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Cor= 3.0000 mm.
 GENERAL
    P1= 600.0137 KPa   PHyd= 900.0205 KPa   Fluid Den= .0011150 kg./cu.cm.
    Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
```

INPUT LISTING

```
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  500  To  510 DY= -287.000 mm.
 RESTRAINTS
    Node  510  ANC   Cnode  511
 ---------------------------------------------------------------------------
 From  511  To  520 DY= -505.000 mm.
 PIPE
    Dia= 1,100.000 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  520  To  530  DX= -290.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  530  To  540 DY= -505.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  540  ANC
 ---------------------------------------------------------------------------
 From  11  To  550 DY= -104.775 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 600.0137 KPa   PHyd= 900.0205 KPa   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.
 RIGID  Weight= 177.93 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  550  To  560 DY= -203.000 mm.
 RESTRAINTS
    Node  560  ANC   Cnode  561
 ---------------------------------------------------------------------------
 From  561  To  570 DY= -507.000 mm.
 PIPE
    Dia= 1,014.000 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  570  To  580  DX= -90.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  580  To  590 DY= -507.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  590  ANC
 ---------------------------------------------------------------------------
 From  460  To  610  DX= -500.000 mm.
 PIPE
    Dia= 48.260 mm.   Wall= 3.683 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:40
Job:: BNK-GCS-CN-018-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  610  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  620  To  630 DZ= 6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0001362 kg./cu.cm.
 RESTRAINTS
    Node  630  +Y   Mu = .30
    Node  630  X
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  630  To  640 DZ= 4,480.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 639
    Angle/Node @2= .00 638
 ------------------------------------------------------------------------------
 From  640  To  650  DX= -6,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 649
    Angle/Node @2= .00 648
 ------------------------------------------------------------------------------
 From  650  To  660 DZ= 517.000 mm.
 ------------------------------------------------------------------------------
 From  660  To  670 DZ= 500.000 mm.
 RESTRAINTS
    Node  670  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  670  To  680 DZ= 983.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 679
    Angle/Node @2= .00 678
 ------------------------------------------------------------------------------
 From  680  To  690  DX= 6,000.000 mm.
```

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INPUT LISTING

```
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 689
    Angle/Node @2= .00 688
 ---------------------------------------------------------------------------
 From  690  To  695 DZ= 5,520.000 mm.
 RESTRAINTS
    Node  695  +Y   Mu = .30
    Node  695  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  695  To  700 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  700  +Y   Mu = .30
    Node  700  X
 ---------------------------------------------------------------------------
 From  700  To  80 DZ= 6,000.000 mm.
 ---------------------------------------------------------------------------
 From  620  To  740 DZ= -3,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  620  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  740  To  750 DZ= -3,000.000 mm.
 RESTRAINTS
    Node  750  +Y   Mu = .30
    Node  750  Z   Gap= 3.000 mm.
    Node  750  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  750  To  760 DZ= -3,000.000 mm.
 ---------------------------------------------------------------------------
 From  760  To  770 DZ= -400.000 mm.
 ---------------------------------------------------------------------------
 From  770  To  780 DZ= -3,000.000 mm.
 RESTRAINTS
    Node  780  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  780  To  800 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  800  +Y   Mu = .30
    Node  800  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  800  To  810 DZ= -2,750.000 mm.
 BEND at "TO" end
```

INPUT LISTING
```
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 809
    Angle/Node @2= .00 808
 ------------------------------------------------------------------------------
 From  810  To  820  DX= -6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 819
    Angle/Node @2= .00 818
 ------------------------------------------------------------------------------
 From  820  To  830 DZ= -1,000.000 mm.
 RESTRAINTS
    Node  830  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  830  To  840 DZ= -1,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 839
    Angle/Node @2= .00 838
 ------------------------------------------------------------------------------
 From  840  To  850  DX= 6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 849
    Angle/Node @2= .00 848
 ------------------------------------------------------------------------------
 From  850  To  860 DZ= -1,250.000 mm.
 RESTRAINTS
    Node  860  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  860  To  875 DZ= -3,000.000 mm.
 ------------------------------------------------------------------------------
 From  875  To  880 DZ= -3,000.000 mm.
 RESTRAINTS
    Node  880  +Y
    Node  880  X   Gap= 3.000 mm.
    Node  880  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  880  To  1050 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 600.0137 KPa   PHyd= 900.0205 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 187,483,936 KPa   EH2= 187,335,024 KPa
    EH3= 205,934,864 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
    Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  1050  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1050  To  1060 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  1060  +Y   Mu = .30
```

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INPUT LISTING

```
    Node  1060  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1060  To  1070 DZ= -2,950.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1069
    Angle/Node @2= .00 1068
 ---------------------------------------------------------------------------
 From  1070  To  1080  DX= -6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1079
    Angle/Node @2= .00 1078
 ---------------------------------------------------------------------------
 From  1080  To  1090 DZ= -1,000.000 mm.
 RESTRAINTS
    Node  1090  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1090  To  1100 DZ= -1,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1099
    Angle/Node @2= .00 1098
 ---------------------------------------------------------------------------
 From  1100  To  1110  DX= 6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1109
    Angle/Node @2= .00 1108
 ---------------------------------------------------------------------------
 From  1110  To  1120 DZ= -850.000 mm.
 RESTRAINTS
    Node  1120  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1120  To  1130  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  1130  +Y   Mu = .30
    Node  1130  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1130  To  1140  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  1140  +Y
    Node  1140  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1140  To  1150 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 600.0137 KPa   PHyd= 900.0205 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 187,483,936 KPa   EH2= 187,335,024 KPa
    EH3= 205,934,864 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
    Insul Den= .0001362 kg./cu.cm.
 RESTRAINTS
    Node  1150  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
```

INPUT LISTING
```
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1150  To  890 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  890  +Y   Mu = .30
    Node  890  X
    Node  890  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  890  To  900 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  900  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  900  To  910 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  910  +Y   Mu = .30
    Node  910  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  910  To  920 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  920  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  920  To  930 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  930  +Y   Mu = .30
    Node  930  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  930  To  940 DZ= -4,500.000 mm.
 RESTRAINTS
    Node  940  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  940  To  950 DZ= -1,070.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 949
    Angle/Node @2= .00 948
 ---------------------------------------------------------------------------
 From  950  To  960  DX= 3,500.000 mm.
 ---------------------------------------------------------------------------
 From  960  To  970  DX= 5,300.000 mm.
 RESTRAINTS
    Node  970  +Y   Mu = .30
    Node  970  Z
 ---------------------------------------------------------------------------
 From  970  To  980  DX= 4,700.000 mm.
 ---------------------------------------------------------------------------
 From  980  To  990  DX= 97.000 mm.
 ---------------------------------------------------------------------------
 From  990  To  1000 DY= 127.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  990  To  1010  DX= 2,903.000 mm.
```

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INPUT LISTING
```
 RESTRAINTS
    Node  1010  +Y   Mu = .30
 ------------------------------------------------------------------------
 From  1010  To  1020  DX= 5,000.000 mm.
 RESTRAINTS
    Node  1020  +Y   Mu = .00
    Node  1020  Z
 ------------------------------------------------------------------------
 From  1020  To  1030  DX= 420.000 mm.
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 MATERIAL Changes:
    10              20              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
   460             610              Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
   620             630              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
   620             740              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
   880            1050              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
  1140            1150              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
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 ALLOWABLE STRESS Changes
    10              20              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 129,638 KPa
                                    Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
   220             230              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
   230             240              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
   315             340              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 129,638 KPa
                                    Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
```

INPUT LISTING

```
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   331              500         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
    11              550         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   460              610         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   620              630         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   620              740         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   880             1050         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1140             1150         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   890              900         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
```

INPUT LISTING

```
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
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 BEND ELEMENTS
    40              50              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 49
                                    Angle/Node @2= .00 48
    50              60              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50 59
                                    Angle/Node @2= .00 58
    65              70              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50 69
                                    Angle/Node @2= .00 68
    40             110              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 89.959   Angle/Node @1= 44.98
                                   109   Angle/Node @2= .00 108
   110             120              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   119   Angle/Node @2= .00 118
   480             130              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   129   Angle/Node @2= .00 128
   140             150              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 89.913   Angle/Node @1= 44.96
                                   149   Angle/Node @2= .00 148
   150             160              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   159   Angle/Node @2= .00 158
   370             380              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   379   Angle/Node @2= .00 378
   385             390              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   389   Angle/Node @2= .00 388
   390             400              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   399   Angle/Node @2= .00 398
   445             450              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 44.993   Angle/Node @1= 22.50
                                   449   Angle/Node @2= .00 448
   630             640              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   639   Angle/Node @2= .00 638
   640             650              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   649   Angle/Node @2= .00 648
   670             680              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   679   Angle/Node @2= .00 678
   680             690              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   689   Angle/Node @2= .00 688
   800             810              Radius= 381.000 mm. (LONG)
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:40
Job:: BNK-GCS-CN-018-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  809   Angle/Node @2= .00 808
   810              820             Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  819   Angle/Node @2= .00 818
   830              840             Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  839   Angle/Node @2= .00 838
   840              850             Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  849   Angle/Node @2= .00 848
  1060             1070             Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1069   Angle/Node @2= .00 1068
  1070             1080             Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1079   Angle/Node @2= .00 1078
  1090             1100             Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1099   Angle/Node @2= .00 1098
  1100             1110             Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1109   Angle/Node @2= .00 1108
   940              950             Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  949   Angle/Node @2= .00 948
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RIGIDS
    10               20          RIGID  Weight= 31.14 N.
   170              180          RIGID  Weight= 54.49 N.
   180              190          RIGID  Weight= 447.05 N.
   190              200          RIGID  Weight= 54.49 N.
   210              220          RIGID  Weight= 54.49 N.
   220              230          RIGID  Weight= 54.49 N.
   230              240          RIGID  Weight= 31.14 N.
   240              250          RIGID  Weight= 31.14 N.
   250              260          RIGID  Weight= 31.14 N.
   280              290          RIGID  Weight= 31.14 N.
   290              300          RIGID  Weight= 209.07 N.
   300              310          RIGID  Weight= 31.14 N.
   320              330          RIGID  Weight= 31.14 N.
   340              350          RIGID  Weight= 31.14 N.
   350              360          RIGID  Weight= 271.34 N.
   360              370          RIGID  Weight= 31.14 N.
   380              460          RIGID  Weight= .00 N.
   410              420          RIGID  Weight= 31.14 N.
   420              430          RIGID  Weight= 266.89 N.
   430              440          RIGID  Weight= 31.14 N.
   331              500          RIGID  Weight= 31.14 N.
   511              520          RIGID  Weight= .00 N.
   520              530          RIGID  Weight= .00 N.
   530              540          RIGID  Weight= .00 N.
    11              550          RIGID  Weight= 177.93 N.
```

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Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

561	570	RIGID	Weight= .00 N.
570	580	RIGID	Weight= .00 N.
580	590	RIGID	Weight= .00 N.
990	1000	RIGID	Weight= .00 N.

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SIF's & TEE's

30	40	Node	40	Weldolet
60	65	Node	65	
130	140	Node	140	Welding Tee
380	460	Node	460	Unreinforced Tee

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REDUCERS

20	30	Diam2= 273.050 mm.	Wall2= 9.271 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
10	ANC	11				.000	.000	.000
65	+Y				.30	.000	1.000	.000
80	+Y				.30	.000	1.000	.000
80	Z			3.00		.000	.000	1.000
470	+Y				.30	.000	1.000	.000
480	+Y				.30	.000	1.000	.000
205	+Y				.30	.000	1.000	.000
205	X			.00		1.000	.000	.000
205	Z			3.00		.000	.000	1.000
330	ANC	331				.000	.000	.000
445	+Y				.30	.000	1.000	.000
510	ANC	511				.000	.000	.000
540	ANC					.000	.000	.000
560	ANC	561				.000	.000	.000
590	ANC					.000	.000	.000
610	+Y				.30	.000	1.000	.000
630	+Y				.30	.000	1.000	.000
630	X					1.000	.000	.000
670	+Y				.30	.000	1.000	.000
695	+Y				.30	.000	1.000	.000
695	X			3.00		1.000	.000	.000
700	+Y				.30	.000	1.000	.000
700	X					1.000	.000	.000
620	+Y				.30	.000	1.000	.000
750	+Y				.30	.000	1.000	.000
750	Z			3.00		.000	.000	1.000
750	X			3.00		1.000	.000	.000
780	+Y				.30	.000	1.000	.000
800	+Y				.30	.000	1.000	.000
800	X			3.00		1.000	.000	.000
830	+Y				.30	.000	1.000	.000

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Job:: BNK-GCS-CN-018-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
     860   +Y                                        .30    .000  1.000   .000
     880   +Y                                               .000  1.000   .000
     880   X                              3.00             1.000   .000   .000
     880   Z                              3.00              .000   .000  1.000
    1050   +Y                                        .30    .000  1.000   .000
    1060   +Y                                        .30    .000  1.000   .000
    1060   X                              3.00             1.000   .000   .000
    1090   +Y                                        .30    .000  1.000   .000
    1120   +Y                                        .30    .000  1.000   .000
    1130   +Y                                        .30    .000  1.000   .000
    1130   X                              3.00             1.000   .000   .000
    1140   +Y                                               .000  1.000   .000
    1140   X                              3.00             1.000   .000   .000
    1150   +Y                                        .30    .000  1.000   .000
     890   +Y                                        .30    .000  1.000   .000
     890   X                                               1.000   .000   .000
     890   Z                              3.00              .000   .000  1.000
     900   +Y                                        .30    .000  1.000   .000
     910   +Y                                        .30    .000  1.000   .000
     910   X                              3.00             1.000   .000   .000
     920   +Y                                        .30    .000  1.000   .000
     930   +Y                                        .30    .000  1.000   .000
     930   X                              3.00             1.000   .000   .000
     940   +Y                                        .30    .000  1.000   .000
     970   +Y                                        .30    .000  1.000   .000
     970   Z                                                .000   .000  1.000
    1010   +Y                                        .30    .000  1.000   .000
    1020   +Y                                        .00    .000  1.000   .000
    1020   Z                                                .000   .000  1.000
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 EQUIPMENT LIMITS
    10              20              Nozzle Node = 10


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,480.19 N.m.   MC= 5,820.25 N.m.
    Equipment Major Direction Vector= 1.0000  .0000  .0000
    Interact. Mtd= Absolute
   320             330             Nozzle Node = 330


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 2,800.14 N.   FB= 2,800.14 N.
    FC= 2,100.10 N.   MA= 420.02 N.m.   MB= 280.01 N.m.   MC= 360.02 N.m.
    Equipment Major Direction Vector= 1.0000  .0000  .0000
    Interact. Mtd= Absolute
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 FORCES AND MOMENTS
   220             230             Node  230   FX1= .00 N.   FY1= 1,500.07 N.
                                   FZ1= -1,500.07 N.   MX1= .00 N.m.
                                   MY1= .00 N.m.   MZ1= .00 N.m.
```

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Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
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UNIFORM LOAD Changes
10 20 Vector1 in G-s
X1 Dir = .26 g's Y1 Dir = .00 g's
Z1 Dir = .00 g's
Vector2 in G-s
X2 Dir = .00 g's Y2 Dir = .12 g's
Z2 Dir = .00 g's
Vector3 in G-s
X3 Dir = .00 g's Y3 Dir = .00 g's
Z3 Dir = .26 g's

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INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	=	N./cm.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO

INPUT LISTING

```
  HGR DEF RESWGT STIF =              0.175127E+13 N./cm.
  DECOMP SNG TOL =                   0.100000E+11
  BEND AXIAL SHAPE =                 YES
  FRICT STIF =                       0.175127E+07 N./cm.
  FRICT NORM FORCE VAR =             0.150000
  FRICT ANGLE VAR =                   15.0000
  FRICT SLIDE MULT =                  1.00000
  ROD TOLERANCE =                     1.00000
  ROD INC =                           2.00000
  INCORE NUMERICAL CHECK =           NO
  OUTCORE NUMERICAL CHECK =          NO
  DEFAULT TRANS RESTRAINT STIFF=     0.175127E+13    N./cm.
  DEFAULT ROT RESTRAINT STIFF=       0.112985E+12  N.m./deg
  IGNORE SPRING HANGER STIFFNESS =   NO
  MISSING MASS ZPA =                 EXTRACTED
  MIN WALL MILL TOLERANCE =           12.5000
  WRC-107 VERSION =                  MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =            LAST VALUE
  DEFAULT AMBIENT TEMPERATURE=        21.1111       C
  BOURDON PRESSURE=                  NONE
  COEFFICIENT OF FRICTION (MU) =          0.000000
  INCLUDE SPRG STIF IN HGR OPE =     NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =             B31.1(POST1980)
  USE WRC329                         NO
  NO REDUCED SIF FOR RFT AND WLT     NO
  B31.1 REDUCED Z FIX =              YES
  CLASS 1 BRANCH FLEX                NO
  ALL STRESS CASES CORRODED =        NO
  ADD TORSION IN SL STRESS =         DEFAULT
  ADD F/A IN STRESS =                DEFAULT
  OCCASIONAL LOAD FACTOR =                0.000000
  DEFAULT CODE =                     B31.3
  B31.3 SUS CASE SIF FACTOR =             0.000000
  ALLOW USERS BEND SIF =             NO
  USE SCHNEIDER                      NO
  YIELD CRITERION STRESS =           MAX 3D SHEAR
  USE PD/4T                           NO
  BASE HOOP STRESS ON ? =             ID
  EN13480 USE IN OUTPLANE SIFS=       NO
  LIBERAL EXPANSION ALLOWABLE=       YES
  B31.3 SEC 319.2.3C SAXIAL=         Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=    DEFAULT
  IMPLEMENT B313 APP-P                NO
  IMPLEMENT B313 CODE CASE 178       YES
  IGNORE B31.1/B31.3 Wc FACTOR=      YES
  USE FRP SIF =                      YES
  USE FRP FLEX =                     YES
  BS 7159 Pressure Stiffening=       Design Strain
  FRP Property Data File=            CAESAR.FRP
  FRP Emod (axial) =                  0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =       0.250000
  FRP Ea/Eh*Vh/a =                    0.152730
  FRP Laminate Type =                THREE
  FRP Alpha =                         21.6000             C
```

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Job:: BNK-GCS-CN-018-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
FRP Density = 0.166079E-02 kg./cu.cm.
EXCLUDE f2 FROM UKOOA BENDING = NO
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EXECUTION CONTROL PARAMETERS

Rigid/ExpJt Print Flag	1.000	
Bourdon Option	.000	
Loop Closure Flag	2.000	
Thermal Bowing Delta Temp ..	.000	C
Liberal Allowable Flag	1.000	
Uniform Load Option	1.000	
Ambient Temperature	20.997	C
Plastic (FRP) Alpha	21.600	
Plastic (FRP) GMOD/EMODa ...	.250	
Plastic (FRP) Laminate Type.	3.000	
Eqn Optimizer	.000	
Node Selection	.000	
Eqn Ordering	.000	
Collins	.000	
Degree Determination	.000	
User Eqn Control	.000	
North Direction	-X	

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COORDINATE REPORT

NODE	X (mm.)	Y (mm.)	Z (mm.)
10	-15700.080	-7395.683	7324.219
20	-15700.080	-7329.008	7324.219
30	-15700.080	-7151.008	7324.219
40	-15700.080	-6861.008	7324.219
50	-15700.080	-5451.008	7324.219
60	-9500.080	-5451.008	7324.219
65	-8600.080	-5451.008	6424.219
70	-7700.080	-5451.008	5524.219
80	-7700.080	-5451.008	1324.219
40	-15700.080	-6861.008	7324.219
110	-15700.080	-6480.585	6943.796
120	-13095.080	-6477.975	6943.796
470	-13095.080	-6475.628	5743.798
480	-13095.080	-6463.822	-256.202
130	-13095.080	-6461.476	-1456.200
140	-14239.080	-6459.366	-1456.200
150	-15091.080	-6458.066	-1456.200
160	-15091.080	-5558.066	-1456.200
170	-15091.080	-5558.066	-1571.200
180	-15091.080	-5558.066	-1644.225
190	-15091.080	-5558.066	-1847.225
200	-15091.080	-5558.066	-1920.250
205	-15091.080	-5558.066	-2196.250
210	-15091.080	-5558.066	-2473.250
220	-15091.080	-5558.066	-2546.275

INPUT LISTING

230	-15091.080	-5558.066	-2619.300
240	-15091.080	-5624.741	-2619.300
250	-15091.080	-5691.416	-2619.300
260	-15091.080	-5758.090	-2619.300
280	-15091.080	-6456.090	-2619.300
290	-15091.080	-6522.765	-2619.300
300	-15091.080	-6709.765	-2619.300
310	-15091.080	-6776.440	-2619.300
315	-15091.080	-7039.440	-2619.300
320	-15091.080	-7331.440	-2619.300
330	-15091.080	-7398.115	-2619.300
315	-15091.080	-7039.440	-2619.300
340	-15091.080	-7039.440	-2982.300
350	-15091.080	-7039.440	-3048.975
360	-15091.080	-7039.440	-3235.975
370	-15091.080	-7039.440	-3302.650
380	-15091.080	-7039.440	-3379.650
385	-14765.080	-7039.440	-3379.650
380	-15091.080	-7039.440	-3379.650
460	-15109.041	-7057.400	-3379.650
385	-14765.080	-7039.440	-3379.650
390	-14639.080	-7039.440	-3379.650
400	-14639.080	-6459.440	-3379.650
410	-14639.080	-6459.440	-3302.650
420	-14639.080	-6459.440	-3235.975
430	-14639.080	-6459.440	-3028.975
440	-14639.080	-6459.440	-2962.300
445	-14639.080	-6459.440	-2762.300
450	-14639.080	-6459.440	-1856.300
140	-14239.080	-6459.366	-1456.200
330	-15091.080	-7398.115	-2619.300
500	-15091.080	-7464.790	-2619.300
510	-15091.080	-7751.790	-2619.300
520	-15091.080	-8256.789	-2619.300
530	-15381.080	-8256.789	-2619.300
540	-15381.080	-8761.789	-2619.300
10	-15700.080	-7395.683	7324.219
550	-15700.080	-7500.458	7324.219
560	-15700.080	-7703.458	7324.219
570	-15700.080	-8210.458	7324.219
580	-15790.080	-8210.458	7324.219
590	-15790.080	-8717.458	7324.219
460	-15109.041	-7057.400	-3379.650
610	-15609.041	-7057.400	-3379.650
620	-7700.080	-5451.008	-28675.781
630	-7700.080	-5451.008	-22675.781
640	-7700.080	-5451.008	-18195.781
650	-13700.080	-5451.008	-18195.781
660	-13700.080	-5451.008	-17678.781
670	-13700.080	-5451.008	-17178.781
680	-13700.080	-5451.008	-16195.781
690	-7700.080	-5451.008	-16195.781
695	-7700.080	-5451.008	-10675.781
700	-7700.080	-5451.008	-4675.781
80	-7700.080	-5451.008	1324.219
620	-7700.080	-5451.008	-28675.781

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Job:: BNK-GCS-CN-018-D03
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INPUT LISTING

740	-7700.080	-5451.008	-31675.781
750	-7700.080	-5451.008	-34675.781
760	-7700.080	-5451.008	-37675.781
770	-7700.080	-5451.008	-38075.781
780	-7700.080	-5451.008	-41075.781
800	-7700.080	-5451.008	-47075.781
810	-7700.080	-5451.008	-49825.781
820	-13700.080	-5451.008	-49825.781
830	-13700.080	-5451.008	-50825.781
840	-13700.080	-5451.008	-51825.781
850	-7700.080	-5451.008	-51825.781
860	-7700.080	-5451.008	-53075.781
875	-7700.080	-5451.008	-56075.781
880	-7700.080	-5451.008	-59075.781
1050	-7700.080	-5451.008	-65075.781
1060	-7700.080	-5451.008	-71075.781
1070	-7700.080	-5451.008	-74025.781
1080	-13700.080	-5451.008	-74025.781
1090	-13700.080	-5451.008	-75025.781
1100	-13700.080	-5451.008	-76025.781
1110	-7700.080	-5451.008	-76025.781
1120	-7700.080	-5451.008	-76875.781
1130	-7700.080	-5451.008	-82875.781
1140	-7700.080	-5451.008	-88875.781
1150	-7700.080	-5451.008	-94875.781
890	-7700.080	-5451.008	-100875.781
900	-7700.080	-5451.008	-106875.781
910	-7700.080	-5451.008	-112875.781
920	-7700.080	-5451.008	-118875.781
930	-7700.080	-5451.008	-124875.781
940	-7700.080	-5451.008	-129375.781
950	-7700.080	-5451.008	-130445.781
960	-4200.080	-5451.008	-130445.781
970	1099.920	-5451.008	-130445.781
980	5799.920	-5451.008	-130445.781
990	5896.920	-5451.008	-130445.781
1000	5896.920	-5324.008	-130445.781
990	5896.920	-5451.008	-130445.781
1010	8799.920	-5451.008	-130445.781
1020	13799.920	-5451.008	-130445.781
1030	14219.920	-5451.008	-130445.781

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1-U2
CASE 14 (OPE) W+T2+P1+U3
CASE 15 (OPE) W+T2+P1+F1
CASE 16 (OCC) L16=L10-L4
CASE 17 (OCC) L17=L11-L4
CASE 18 (OCC) L18=L12-L4
CASE 19 (OCC) L19=L13-L4
CASE 20 (OCC) L20=L14-L4
CASE 21 (OCC) L21=L15-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid ANC;					
	1(HYD)	-1429	-5963	36	382	44	481
	2(OPE)	-3435	-4163	3535	5096	-9360	1272
	4(OPE)	-3449	-4175	3557	5130	-9429	1268
	6(OPE)	1626	-3061	-916	-1111	2441	-2815
	8(SUS)	-779	-3331	21	177	22	261
	9(SUS)	-778	-3327	21	176	22	261
	10(OPE)	-1041	-4044	3261	4752	-9201	-2009
	11(OPE)	-5978	-4312	3905	5592	-9734	4731
	12(OPE)	-3261	-3766	3528	5075	-9409	1109
	13(OPE)	-3638	-4583	3587	5186	-9449	1428
	14(OPE)	-3389	-4174	4694	6582	-10059	1132
	15(OPE)	-3455	-4160	3516	5110	-9352	1271
	16(OCC)	2408	130	-296	-378	228	-3276
	17(OCC)	-2529	-138	348	463	-305	3463
	18(OCC)	188	408	-29	-55	20	-159
	19(OCC)	-189	-409	30	56	-21	161
	20(OCC)	60	1	1136	1453	-631	-135
	21(OCC)	-6	14	-41	-19	77	4
	MAX	-5978/L11	-5963/L1	4694/L14	6582/L14	-10059/L14	4731/L11
65		TYPE=Rigid +Y;					
	1(HYD)	1434	-7323	1074	0	0	0
	2(OPE)	754	-3232	610	0	0	0
	4(OPE)	753	-3226	608	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	-703	-4206	-1048	0	0	0
	8(SUS)	780	-3974	582	0	0	0
	9(SUS)	779	-3969	581	0	0	0
	10(OPE)	795	-3359	619	0	0	0
	11(OPE)	708	-3087	597	0	0	0
	12(OPE)	643	-2753	518	0	0	0
	13(OPE)	862	-3698	698	0	0	0
	14(OPE)	759	-3271	621	0	0	0
	15(OPE)	753	-3226	608	0	0	0
	16(OCC)	42	-134	11	0	0	0
	17(OCC)	-45	139	-11	0	0	0
	18(OCC)	-110	472	-90	0	0	0
	19(OCC)	109	-472	90	0	0	0
	20(OCC)	7	-45	13	0	0	0
	21(OCC)	0	-0	-0	0	0	0
	MAX	1434/L1	-7323/L1	1074/L1			
80		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	1	-7293	-627	0	0	0
	2(OPE)	1276	-4335	4924	0	0	0
	4(OPE)	1277	-4339	4952	0	0	0
	6(OPE)	-695	-3882	-2034	0	0	0
	8(SUS)	1	-3959	-340	0	0	0
	9(SUS)	1	-3954	-339	0	0	0
	10(OPE)	1271	-4305	5614	0	0	0
	11(OPE)	1281	-4372	4302	0	0	0
	12(OPE)	1138	-3863	4686	0	0	0
	13(OPE)	1417	-4814	5217	0	0	0
	14(OPE)	1263	-4294	10259	0	0	0
	15(OPE)	1277	-4339	4949	0	0	0
	16(OCC)	-7	34	662	0	0	0
	17(OCC)	3	-33	-650	0	0	0
	18(OCC)	-140	475	-265	0	0	0
	19(OCC)	139	-475	266	0	0	0
	20(OCC)	-14	45	5308	0	0	0
	21(OCC)	-0	0	-3	0	0	0
	MAX	1417/L13	-7293/L1	10259/L14			
205		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	1(HYD)	-39	-2146	21	0	0	0
	2(OPE)	169	0	0	0	0	0
	4(OPE)	155	0	0	0	0	0
	6(OPE)	82	-3752	-441	0	0	0
	8(SUS)	-33	-1881	14	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(SUS)	-33	-1880	14	0	0	0
	10(OPE)	678	0	1	0	0	0
	11(OPE)	-367	0	0	0	0	0
	12(OPE)	184	0	0	0	0	0
	13(OPE)	125	0	0	0	0	0
	14(OPE)	103	0	334	0	0	0
	15(OPE)	284	0	-1189	0	0	0
	16(OCC)	523	0	1	0	0	0
	17(OCC)	-521	0	0	0	0	0
	18(OCC)	30	0	0	0	0	0
	19(OCC)	-29	0	0	0	0	0
	20(OCC)	-52	0	334	0	0	0
	21(OCC)	129	0	-1189	0	0	0
	MAX	678/L10	-3752/L6	-1189/L15			
330		TYPE=Rigid ANC;					
	1(HYD)	-23	193	168	-18	-5	-13
	2(OPE)	-380	-2572	-725	-325	486	132
	4(OPE)	-363	-2556	-726	-342	494	125
	6(OPE)	27	1942	501	98	-74	-18
	8(SUS)	-25	62	164	-17	-5	-11
	9(SUS)	-25	100	164	-17	-5	-11
	10(OPE)	-34	-2584	-613	-229	468	96
	11(OPE)	-689	-2528	-837	-455	519	153
	12(OPE)	-368	-2278	-711	-325	496	134
	13(OPE)	-357	-2834	-741	-360	492	116
	14(OPE)	-289	-2510	-252	-169	380	93
	15(OPE)	-443	-1169	-995	-583	498	129
	16(OCC)	328	-28	113	114	-26	-28
	17(OCC)	-327	27	-111	-113	26	28
	18(OCC)	-5	278	15	18	2	9
	19(OCC)	6	-278	-15	-17	-2	-9
	20(OCC)	74	46	474	174	-114	-32
	21(OCC)	-81	1387	-269	-240	4	4
	MAX	-689/L11	-2834/L13	-995/L15	-583/L15	519/L11	153/L11
445		TYPE=Rigid +Y;					
	1(HYD)	53	-644	-186	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	36	-687	203	0	0	0
	8(SUS)	53	-615	-177	0	0	0
	9(SUS)	53	-615	-177	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	53/L8	-687/L6	203/L6			
470		TYPE=Rigid +Y;					
	1(HYD)	-9	-1035	-2	0	0	0
	2(OPE)	142	-596	108	0	0	0
	4(OPE)	140	-584	106	0	0	0
	6(OPE)	-171	-878	-201	0	0	0
	8(SUS)	-3	-810	-3	0	0	0
	9(SUS)	-3	-809	-3	0	0	0
	10(OPE)	152	-613	104	0	0	0
	11(OPE)	127	-555	107	0	0	0
	12(OPE)	118	-493	89	0	0	0
	13(OPE)	161	-675	123	0	0	0
	14(OPE)	125	-575	119	0	0	0
	15(OPE)	146	-595	103	0	0	0
	16(OCC)	12	-29	-2	0	0	0
	17(OCC)	-12	30	1	0	0	0
	18(OCC)	-22	91	-17	0	0	0
	19(OCC)	21	-91	17	0	0	0
	20(OCC)	-15	10	13	0	0	0
	21(OCC)	6	-11	-3	0	0	0
	MAX	-171/L6	-1035/L1	-201/L6			
480		TYPE=Rigid +Y;					
	1(HYD)	-16	-1025	-10	0	0	0
	2(OPE)	212	-768	-91	0	0	0
	4(OPE)	218	-789	-93	0	0	0
	6(OPE)	-197	-731	95	0	0	0
	8(SUS)	-17	-802	-10	0	0	0
	9(SUS)	-17	-802	-10	0	0	0
	10(OPE)	211	-750	-78	0	0	0
	11(OPE)	222	-829	-112	0	0	0
	12(OPE)	183	-663	-78	0	0	0
	13(OPE)	252	-915	-108	0	0	0
	14(OPE)	245	-838	-54	0	0	0
	15(OPE)	180	-679	-95	0	0	0
	16(OCC)	-7	40	15	0	0	0
	17(OCC)	4	-40	-19	0	0	0
	18(OCC)	-35	126	15	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OCC)	35	-126	-15	0	0	0
	20(OCC)	28	-48	39	0	0	0
	21(OCC)	-37	110	-2	0	0	0
	MAX	252/L13	-1025/L1	-112/L11			
510		TYPE=Rigid ANC;					
	1(HYD)	-23	134	168	41	-5	-5
	2(OPE)	-380	-2632	-725	-581	486	267
	4(OPE)	-363	-2615	-726	-599	494	253
	6(OPE)	27	1883	501	275	-74	-28
	8(SUS)	-25	2	164	41	-5	-2
	9(SUS)	-25	47	164	41	-5	-2
	10(OPE)	-19	-2643	-613	-446	468	105
	11(OPE)	-705	-2588	-837	-751	519	400
	12(OPE)	-368	-2330	-711	-576	496	264
	13(OPE)	-357	-2900	-741	-622	492	242
	14(OPE)	-289	-2569	-236	-254	380	195
	15(OPE)	-443	-1229	-995	-934	498	286
	16(OCC)	344	-28	113	153	-26	-148
	17(OCC)	-342	27	-111	-152	26	147
	18(OCC)	-5	285	15	23	2	11
	19(OCC)	6	-285	-15	-23	-2	-11
	20(OCC)	74	46	490	345	-114	-58
	21(OCC)	-81	1387	-269	-335	4	33
	MAX	-705/L11	-2900/L13	-995/L15	-934/L15	519/L11	400/L11
540		TYPE=Rigid ANC;					
	1(HYD)	-23	134	168	211	-54	57
	2(OPE)	-380	-2632	-725	-1314	696	-113
	4(OPE)	-363	-2615	-726	-1332	704	-139
	6(OPE)	27	1883	501	781	-219	490
	8(SUS)	-25	2	164	207	-53	24
	9(SUS)	-25	47	164	207	-53	37
	10(OPE)	-19	-2643	-613	-1065	646	-643
	11(OPE)	-705	-2588	-837	-1596	762	362
	12(OPE)	-368	-2330	-711	-1295	702	-40
	13(OPE)	-357	-2900	-741	-1370	707	-238
	14(OPE)	-289	-2569	-236	-493	449	-259
	15(OPE)	-443	-1229	-995	-1939	787	377
	16(OCC)	344	-28	113	267	-59	-503
	17(OCC)	-342	27	-111	-264	58	501
	18(OCC)	-5	285	15	38	-3	99
	19(OCC)	6	-285	-15	-37	3	-99
	20(OCC)	74	46	490	840	-256	-119
	21(OCC)	-81	1387	-269	-607	83	516
	MAX	-705/L11	-2900/L13	-995/L15	-1939/L15	787/L15	-643/L10

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
560		TYPE=Rigid ANC;					
	1(HYD)	-1429	-6340	36	393	44	921
	2(OPE)	-3435	-4446	3535	6184	-9360	2329
	4(OPE)	-3449	-4458	3557	6225	-9429	2329
	6(OPE)	1626	-3345	-916	-1393	2441	-3315
	8(SUS)	-779	-3614	21	183	22	501
	9(SUS)	-778	-3610	21	183	22	500
	10(OPE)	-968	-4328	3261	5756	-9201	-1703
	11(OPE)	-6052	-4596	3905	6794	-9734	6585
	12(OPE)	-3261	-4016	3528	6161	-9409	2113
	13(OPE)	-3638	-4901	3587	6290	-9449	2548
	14(OPE)	-3389	-4457	4767	8041	-10059	2175
	15(OPE)	-3455	-4444	3516	6192	-9352	2335
	16(OCC)	2481	130	-296	-469	228	-4032
	17(OCC)	-2603	-138	348	570	-305	4256
	18(OCC)	188	442	-29	-64	20	-217
	19(OCC)	-189	-443	30	65	-21	219
	20(OCC)	60	1	1210	1817	-631	-154
	21(OCC)	-6	14	-41	-32	77	6
	MAX	-6052/L11	-6340/L1	4767/L14	8041/L14	-10059/L14	6585/L11
590		TYPE=Rigid ANC;					
	1(HYD)	-1429	-6340	36	429	41	1800
	2(OPE)	-3435	-4446	3535	9768	-9678	5412
	4(OPE)	-3449	-4458	3557	9831	-9749	5425
	6(OPE)	1626	-3345	-916	-2322	2524	-5264
	8(SUS)	-779	-3614	21	204	20	965
	9(SUS)	-778	-3610	21	204	20	964
	10(OPE)	-968	-4328	3261	9062	-9494	-1111
	11(OPE)	-6052	-4596	3905	10754	-10085	12308
	12(OPE)	-3261	-4016	3528	9738	-9727	5058
	13(OPE)	-3638	-4901	3587	9927	-9772	5796
	14(OPE)	-3389	-4457	4767	12875	-10488	5210
	15(OPE)	-3455	-4444	3516	9757	-9668	5438
	16(OCC)	2481	130	-296	-769	255	-6536
	17(OCC)	-2603	-138	348	923	-336	6883
	18(OCC)	188	442	-29	-94	22	-367
	19(OCC)	-189	-443	30	95	-23	371
	20(OCC)	60	1	1210	3044	-740	-215
	21(OCC)	-6	14	-41	-74	81	13
	MAX	-6052/L11	-6340/L1	4767/L14	12875/L14	-10488/L14	12308/L11
610		TYPE=Rigid +Y;					
	1(HYD)	36	-123	-9	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	31	-117	16	0	0	0
	8(SUS)	33	-114	-10	0	0	0
	9(SUS)	33	-114	-10	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	36/L1	-123/L1	16/L6			
620		TYPE=Rigid +Y;					
	1(HYD)	0	-1551	-0	0	0	0
	2(OPE)	80	-847	241	0	0	0
	4(OPE)	80	-847	241	0	0	0
	6(OPE)	24	-841	-251	0	0	0
	8(SUS)	0	-842	-0	0	0	0
	9(SUS)	0	-841	-0	0	0	0
	10(OPE)	59	-847	247	0	0	0
	11(OPE)	81	-847	241	0	0	0
	12(OPE)	72	-746	212	0	0	0
	13(OPE)	88	-948	270	0	0	0
	14(OPE)	65	-847	246	0	0	0
	15(OPE)	80	-847	241	0	0	0
	16(OCC)	-21	0	6	0	0	0
	17(OCC)	1	-0	-0	0	0	0
	18(OCC)	-8	101	-29	0	0	0
	19(OCC)	8	-101	29	0	0	0
	20(OCC)	-15	0	4	0	0	0
	21(OCC)	-0	-0	0	0	0	0
	MAX	88/L13	-1551/L1	270/L13			
630		TYPE=Rigid X; Rigid +Y;					
	1(HYD)	-0	-15387	-0	0	0	0
	2(OPE)	-582	-8368	2510	0	0	0
	4(OPE)	-593	-8368	2511	0	0	0
	6(OPE)	-846	-8347	-2504	0	0	0
	8(SUS)	-0	-8351	-0	0	0	0
	9(SUS)	-0	-8340	-0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(OPE)	2792	-8368	2510	0	0	0
	11(OPE)	-3821	-8369	2511	0	0	0
	12(OPE)	-677	-7366	2210	0	0	0
	13(OPE)	-492	-9370	2811	0	0	0
	14(OPE)	-1287	-8369	2511	0	0	0
	15(OPE)	-593	-8368	2511	0	0	0
	16(OCC)	3385	1	-0	0	0	0
	17(OCC)	-3228	-1	0	0	0	0
	18(OCC)	-84	1002	-301	0	0	0
	19(OCC)	101	-1002	301	0	0	0
	20(OCC)	-694	-0	0	0	0	0
	21(OCC)	0	-0	0	0	0	0
	MAX	-3821/L11	-15387/L1	2811/L13			
670		TYPE=Rigid +Y;					
	1(HYD)	-0	-8678	-0	0	0	0
	2(OPE)	-1374	-4597	-119	0	0	0
	4(OPE)	-1374	-4596	-119	0	0	0
	6(OPE)	1403	-4734	-220	0	0	0
	8(SUS)	-0	-4710	-0	0	0	0
	9(SUS)	-0	-4704	-0	0	0	0
	10(OPE)	-1380	-4600	-32	0	0	0
	11(OPE)	-1370	-4591	-140	0	0	0
	12(OPE)	-1205	-4031	-106	0	0	0
	13(OPE)	-1543	-5161	-131	0	0	0
	14(OPE)	-1372	-4595	133	0	0	0
	15(OPE)	-1374	-4596	-119	0	0	0
	16(OCC)	-6	-5	87	0	0	0
	17(OCC)	4	5	-21	0	0	0
	18(OCC)	169	565	13	0	0	0
	19(OCC)	-169	-565	-12	0	0	0
	20(OCC)	2	1	252	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-1543/L13	-8678/L1	252/L20			
695		TYPE=Rigid X w/gap; Rigid +Y;					
	1(HYD)	-0	-16081	-181	0	0	0
	2(OPE)	-2063	-8957	-2678	0	0	0
	4(OPE)	-2100	-8959	-2679	0	0	0
	6(OPE)	-188	-8679	2597	0	0	0
	8(SUS)	-0	-8727	-98	0	0	0
	9(SUS)	-0	-8716	-98	0	0	0
	10(OPE)	-53	-8949	-2684	0	0	0
	11(OPE)	-4735	-8970	-2682	0	0	0
	12(OPE)	-2281	-7911	-2365	0	0	0
	13(OPE)	-1923	-10007	-2992	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	-1256	-8959	-2679	0	0	0
	15(OPE)	-2100	-8959	-2679	0	0	0
	16(OCC)	2047	10	-5	0	0	0
	17(OCC)	-2635	-11	-3	0	0	0
	18(OCC)	-181	1048	313	0	0	0
	19(OCC)	177	-1048	-313	0	0	0
	20(OCC)	844	-0	-0	0	0	0
	21(OCC)	-0	-0	-0	0	0	0
	MAX	-4735/L11	-16081/L1	-2992/L13			
700		TYPE=Rigid X; Rigid +Y;					
	1(HYD)	1	-1156	-302	0	0	0
	2(OPE)	4154	-245	-74	0	0	0
	4(OPE)	4206	-242	-73	0	0	0
	6(OPE)	-334	-707	212	0	0	0
	8(SUS)	0	-627	-164	0	0	0
	9(SUS)	0	-627	-164	0	0	0
	10(OPE)	5570	-262	-79	0	0	0
	11(OPE)	3399	-221	-66	0	0	0
	12(OPE)	4365	-167	-50	0	0	0
	13(OPE)	4047	-317	-95	0	0	0
	14(OPE)	3939	-251	-75	0	0	0
	15(OPE)	4207	-242	-73	0	0	0
	16(OCC)	1364	-20	-6	0	0	0
	17(OCC)	-807	21	6	0	0	0
	18(OCC)	158	75	22	0	0	0
	19(OCC)	-160	-75	-22	0	0	0
	20(OCC)	-268	-9	-3	0	0	0
	21(OCC)	1	-0	-0	0	0	0
	MAX	5570/L10	-1156/L1	-302/L1			
750		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	1(HYD)	-0	-8531	-0	0	0	0
	2(OPE)	2042	-4628	-1297	0	0	0
	4(OPE)	2068	-4628	-1313	0	0	0
	6(OPE)	-35	-4630	393	0	0	0
	8(SUS)	-0	-4630	-0	0	0	0
	9(SUS)	-0	-4624	-0	0	0	0
	10(OPE)	3491	-4628	-1555	0	0	0
	11(OPE)	855	-4628	-1210	0	0	0
	12(OPE)	2063	-4072	-1303	0	0	0
	13(OPE)	2001	-5184	-1329	0	0	0
	14(OPE)	2173	-4628	4665	0	0	0
	15(OPE)	2068	-4628	-1313	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OCC)	1424	-0	-242	0	0	0
	17(OCC)	-1213	0	103	0	0	0
	18(OCC)	-4	556	9	0	0	0
	19(OCC)	-67	-556	-16	0	0	0
	20(OCC)	106	-0	5978	0	0	0
	21(OCC)	-0	0	-0	0	0	0
	MAX	3491/L10	-8531/L1	5978/L20			
780		TYPE=Rigid +Y;					
	1(HYD)	0	-4582	-0	0	0	0
	2(OPE)	121	-2489	-737	0	0	0
	4(OPE)	121	-2489	-737	0	0	0
	6(OPE)	-201	-2486	718	0	0	0
	8(SUS)	0	-2487	-0	0	0	0
	9(SUS)	0	-2483	-0	0	0	0
	10(OPE)	219	-2488	-714	0	0	0
	11(OPE)	112	-2489	-738	0	0	0
	12(OPE)	104	-2190	-649	0	0	0
	13(OPE)	132	-2787	-826	0	0	0
	14(OPE)	175	-2489	-726	0	0	0
	15(OPE)	121	-2489	-737	0	0	0
	16(OCC)	98	0	23	0	0	0
	17(OCC)	-9	-0	-1	0	0	0
	18(OCC)	-17	298	88	0	0	0
	19(OCC)	11	-298	-89	0	0	0
	20(OCC)	54	-0	11	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	219/L10	-4582/L1	-826/L13			
800		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-0	-10767	-0	0	0	0
	2(OPE)	-469	-5840	-1748	0	0	0
	4(OPE)	-491	-5840	-1748	0	0	0
	6(OPE)	-417	-5844	1703	0	0	0
	8(SUS)	-0	-5843	-0	0	0	0
	9(SUS)	-0	-5836	-0	0	0	0
	10(OPE)	2113	-5840	-1748	0	0	0
	11(OPE)	-4209	-5840	-1748	0	0	0
	12(OPE)	-746	-5138	-1538	0	0	0
	13(OPE)	-307	-6541	-1958	0	0	0
	14(OPE)	-46	-5840	-1751	0	0	0
	15(OPE)	-491	-5840	-1748	0	0	0
	16(OCC)	2604	-0	-0	0	0	0
	17(OCC)	-3718	0	0	0	0	0
	18(OCC)	-255	701	210	0	0	0
	19(OCC)	184	-701	-210	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	20(OCC)	445	0	-3	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-4209/L11	-10767/L1	-1958/L13			
830		TYPE=Rigid +Y;					
	1(HYD)	0	-8205	0	0	0	0
	2(OPE)	-1296	-4455	-328	0	0	0
	4(OPE)	-1296	-4455	-327	0	0	0
	6(OPE)	1331	-4452	118	0	0	0
	8(SUS)	0	-4453	0	0	0	0
	9(SUS)	0	-4447	0	0	0	0
	10(OPE)	-1282	-4455	-379	0	0	0
	11(OPE)	-1326	-4456	-168	0	0	0
	12(OPE)	-1142	-3921	-282	0	0	0
	13(OPE)	-1450	-4990	-373	0	0	0
	14(OPE)	-1337	-4455	2	0	0	0
	15(OPE)	-1296	-4455	-327	0	0	0
	16(OCC)	14	0	-52	0	0	0
	17(OCC)	-30	-0	159	0	0	0
	18(OCC)	154	534	44	0	0	0
	19(OCC)	-154	-534	-46	0	0	0
	20(OCC)	-41	-0	329	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-1450/L13	-8205/L1	-379/L10			
860		TYPE=Rigid +Y;					
	1(HYD)	-0	-8041	0	0	0	0
	2(OPE)	-524	-4364	1200	0	0	0
	4(OPE)	-525	-4364	1199	0	0	0
	6(OPE)	-284	-4364	-1278	0	0	0
	8(SUS)	-0	-4364	0	0	0	0
	9(SUS)	-0	-4358	0	0	0	0
	10(OPE)	-205	-4364	1293	0	0	0
	11(OPE)	-690	-4364	1113	0	0	0
	12(OPE)	-471	-3840	1051	0	0	0
	13(OPE)	-574	-4888	1349	0	0	0
	14(OPE)	-525	-4364	1199	0	0	0
	15(OPE)	-525	-4364	1199	0	0	0
	16(OCC)	320	0	94	0	0	0
	17(OCC)	-165	-0	-87	0	0	0
	18(OCC)	54	524	-148	0	0	0
	19(OCC)	-49	-524	150	0	0	0
	20(OCC)	-0	-0	-0	0	0	0
	21(OCC)	-0	0	0	0	0	0
	MAX	-690/L11	-8041/L1	1349/L13			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
880		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	0	-6891	0	0	0	0
	2(OPE)	2092	-3739	3182	0	0	0
	4(OPE)	2119	-3739	3212	0	0	0
	6(OPE)	0	-3740	-917	0	0	0
	8(SUS)	0	-3740	0	0	0	0
	9(SUS)	0	-3735	0	0	0	0
	10(OPE)	4771	-3739	3304	0	0	0
	11(OPE)	373	-3739	3568	0	0	0
	12(OPE)	2104	-3291	3166	0	0	0
	13(OPE)	2139	-4188	3451	0	0	0
	14(OPE)	1884	-3739	8874	0	0	0
	15(OPE)	2119	-3739	3212	0	0	0
	16(OCC)	2652	-0	92	0	0	0
	17(OCC)	-1746	0	356	0	0	0
	18(OCC)	-15	449	-45	0	0	0
	19(OCC)	20	-449	239	0	0	0
	20(OCC)	-235	0	5662	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	4771/L10	-6891/L1	8874/L14			
890		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	1(HYD)	0	-6522	0	0	0	0
	2(OPE)	-46	-3540	-243	0	0	0
	4(OPE)	-51	-3540	-262	0	0	0
	6(OPE)	28	-3540	-1062	0	0	0
	8(SUS)	0	-3540	0	0	0	0
	9(SUS)	0	-3535	0	0	0	0
	10(OPE)	2405	-3540	-1483	0	0	0
	11(OPE)	-2306	-3540	1062	0	0	0
	12(OPE)	-54	-3115	-935	0	0	0
	13(OPE)	-2	-3965	23	0	0	0
	14(OPE)	145	-3540	9605	0	0	0
	15(OPE)	-51	-3540	-262	0	0	0
	16(OCC)	2456	0	-1221	0	0	0
	17(OCC)	-2255	0	1324	0	0	0
	18(OCC)	-3	425	-672	0	0	0
	19(OCC)	48	-425	286	0	0	0
	20(OCC)	196	0	9867	0	0	0
	21(OCC)	-0	0	0	0	0	0
	MAX	2456/L16	-6522/L1	9867/L20			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
900		TYPE=Rigid +Y;					
	1(HYD)	-0	-6558	0	0	0	0
	2(OPE)	-56	-3559	-1066	0	0	0
	4(OPE)	-58	-3559	-1066	0	0	0
	6(OPE)	-25	-3559	1067	0	0	0
	8(SUS)	-0	-3559	0	0	0	0
	9(SUS)	-0	-3555	0	0	0	0
	10(OPE)	91	-3559	-1064	0	0	0
	11(OPE)	-167	-3559	-1055	0	0	0
	12(OPE)	-57	-3132	-938	0	0	0
	13(OPE)	-34	-3986	-1195	0	0	0
	14(OPE)	-76	-3559	-1065	0	0	0
	15(OPE)	-58	-3559	-1066	0	0	0
	16(OCC)	149	0	2	0	0	0
	17(OCC)	-109	0	12	0	0	0
	18(OCC)	1	427	128	0	0	0
	19(OCC)	24	-427	-129	0	0	0
	20(OCC)	-18	0	1	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-167/L11	-6558/L1	-1195/L13			
910		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-6443	0	0	0	0
	2(OPE)	-64	-3496	-1047	0	0	0
	4(OPE)	-66	-3496	-1047	0	0	0
	6(OPE)	-20	-3496	1049	0	0	0
	8(SUS)	0	-3496	0	0	0	0
	9(SUS)	0	-3492	0	0	0	0
	10(OPE)	14	-3496	-1049	0	0	0
	11(OPE)	-508	-3496	-1045	0	0	0
	12(OPE)	-194	-3077	-920	0	0	0
	13(OPE)	-38	-3916	-1174	0	0	0
	14(OPE)	-68	-3496	-1047	0	0	0
	15(OPE)	-66	-3496	-1047	0	0	0
	16(OCC)	79	0	-2	0	0	0
	17(OCC)	-442	0	1	0	0	0
	18(OCC)	-129	420	126	0	0	0
	19(OCC)	28	-420	-127	0	0	0
	20(OCC)	-2	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-508/L11	-6443/L1	-1174/L13			
920		TYPE=Rigid +Y;					
	1(HYD)	-0	-6875	0	0	0	0
	2(OPE)	-67	-3731	-1117	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	-68	-3731	-1117	0	0	0
	6(OPE)	71	-3731	1117	0	0	0
	8(SUS)	-0	-3731	0	0	0	0
	9(SUS)	-0	-3726	0	0	0	0
	10(OPE)	-71	-3731	-1117	0	0	0
	11(OPE)	-7	-3731	-1119	0	0	0
	12(OPE)	-76	-3283	-982	0	0	0
	13(OPE)	-47	-4179	-1253	0	0	0
	14(OPE)	-67	-3731	-1117	0	0	0
	15(OPE)	-68	-3731	-1117	0	0	0
	16(OCC)	-3	0	0	0	0	0
	17(OCC)	62	0	-2	0	0	0
	18(OCC)	-8	448	135	0	0	0
	19(OCC)	21	-448	-136	0	0	0
	20(OCC)	1	0	-0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-76/L12	-6875/L1	-1253/L13			
930		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-4874	0	0	0	0
	2(OPE)	-2959	-2645	-793	0	0	0
	4(OPE)	-2953	-2645	-793	0	0	0
	6(OPE)	861	-2645	773	0	0	0
	8(SUS)	0	-2645	0	0	0	0
	9(SUS)	0	-2642	0	0	0	0
	10(OPE)	3558	-2645	-793	0	0	0
	11(OPE)	-8443	-2645	-793	0	0	0
	12(OPE)	-2430	-2328	-698	0	0	0
	13(OPE)	-3424	-2963	-888	0	0	0
	14(OPE)	-2961	-2645	-793	0	0	0
	15(OPE)	-2953	-2645	-793	0	0	0
	16(OCC)	6511	0	-0	0	0	0
	17(OCC)	-5490	0	0	0	0	0
	18(OCC)	523	317	95	0	0	0
	19(OCC)	-471	-317	-95	0	0	0
	20(OCC)	-8	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-8443/L11	-4874/L1	-888/L13			
940		TYPE=Rigid +Y;					
	1(HYD)	0	-7875	0	0	0	0
	2(OPE)	43	-4274	-1281	0	0	0
	4(OPE)	46	-4274	-1281	0	0	0
	6(OPE)	396	-4274	1220	0	0	0
	8(SUS)	0	-4274	0	0	0	0
	9(SUS)	0	-4269	0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(OPE)	371	-4274	-1227	0	0	0
	11(OPE)	-161	-4274	-1272	0	0	0
	12(OPE)	67	-3761	-1126	0	0	0
	13(OPE)	14	-4787	-1436	0	0	0
	14(OPE)	39	-4274	-1282	0	0	0
	15(OPE)	46	-4274	-1281	0	0	0
	16(OCC)	325	0	54	0	0	0
	17(OCC)	-206	0	9	0	0	0
	18(OCC)	22	513	155	0	0	0
	19(OCC)	-31	-513	-155	0	0	0
	20(OCC)	-7	0	-0	0	0	0
	21(OCC)	-0	0	0	0	0	0
	MAX	396/L6	-7875/L1	-1436/L13			
970		TYPE=Rigid +Y; Rigid Z;					
	1(HYD)	0	-10550	0	0	0	0
	2(OPE)	1718	-5726	-7121	0	0	0
	4(OPE)	1718	-5726	-7168	0	0	0
	6(OPE)	-318	-5726	1641	0	0	0
	8(SUS)	0	-5726	0	0	0	0
	9(SUS)	0	-5718	0	0	0	0
	10(OPE)	1718	-5726	-5811	0	0	0
	11(OPE)	1718	-5726	-8029	0	0	0
	12(OPE)	1512	-5038	-6989	0	0	0
	13(OPE)	1924	-6413	-7363	0	0	0
	14(OPE)	1718	-5726	-4898	0	0	0
	15(OPE)	1718	-5726	-7168	0	0	0
	16(OCC)	0	0	1356	0	0	0
	17(OCC)	0	0	-862	0	0	0
	18(OCC)	-206	687	179	0	0	0
	19(OCC)	206	-687	-196	0	0	0
	20(OCC)	0	0	2269	0	0	0
	21(OCC)	0	0	-0	0	0	0
	MAX	1924/L13	-10550/L1	-8029/L11			
1010		TYPE=Rigid +Y;					
	1(HYD)	0	-6976	0	0	0	0
	2(OPE)	1101	-3786	278	0	0	0
	4(OPE)	1101	-3786	277	0	0	0
	6(OPE)	-1026	-3786	-487	0	0	0
	8(SUS)	0	-3786	0	0	0	0
	9(SUS)	0	-3781	0	0	0	0
	10(OPE)	1120	-3786	189	0	0	0
	11(OPE)	1067	-3786	389	0	0	0
	12(OPE)	972	-3332	234	0	0	0
	13(OPE)	1230	-4240	325	0	0	0
	14(OPE)	1094	-3786	305	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	15(OPE)	1101	-3786	277	0	0	0
	16(OCC)	19	0	-89	0	0	0
	17(OCC)	-34	0	112	0	0	0
	18(OCC)	-130	454	-43	0	0	0
	19(OCC)	128	-454	48	0	0	0
	20(OCC)	-7	0	28	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	1230/L13	-6976/L1	-487/L6			
1020		TYPE=Rigid +Y; Rigid Z;					
	1(HYD)	0	-2475	0	0	0	0
	2(OPE)	0	-1343	1795	0	0	0
	4(OPE)	0	-1343	1812	0	0	0
	6(OPE)	0	-1343	-126	0	0	0
	8(SUS)	0	-1343	0	0	0	0
	9(SUS)	0	-1342	0	0	0	0
	10(OPE)	0	-1343	1882	0	0	0
	11(OPE)	0	-1343	1851	0	0	0
	12(OPE)	0	-1182	1825	0	0	0
	13(OPE)	0	-1505	1799	0	0	0
	14(OPE)	0	-1343	2588	0	0	0
	15(OPE)	0	-1343	1812	0	0	0
	16(OCC)	0	0	71	0	0	0
	17(OCC)	0	0	40	0	0	0
	18(OCC)	0	161	14	0	0	0
	19(OCC)	0	-161	-13	0	0	0
	20(OCC)	0	0	777	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX		-2475/L1	2588/L14			
1050		TYPE=Rigid +Y;					
	1(HYD)	0	-4473	-0	0	0	0
	2(OPE)	331	-2428	-649	0	0	0
	4(OPE)	331	-2428	-649	0	0	0
	6(OPE)	-593	-2428	423	0	0	0
	8(SUS)	0	-2428	-0	0	0	0
	9(SUS)	0	-2425	-0	0	0	0
	10(OPE)	368	-2428	-629	0	0	0
	11(OPE)	390	-2428	-615	0	0	0
	12(OPE)	294	-2136	-569	0	0	0
	13(OPE)	365	-2719	-730	0	0	0
	14(OPE)	358	-2428	-635	0	0	0
	15(OPE)	331	-2428	-649	0	0	0
	16(OCC)	37	0	20	0	0	0
	17(OCC)	59	-0	34	0	0	0
	18(OCC)	-37	291	79	0	0	0
	19(OCC)	34	-291	-81	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	20(OCC)	27	-0	14	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-593/L6	-4473/L1	-730/L13			
1060		TYPE=Rigid X w/gap; Rigid +Y;					
	1(HYD)	-0	-10876	-0	0	0	0
	2(OPE)	-1154	-5903	-1765	0	0	0
	4(OPE)	-1178	-5903	-1765	0	0	0
	6(OPE)	-219	-5903	1757	0	0	0
	8(SUS)	-0	-5903	-0	0	0	0
	9(SUS)	-0	-5895	-0	0	0	0
	10(OPE)	1093	-5903	-1765	0	0	0
	11(OPE)	-4952	-5903	-1765	0	0	0
	12(OPE)	-1157	-5194	-1553	0	0	0
	13(OPE)	-1054	-6611	-1977	0	0	0
	14(OPE)	-959	-5903	-1765	0	0	0
	15(OPE)	-1178	-5903	-1765	0	0	0
	16(OCC)	2270	0	0	0	0	0
	17(OCC)	-3775	-0	-0	0	0	0
	18(OCC)	21	708	212	0	0	0
	19(OCC)	124	-708	-212	0	0	0
	20(OCC)	219	-0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-4952/L11	-10876/L1	-1977/L13			
1090		TYPE=Rigid +Y;					
	1(HYD)	0	-8358	0	0	0	0
	2(OPE)	-1258	-4536	519	0	0	0
	4(OPE)	-1257	-4536	520	0	0	0
	6(OPE)	1325	-4536	-310	0	0	0
	8(SUS)	0	-4536	0	0	0	0
	9(SUS)	0	-4530	0	0	0	0
	10(OPE)	-1225	-4536	592	0	0	0
	11(OPE)	-1196	-4536	649	0	0	0
	12(OPE)	-1106	-3991	458	0	0	0
	13(OPE)	-1413	-5080	570	0	0	0
	14(OPE)	-1164	-4536	705	0	0	0
	15(OPE)	-1257	-4536	520	0	0	0
	16(OCC)	32	-0	72	0	0	0
	17(OCC)	61	0	128	0	0	0
	18(OCC)	151	544	-63	0	0	0
	19(OCC)	-156	-544	50	0	0	0
	20(OCC)	93	0	185	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-1413/L13	-8358/L1	705/L14			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1120		TYPE=Rigid +Y;					
	1(HYD)	-0	-7442	0	0	0	0
	2(OPE)	-228	-4039	1190	0	0	0
	4(OPE)	-228	-4039	1190	0	0	0
	6(OPE)	-169	-4039	-1200	0	0	0
	8(SUS)	-0	-4039	0	0	0	0
	9(SUS)	-0	-4034	0	0	0	0
	10(OPE)	-108	-4039	1207	0	0	0
	11(OPE)	-333	-4039	1165	0	0	0
	12(OPE)	-202	-3554	1047	0	0	0
	13(OPE)	-248	-4523	1334	0	0	0
	14(OPE)	-288	-4039	1177	0	0	0
	15(OPE)	-228	-4039	1190	0	0	0
	16(OCC)	120	-0	17	0	0	0
	17(OCC)	-105	0	-25	0	0	0
	18(OCC)	26	485	-143	0	0	0
	19(OCC)	-20	-485	144	0	0	0
	20(OCC)	-59	0	-13	0	0	0
	21(OCC)	-0	0	0	0	0	0
	MAX	-333/L11	-7442/L1	1334/L13			
1130		TYPE=Rigid X w/gap; Rigid +Y;					
	1(HYD)	0	-6769	0	0	0	0
	2(OPE)	183	-3674	1101	0	0	0
	4(OPE)	176	-3674	1101	0	0	0
	6(OPE)	-355	-3674	-1056	0	0	0
	8(SUS)	0	-3674	0	0	0	0
	9(SUS)	0	-3669	0	0	0	0
	10(OPE)	3379	-3674	1101	0	0	0
	11(OPE)	-1154	-3674	1101	0	0	0
	12(OPE)	130	-3233	969	0	0	0
	13(OPE)	369	-4115	1233	0	0	0
	14(OPE)	4	-3674	1102	0	0	0
	15(OPE)	176	-3674	1101	0	0	0
	16(OCC)	3203	0	-0	0	0	0
	17(OCC)	-1329	-0	0	0	0	0
	18(OCC)	-46	441	-132	0	0	0
	19(OCC)	193	-441	132	0	0	0
	20(OCC)	-172	-0	1	0	0	0
	21(OCC)	-0	0	0	0	0	0
	MAX	3379/L10	-6769/L1	1233/L13			
1140		TYPE=Rigid X w/gap; Rigid +Y;					
	1(HYD)	0	-6470	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	1192	-3511	0	0	0	0
	4(OPE)	1210	-3511	0	0	0	0
	6(OPE)	0	-3511	0	0	0	0
	8(SUS)	0	-3511	0	0	0	0
	9(SUS)	0	-3507	0	0	0	0
	10(OPE)	1269	-3511	0	0	0	0
	11(OPE)	0	-3511	0	0	0	0
	12(OPE)	1234	-3090	0	0	0	0
	13(OPE)	1094	-3933	0	0	0	0
	14(OPE)	915	-3511	0	0	0	0
	15(OPE)	1210	-3511	0	0	0	0
	16(OCC)	59	-0	0	0	0	0
	17(OCC)	-1210	0	0	0	0	0
	18(OCC)	24	421	0	0	0	0
	19(OCC)	-116	-421	0	0	0	0
	20(OCC)	-295	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	1269/L10	-6470/L1				
1150		TYPE=Rigid +Y;					
	1(HYD)	-0	-6551	0	0	0	0
	2(OPE)	58	-3555	1065	0	0	0
	4(OPE)	58	-3555	1065	0	0	0
	6(OPE)	-130	-3555	-1059	0	0	0
	8(SUS)	-0	-3555	0	0	0	0
	9(SUS)	-0	-3551	0	0	0	0
	10(OPE)	114	-3555	1061	0	0	0
	11(OPE)	-36	-3555	1066	0	0	0
	12(OPE)	51	-3129	937	0	0	0
	13(OPE)	61	-3982	1193	0	0	0
	14(OPE)	79	-3555	1064	0	0	0
	15(OPE)	58	-3555	1065	0	0	0
	16(OCC)	56	0	-5	0	0	0
	17(OCC)	-94	0	1	0	0	0
	18(OCC)	-6	427	-128	0	0	0
	19(OCC)	3	-427	128	0	0	0
	20(OCC)	21	0	-1	0	0	0
	21(OCC)	-0	0	0	0	0	0
	MAX	-130/L6	-6551/L1	1193/L13			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 22 (OCC) L22=L16+L8
CASE 23 (OCC) L23=L17+L8
CASE 24 (OCC) L24=L18+L8
CASE 25 (OCC) L25=L19+L8
CASE 26 (OCC) L26=L20+L8
CASE 27 (OCC) L27=L21+L8
CASE 28 (EXP) L28=L2-L8
CASE 29 (EXP) L29=L4-L8
CASE 30 (EXP) L30=L2-L4
CASE 31 (EXP) L31=L6-L8
CASE 32 (EXP) L32=L2-L6
CASE 33 (EXP) L33=L4-L6

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	22.9	@Node	695
Code Stress:	55349.4	Allowable Stress:	241316.5
Axial Stress:	5959.8	@Node	640
Bending Stress:	49305.0	@Node	695
Torsion Stress:	5959.4	@Node	680
Hoop Stress:	12353.7	@Node	30
Max Stress Intensity:	55373.0	@Node	695

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	64.3	@Node	695
Code Stress:	83159.5	Allowable Stress:	129365.3
Axial Stress:	12073.5	@Node	640
Bending Stress:	70969.2	@Node	695
Torsion Stress:	8577.9	@Node	680
Hoop Stress:	24443.4	@Node	30
Max Stress Intensity:	83194.8	@Node	695

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	54.9	@Node	695
Code Stress:	71051.0	Allowable Stress:	129365.3
Axial Stress:	1723.1	@Node	260
Bending Stress:	70879.4	@Node	695
Torsion Stress:	8567.0	@Node	680
Hoop Stress:	0.0	@Node	20

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Max Stress Intensity:       71051.0       @Node    695

 CODE STRESS CHECK PASSED      : LOADCASE 22 (OCC) L22=L16+L8

Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L16+L8
Ratio (%):                    60.6       @Node    630
Code Stress:                104310.8       Allowable Stress:     172055.9
Axial Stress:                13421.9       @Node    950
Bending Stress:             115575.7       @Node    950
Torsion Stress:               9463.3       @Node    140
Hoop Stress:                 24443.4       @Node     30
Max Stress Intensity:       136196.3       @Node    950

 CODE STRESS CHECK PASSED      : LOADCASE 23 (OCC) L23=L17+L8

Highest Stresses: (   KPa    ) LOADCASE 23 (OCC) L23=L17+L8
Ratio (%):                    61.8       @Node    695
Code Stress:                106276.3       Allowable Stress:     172055.9
Axial Stress:                12808.4       @Node   1070
Bending Stress:              93928.2       @Node    695
Torsion Stress:               8583.4       @Node    680
Hoop Stress:                 24443.4       @Node     30
Max Stress Intensity:       107677.5       @Node    950

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L18+L8

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L18+L8
Ratio (%):                    53.4       @Node    695
Code Stress:                 91963.7       Allowable Stress:     172055.9
Axial Stress:                12383.8       @Node    900
Bending Stress:              79667.0       @Node    695
Torsion Stress:               7548.3       @Node    680
Hoop Stress:                 24443.4       @Node     30
Max Stress Intensity:        92034.3       @Node    695

 CODE STRESS CHECK PASSED      : LOADCASE 25 (OCC) L25=L19+L8

Highest Stresses: (   KPa    ) LOADCASE 25 (OCC) L25=L19+L8
Ratio (%):                    53.4       @Node    695
Code Stress:                 91952.9       Allowable Stress:     172055.9
Axial Stress:                12080.3       @Node    840
Bending Stress:              79655.6       @Node    695
Torsion Stress:               9607.5       @Node    680
Hoop Stress:                 24443.4       @Node     30
Max Stress Intensity:        92023.6       @Node    695

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L20+L8

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L20+L8
Ratio (%):                    51.1       @Node    695
Code Stress:                 87959.3       Allowable Stress:     172055.9
Axial Stress:                13827.0       @Node    890
Bending Stress:              75027.9       @Node    695
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Torsion Stress:             12648.4       @Node    108
Hoop Stress:                24443.4       @Node     30
Max Stress Intensity:       87994.7       @Node    695

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L21+L8

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L21+L8
Ratio (%):                     48.3       @Node    695
Code Stress:                83161.0       Allowable Stress:     172055.9
Axial Stress:               12073.5       @Node    680
Bending Stress:             70970.8       @Node    695
Torsion Stress:              9324.9       @Node    130
Hoop Stress:                24443.4       @Node     30
Max Stress Intensity:       83196.4       @Node    695

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L2-L8
Ratio (%):                     41.0       @Node   1099
Code Stress:               128545.7       Allowable Stress:     313501.9
Axial Stress:                2763.3       @Node    320
Bending Stress:            130223.7       @Node   1098
Torsion Stress:             20507.1       @Node    320
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      347855.5       @Node   1098

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L4-L8

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L4-L8
Ratio (%):                     41.4       @Node   1099
Code Stress:               129675.3       Allowable Stress:     313160.6
Axial Stress:                2746.3       @Node    320
Bending Stress:            131371.3       @Node   1098
Torsion Stress:             20844.1       @Node    320
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      350919.3       @Node   1098

 CODE STRESS CHECK PASSED      : LOADCASE 30 (EXP) L30=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 30 (EXP) L30=L2-L4
Ratio (%):                      1.8       @Node    140
Code Stress:                 5126.2       Allowable Stress:     289917.4
Axial Stress:                  64.8       @Node    280
Bending Stress:              5053.2       @Node    140
Torsion Stress:               714.1       @Node    148
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:       24074.8       @Node    140

 CODE STRESS CHECK PASSED      : LOADCASE 31 (EXP) L31=L6-L8

Highest Stresses: (   KPa    ) LOADCASE 31 (EXP) L31=L6-L8
Ratio (%):                      9.9       @Node    260
Code Stress:                28164.5       Allowable Stress:     284424.4
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Axial Stress:                1973.3       @Node    320
Bending Stress:             26293.2       @Node    260
Torsion Stress:              3587.4       @Node     20
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:       59709.0       @Node    949

 CODE STRESS CHECK PASSED      : LOADCASE 32 (EXP) L32=L2-L6

Highest Stresses: (   KPa    ) LOADCASE 32 (EXP) L32=L2-L6
Ratio (%):                     47.4       @Node   1099
Code Stress:                148702.0       Allowable Stress:     313501.9
Axial Stress:                4736.6       @Node    320
Bending Stress:             150038.5       @Node   1098
Torsion Stress:              23374.3       @Node    320
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:       400888.2       @Node   1098

 CODE STRESS CHECK PASSED      : LOADCASE 33 (EXP) L33=L4-L6

Highest Stresses: (   KPa    ) LOADCASE 33 (EXP) L33=L4-L6
Ratio (%):                     47.8       @Node   1099
Code Stress:                149831.7       Allowable Stress:     313160.6
Axial Stress:                4719.6       @Node    320
Bending Stress:             151186.1       @Node   1098
Torsion Stress:              23711.3       @Node    320
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:       403952.0       @Node   1098
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:40
Job:: BNK-GCS-CN-018-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:40
Job:: BNK-GCS-CN-018-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

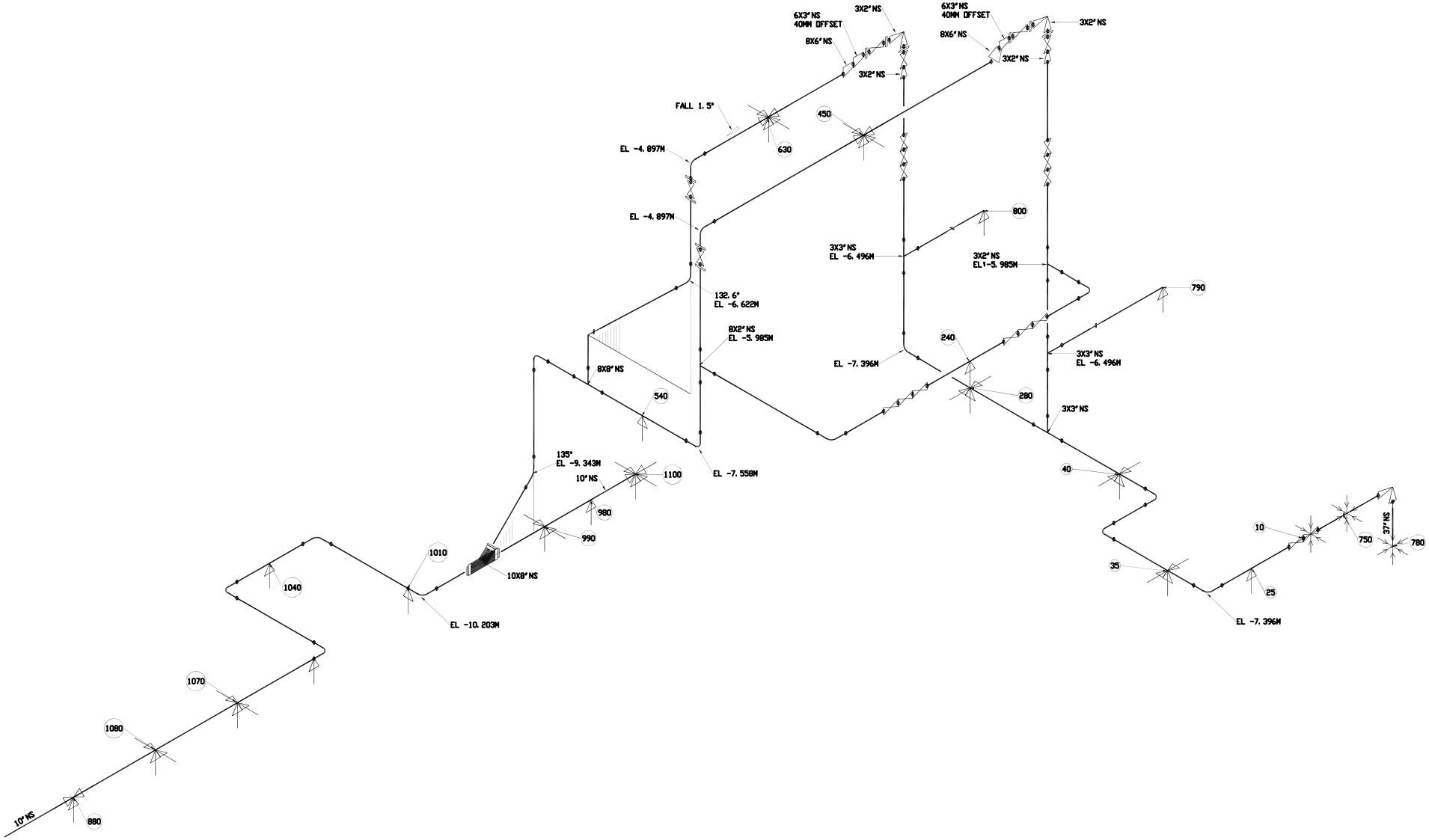
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
10		Absolute Method								
	Limits	11201	11201	8400		6720	4480	5820		
	2(OPE)	-4163	-3435	-3535	0.421	-9360	5096	-1272	1.393	*
	4(OPE)	-4175	-3449	-3557	0.423	-9429	5130	-1268	1.403	*
	6(OPE)	-3061	1626	916	0.273	2441	-1111	2815	0.484	
	8(SUS)	-3331	-779	-21	0.297	22	177	-261	0.045	
	9(SUS)	-3327	-778	-21	0.297	22	176	-261	0.045	
330		Absolute Method								
	Limits	2800	2800	2100		420	280	360		
	2(OPE)	2572	-380	-725	0.919	-486	-325	132	1.160	*
	4(OPE)	2556	-363	-726	0.913	-494	-342	125	1.223	*
	6(OPE)	-1942	27	501	0.694	74	98	-18	0.350	
	8(SUS)	-62	-25	164	0.078	5	-17	-11	0.062	
	9(SUS)	-100	-25	164	0.078	5	-17	-11	0.062	

BNK-GCS-CN-027

1. GAS-111-0060-FN05-3"-PT
2. GAS-111-0062-FN05-3"-PT
3. FL-112-0026-AN07-2"-PT
4. FL-112-0027-AN07-8"-PT
5. FL-112-0025-AN07-8"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 1 OF 2

REV.	CHANGE	DATE
		14 MAY 2024

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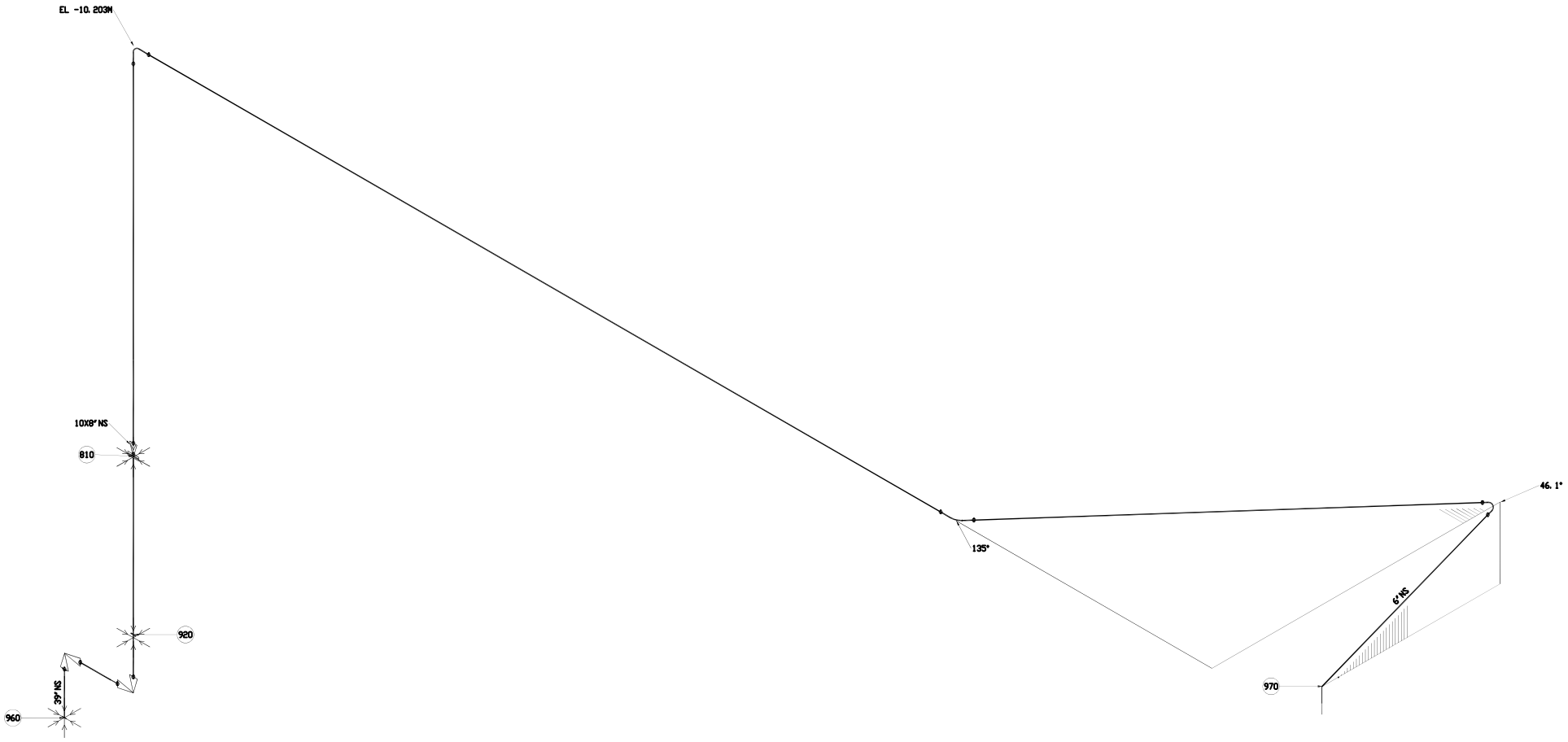

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 2 OF 2

REV.	CHANGE	DATE
		14 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OPE) W+T2+P1+F2
17 (OCC) L17=L10-L4
18 (OCC) L18=L11-L4
19 (OCC) L19=L12-L4
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17+L8
25 (OCC) L25=L18+L8
26 (OCC) L26=L19+L8
27 (OCC) L27=L20+L8
28 (OCC) L28=L21+L8
29 (OCC) L29=L22+L8
30 (OCC) L30=L23+L8
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8
33 (EXP) L33=L6-L8
34 (EXP) L34=L2-L6
35 (EXP) L35=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 15:0
Job:: BNK-GCS-CN-027-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 15:0
Job:: BNK-GCS-CN-027-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
                                                    File created by FEATools
CAESAR II 2018  Ver.10.00.00.7700,  (Build 170726)  MAY 20,2024  15: 1: 0

PIPE DATA
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
From  10  To  20 DY= .000 mm.  DZ= 92.075 mm.
PIPE
   Dia= 88.900 mm.   Wall= 7.620 mm.   Cor= 3.0000 mm.
GENERAL
   T1= 130 C   T2= 60 C   T3= 60 C   P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa
   Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 196,294,464 KPa
   EH2= 200,637,808 KPa   EH3= 200,637,808 KPa   EH4= 203,401,232 KPa
   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000562 kg./cu.cm.
   Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
RIGID  Weight= 106.76 N.
RESTRAINTS
   Node  10  ANC   Cnode  730
UNIFORM LOAD
  Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
  Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
  Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
ALLOWABLE STRESSES
   B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
   Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
   Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
   Sh9= 137,895 KPa   Sy= 241,316 KPa
-------------------------------------------------------------------------------
From  20  To  25 DZ= 879.000 mm.
RESTRAINTS
   Node  25  +Y   Mu = .30
-------------------------------------------------------------------------------
From  25  To  30 DZ= 564.000 mm.
BEND at "TO" end
   Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 29
   Angle/Node @2= .00 28
-------------------------------------------------------------------------------
From  30  To  35  DX= -414.000 mm.
RESTRAINTS
   Node  35  +Y   Mu = .30
   Node  35  Z   Gap= 3.000 mm.   Mu = .30
-------------------------------------------------------------------------------
From  35  To  1110  DX= -2,372.000 mm.
BEND at "TO" end
   Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1109
   Angle/Node @2= .00 1108
-------------------------------------------------------------------------------
From  1110  To  1120 DZ= -778.000 mm.
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 15:0
Job:: BNK-GCS-CN-027-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1119
    Angle/Node @2= .00 1118
 ---------------------------------------------------------------------------
 From  1120  To  40  DX= -414.000 mm.
 RESTRAINTS
    Node  40  +Y   Mu = .30
    Node  40  Z   Gap= .000 mm.
 ---------------------------------------------------------------------------
 From  40  To  50  DX= -2,695.000 mm.
 SIF's & TEE's
    Node  50   Welding Tee
 ---------------------------------------------------------------------------
 From  50  To  60 DY= 900.000 mm.
 ---------------------------------------------------------------------------
 From  60  To  70 DZ= -38.100 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  70   Reinforced Tee   Pad= 7.620 mm.
 ---------------------------------------------------------------------------
 From  60  To  80 DY= 511.000 mm.
 SIF's & TEE's
    Node  80   Welding Tee
 ---------------------------------------------------------------------------
 From  80  To  90 DY= 86.000 mm.
 ---------------------------------------------------------------------------
 From  90  To  100 DY= 92.075 mm.
 RIGID  Weight= 106.76 N.
 ---------------------------------------------------------------------------
 From  100  To  110 DY= 365.000 mm.
 GENERAL
    T3= 60 C
 RIGID  Weight= 591.61 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  110  To  120 DY= 92.075 mm.
 RIGID  Weight= 106.76 N.
 ---------------------------------------------------------------------------
 From  120  To  130 DY= 300.000 mm.
 ---------------------------------------------------------------------------
 From  130  To  140 DY= 89.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 8.738 mm.
 ---------------------------------------------------------------------------
 From  140  To  150 DY= 82.550 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 57.83 N.
 ---------------------------------------------------------------------------
 From  150  To  160 DY= 46.000 mm.
 RIGID  Weight= 57.83 N.
```

INPUT LISTING

```
 FORCES & MOMENTS
    Node  160   FY1= 2,500.13 N.   FZ1= -3,000.15 N.
 ------------------------------------------------------------------------------
 From  160  To  170 DZ= 63.925 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 106.76 N.
 ------------------------------------------------------------------------------
 From  170  To  180 DZ= 92.075 mm.
 RIGID  Weight= 106.76 N.
 ------------------------------------------------------------------------------
 From  80  To  190  DX= 352.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 189
    Angle/Node @2= .00 188
 ------------------------------------------------------------------------------
 From  190  To  200 DZ= 77.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  200  To  210 DZ= 82.550 mm.
 RIGID  Weight= 57.83 N.
 ------------------------------------------------------------------------------
 From  210  To  220 DZ= 301.000 mm.
 RIGID  Weight= 311.38 N.
 ------------------------------------------------------------------------------
 From  220  To  230 DZ= 82.550 mm.
 RIGID  Weight= 57.83 N.
 ------------------------------------------------------------------------------
 From  230  To  240 DZ= 125.500 mm.
 RESTRAINTS
    Node  240  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  240  To  250 DZ= 125.500 mm.
 ------------------------------------------------------------------------------
 From  250  To  260 DZ= 82.550 mm.
 RIGID  Weight= 57.83 N.
 ------------------------------------------------------------------------------
 From  260  To  270 DZ= 297.000 mm.
 RIGID  Weight= 515.99 N.
 ------------------------------------------------------------------------------
 From  50  To  280  DX= -566.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  280  +Y
    Node  280  Z   Gap= 5.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
```

INPUT LISTING

```
 From  280  To  290  DX= -234.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 289
    Angle/Node @2= .00 288
 ------------------------------------------------------------------------------
 From  290  To  300 DY= 900.000 mm.
 ------------------------------------------------------------------------------
 From  300  To  310 DZ= -38.100 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  310   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  300  To  320 DY= 597.000 mm.
 ------------------------------------------------------------------------------
 From  320  To  330 DY= 92.075 mm.
 RIGID  Weight= 106.76 N.
 ------------------------------------------------------------------------------
 From  330  To  340 DY= 365.000 mm.
 RIGID  Weight= 591.61 N.
 ------------------------------------------------------------------------------
 From  340  To  350 DY= 92.075 mm.
 RIGID  Weight= 106.76 N.
 ------------------------------------------------------------------------------
 From  350  To  360 DY= 300.000 mm.
 ------------------------------------------------------------------------------
 From  360  To  370 DY= 89.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 8.738 mm.
 ------------------------------------------------------------------------------
 From  370  To  380 DY= 82.550 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 57.83 N.
 ------------------------------------------------------------------------------
 From  380  To  390 DY= 46.000 mm.
 RIGID  Weight= 57.83 N.
 FORCES & MOMENTS
    Node  390   FY2= 2,500.13 N.   FZ2= -3,000.15 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  390  To  400 DZ= 64.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 106.76 N.
 ------------------------------------------------------------------------------
 From  400  To  410 DZ= 92.075 mm.
 RIGID  Weight= 106.76 N.
 ------------------------------------------------------------------------------
 From  180  To  420 DZ= 73.025 mm.
 PIPE
```

INPUT LISTING
```
    Dia= 88.900 mm.   Wall= 7.620 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 54.49 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  420  To  430 DY= -40.000 mm.  DZ= 140.000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------------
 From  430  To  440 DY= -25.000 mm.  DZ= 153.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 REDUCER
    Diam2= 219.075 mm.   Wall2= 10.312 mm.
 ------------------------------------------------------------------------------
 From  440  To  450 DZ= 300.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  450  +Y   Mu = .30
    Node  450  X   Gap= 3.000 mm.
    Node  450  Z
 ------------------------------------------------------------------------------
 From  450  To  460 DZ= 505.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 459
    Angle/Node @2= .00 458
 ------------------------------------------------------------------------------
 From  460  To  470 DY= -305.000 mm.
 ------------------------------------------------------------------------------
 From  470  To  480 DY= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  480  To  490 DY= -462.000 mm.
 RIGID  Weight= 2,259.70 N.
 ------------------------------------------------------------------------------
 From  490  To  500 DY= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  500  To  510 DY= -111.000 mm.
 ------------------------------------------------------------------------------
 From  510  To  520 DY= -511.000 mm.
 ------------------------------------------------------------------------------
 From  520  To  530 DY= -1,062.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 529
    Angle/Node @2= .00 528
 ------------------------------------------------------------------------------
```

INPUT LISTING

```
 From  530  To  540  DX= -565.000 mm.
 RESTRAINTS
    Node  540  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  540  To  550  DX= -1,171.000 mm.
 SIF's & TEE's
    Node  550   Welding Tee
 ------------------------------------------------------------------------------
 From  550  To  560 DY= 76.200 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  550  To  570  DX= -419.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 569
    Angle/Node @2= .00 568
 ------------------------------------------------------------------------------
 From  570  To  580 DY= -1,785.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 579
    Angle/Node @2= .00 578
 ------------------------------------------------------------------------------
 From  580  To  590 DY= -860.000 mm.  DZ= 860.000 mm.
 ------------------------------------------------------------------------------
 From  410  To  600 DY= .000 mm.  DZ= 73.025 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 54.49 N.
 ------------------------------------------------------------------------------
 From  600  To  610 DY= -40.000 mm.  DZ= 140.000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------------
 From  610  To  620 DY= -25.000 mm.  DZ= 153.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 REDUCER
    Diam2= 219.075 mm.   Wall2= 10.312 mm.
 ------------------------------------------------------------------------------
 From  620  To  630 DZ= 300.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  630  +Y   Mu = .30
    Node  630  X
    Node  630  Z
 ------------------------------------------------------------------------------
 From  630  To  640 DZ= 505.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 639
    Angle/Node @2= .00 638
 ------------------------------------------------------------------------------
 From  640  To  650 DY= -305.000 mm.
 ------------------------------------------------------------------------------
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 15:0
Job:: BNK-GCS-CN-027-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
 From  650  To  660 DY= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  660  To  670 DY= -462.000 mm.
 RIGID  Weight= 2,259.70 N.
 ------------------------------------------------------------------------------
 From  670  To  680 DY= -104.775 mm.
 RIGID  Weight= 177.93 N.
 ------------------------------------------------------------------------------
 From  680  To  690 DY= -522.000 mm.
 ------------------------------------------------------------------------------
 From  690  To  700 DY= -226.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 47.430   Angle/Node @1= 23.71 699
 ------------------------------------------------------------------------------
 From  700  To  560  DX= -936.000 mm.  DY= -859.800 mm.  DZ= -.075 mm.
 ------------------------------------------------------------------------------
 From  270  To  710  DX= .000 mm.  DY= .000 mm.  DZ= 67.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  710  To  720  DX= .000 mm.  DY= .000 mm.  DZ= 86.376 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 719
    Angle/Node @2= .00 718
 ------------------------------------------------------------------------------
 From  720  To  510  DX= -352.000 mm.  DY= .075 mm.  DZ= .000 mm.
 ------------------------------------------------------------------------------
 From  730  To  740 DZ= -92.075 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 130 C   T2= 60 C   T3= 60 C   P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 196,294,464 KPa
    EH2= 200,637,808 KPa   EH3= 200,637,808 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000592 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= 106.76 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  740  To  750 DZ= -120.000 mm.
 RESTRAINTS
    Node  750  ANC   Cnode  760
 EQUIPMENT LIMITS
    Nozzle Node = 750   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 4,800.24 N.
    FB= 4,800.24 N.   FC= 3,600.18 N.   MA= 1,080.05 N.m.   MB= 720.03 N.m.
    MC= 940.04 N.m.   Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
```

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```
 ------------------------------------------------------------------------------
 From  760  To  770 DZ= -472.000 mm.
 PIPE
    Dia= 944.000 mm.   Wall= 15.000 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  770  To  780 DY= -2,400.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  780  ANC
 ------------------------------------------------------------------------------
 From  70  To  790 DZ= -300.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 3.912 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  790  +Y   K= 10 N./cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  310  To  800 DZ= -300.000 mm.
 RESTRAINTS
    Node  800  +Y
 ------------------------------------------------------------------------------
 From  810  To  820 DY= 66.675 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= 31.14 N.
 RESTRAINTS
    Node  810  ANC   Cnode  900
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 EQUIPMENT LIMITS
    Nozzle Node = 810
```

INPUT LISTING
```
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,480.19 N.m.   MC= 5,820.25 N.m.
    Equipment Major Direction Vector= 1.0000  .0000  .0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  820  To  830 DY= 178.000 mm.
 REDUCER
    Diam2= 273.050 mm.   Wall2= 9.271 mm.
 ---------------------------------------------------------------------------
 From  830  To  840 DY= 290.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.
    Insul Thk= .000 mm.
 ---------------------------------------------------------------------------
 From  840  To  850 DY= 1,410.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 849
    Angle/Node @2= .00 848
 ---------------------------------------------------------------------------
 From  850  To  860  DX= 6,200.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 859
    Angle/Node @2= .00 858
 ---------------------------------------------------------------------------
 From  860  To  870  DX= 1,800.000 mm.  DZ= -1,800.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 869
    Angle/Node @2= .00 868
 ---------------------------------------------------------------------------
 From  870  To  880 DZ= -4,200.000 mm.
 RESTRAINTS
    Node  880  +Y   Mu = .30
    Node  880  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  870  To  890 DY= -89.803 mm.  DZ= 89.803 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  890   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  900  To  910 DY= -104.775 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 10.312 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.
 RIGID  Weight= 177.93 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  910  To  920 DY= -203.000 mm.
 RESTRAINTS
    Node  920  ANC   Cnode  930
 ---------------------------------------------------------------------------
```

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```
 From  930  To  940 DY= -507.000 mm.
 PIPE
    Dia= 1,014.000 mm.   Wall= 10.312 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  940  To  950  DX= -90.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  950  To  960 DY= -507.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  960  ANC
 ---------------------------------------------------------------------------
 From  890  To  970 DZ= 500.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  970  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  980  To  990 DZ= 6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  990  +Y   Mu = .30
    Node  990  X
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  990  To  590 DZ= 3,622.000 mm.
 SIF's & TEE's
    Node  590   Welding Tee
```

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```
 ----------------------------------------------------------------------------
 From  590  To  1010 DZ= 858.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1009
    Angle/Node @2= .00 1008
 RESTRAINTS
    Node  1010  +Y   Mu = .30
 ----------------------------------------------------------------------------
 From  1010  To  1020  DX= -6,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1019
    Angle/Node @2= .00 1018
 ----------------------------------------------------------------------------
 From  1020  To  1030 DZ= 517.000 mm.
 ----------------------------------------------------------------------------
 From  1030  To  1040 DZ= 500.000 mm.
 RESTRAINTS
    Node  1040  +Y   Mu = .30
 ----------------------------------------------------------------------------
 From  1040  To  1050 DZ= 983.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1049
    Angle/Node @2= .00 1048
 ----------------------------------------------------------------------------
 From  1050  To  1060  DX= 6,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1059
    Angle/Node @2= .00 1058
 RESTRAINTS
    Node  1060  +Y   Mu = .30
 ----------------------------------------------------------------------------
 From  1060  To  1070 DZ= 5,520.000 mm.
 RESTRAINTS
    Node  1070  +Y   Mu = .30
    Node  1070  X
 ----------------------------------------------------------------------------
 From  1070  To  1080 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  1080  +Y   Mu = .30
    Node  1080  X
 ----------------------------------------------------------------------------
 From  1080  To  880 DZ= 6,000.000 mm.
 ----------------------------------------------------------------------------
 From  980  To  1090 DZ= -3,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  980  +Y   Mu = .30
```

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INPUT LISTING
```
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1090  To  1100 DZ= -3,000.000 mm.
 RESTRAINTS
    Node  1100  +Y   Mu = .30
    Node  1100  Z   Gap= 3.000 mm.
    Node  1100  X   Gap= 3.000 mm.
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 MATERIAL Changes:
    10              20             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   730             740             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
    70             790             Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   810             820             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   890             970             Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   980             990             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   980            1090             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
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 ALLOWABLE STRESS Changes
    10              20             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 137,895 KPa
                                   Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
   100             110             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 137,895 KPa
                                   Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
   190             200             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 137,895 KPa
                                   Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
   380             390             B31.3 (2016)        Cycle Max Switch = ---
```

INPUT LISTING

```
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   180              420         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   730              740         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
    70              790         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   810              820         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   900              910         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   890              970         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   980              990         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   980             1090         B31.3 (2016)        Cycle Max Switch = ---
```

INPUT LISTING

```
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
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 BEND ELEMENTS
    25              30              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 29
                                    Angle/Node @2= .00 28
    35            1110              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1109   Angle/Node @2= .00 1108
  1110            1120              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1119   Angle/Node @2= .00 1118
    80             190              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  189   Angle/Node @2= .00 188
   280             290              Radius= 114.300 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  289   Angle/Node @2= .00 288
   450             460              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  459   Angle/Node @2= .00 458
   520             530              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  529   Angle/Node @2= .00 528
   550             570              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  569   Angle/Node @2= .00 568
   570             580              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50
                                  579   Angle/Node @2= .00 578
   630             640              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  639   Angle/Node @2= .00 638
   690             700              Radius= 304.800 mm. (LONG)
                                    Bend Angle= 47.430   Angle/Node @1= 23.71
                                  699
   710             720              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  719   Angle/Node @2= .00 718
   840             850              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  849   Angle/Node @2= .00 848
   850             860              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50
                                  859   Angle/Node @2= .00 858
   860             870              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50
                                  869   Angle/Node @2= .00 868
```

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```
   590            1010              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   1009   Angle/Node @2= .00 1008
  1010            1020              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   1019   Angle/Node @2= .00 1018
  1040            1050              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   1049   Angle/Node @2= .00 1048
  1050            1060              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   1059   Angle/Node @2= .00 1058
```

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RIGIDS

10	20	RIGID Weight= 106.76 N.
60	70	RIGID Weight= .00 N.
90	100	RIGID Weight= 106.76 N.
100	110	RIGID Weight= 591.61 N.
110	120	RIGID Weight= 106.76 N.
140	150	RIGID Weight= 57.83 N.
150	160	RIGID Weight= 57.83 N.
160	170	RIGID Weight= 106.76 N.
170	180	RIGID Weight= 106.76 N.
200	210	RIGID Weight= 57.83 N.
210	220	RIGID Weight= 311.38 N.
220	230	RIGID Weight= 57.83 N.
250	260	RIGID Weight= 57.83 N.
260	270	RIGID Weight= 515.99 N.
300	310	RIGID Weight= .00 N.
320	330	RIGID Weight= 106.76 N.
330	340	RIGID Weight= 591.61 N.
340	350	RIGID Weight= 106.76 N.
370	380	RIGID Weight= 57.83 N.
380	390	RIGID Weight= 57.83 N.
390	400	RIGID Weight= 106.76 N.
400	410	RIGID Weight= 106.76 N.
180	420	RIGID Weight= 54.49 N.
470	480	RIGID Weight= 177.93 N.
480	490	RIGID Weight= 2,259.70 N.
490	500	RIGID Weight= 177.93 N.
550	560	RIGID Weight= .00 N.
410	600	RIGID Weight= 54.49 N.
650	660	RIGID Weight= 177.93 N.
660	670	RIGID Weight= 2,259.70 N.
670	680	RIGID Weight= 177.93 N.
270	710	RIGID Weight= 31.14 N.
730	740	RIGID Weight= 106.76 N.
760	770	RIGID Weight= .00 N.
770	780	RIGID Weight= .00 N.
810	820	RIGID Weight= 31.14 N.
870	890	RIGID Weight= .00 N.
900	910	RIGID Weight= 177.93 N.
930	940	RIGID Weight= .00 N.

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```
   940             950           RIGID  Weight= .00 N.
   950             960           RIGID  Weight= .00 N.
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```

SIF's & TEE's

```
    40              50             Node  50   Welding Tee
    60              70             Node  70   Reinforced Tee   Pad= 7.620 mm.
    60              80             Node  80   Welding Tee
   300             310             Node  310   Unreinforced Tee
   540             550             Node  550   Welding Tee
   870             890             Node  890   Unreinforced Tee
   990             590             Node  590   Welding Tee
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```

REDUCERS

```
   130             140             Diam2= 60.325 mm.   Wall2= 8.738 mm.
   360             370             Diam2= 60.325 mm.   Wall2= 8.738 mm.
   420             430             Diam2= 168.275 mm.   Wall2= 10.973 mm.
   430             440             Diam2= 219.075 mm.   Wall2= 10.312 mm.
   600             610             Diam2= 168.275 mm.   Wall2= 10.973 mm.
   610             620             Diam2= 219.075 mm.   Wall2= 10.312 mm.
   820             830             Diam2= 273.050 mm.   Wall2= 9.271 mm.
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```

RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
10	ANC	730				.000	.000	.000
25	+Y				.30	.000	1.000	.000
35	+Y				.30	.000	1.000	.000
35	Z			3.00	.30	.000	.000	1.000
40	+Y				.30	.000	1.000	.000
40	Z			.00		.000	.000	1.000
240	+Y				.30	.000	1.000	.000
280	+Y					.000	1.000	.000
280	Z			5.00	.30	.000	.000	1.000
450	+Y				.30	.000	1.000	.000
450	X			3.00		1.000	.000	.000
450	Z					.000	.000	1.000
540	+Y				.30	.000	1.000	.000
630	+Y				.30	.000	1.000	.000
630	X					1.000	.000	.000
630	Z					.000	.000	1.000
750	ANC	760				.000	.000	.000
780	ANC					.000	.000	.000
790	+Y		10			.000	1.000	.000
800	+Y					.000	1.000	.000
810	ANC	900				.000	.000	.000
880	+Y				.30	.000	1.000	.000
880	Z			3.00		.000	.000	1.000
920	ANC	930				.000	.000	.000

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```
     960   ANC                                                .000   .000   .000
     970   +Y                                          .30    .000  1.000   .000
     990   +Y                                          .30    .000  1.000   .000
     990   X                                                 1.000   .000   .000
    1010   +Y                                          .30    .000  1.000   .000
    1040   +Y                                          .30    .000  1.000   .000
    1060   +Y                                          .30    .000  1.000   .000
    1070   +Y                                          .30    .000  1.000   .000
    1070   X                                                 1.000   .000   .000
    1080   +Y                                          .30    .000  1.000   .000
    1080   X                                                 1.000   .000   .000
     980   +Y                                          .30    .000  1.000   .000
    1100   +Y                                          .30    .000  1.000   .000
    1100   Z                              3.00                .000   .000  1.000
    1100   X                              3.00              1.000   .000   .000
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 EQUIPMENT LIMITS
   740             750              Nozzle Node = 750


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 4,800.24 N.   FB= 4,800.24 N.
    FC= 3,600.18 N.   MA= 1,080.05 N.m.   MB= 720.03 N.m.   MC= 940.04 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
   810             820              Nozzle Node = 810


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,480.19 N.m.   MC= 5,820.25 N.m.
    Equipment Major Direction Vector= 1.0000  .0000  .0000
    Interact. Mtd= Absolute
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 FORCES AND MOMENTS
   150             160              Node  160   FY1= 2,500.13 N.
                                    FZ1= -3,000.15 N.
   380             390              Node  390   FY2= 2,500.13 N.
                                    FZ2= -3,000.15 N.
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 UNIFORM LOAD Changes
    10              20             Vector1 in G-s
                                   X1 Dir = .26 g's  Y1 Dir = .00 g's
                                   Z1 Dir = .00 g's
                                   Vector2 in G-s
                                   X2 Dir = .00 g's  Y2 Dir = .12 g's
                                   Z2 Dir = .00 g's
                                   Vector3 in G-s
                                   X3 Dir = .00 g's  Y3 Dir = .00 g's
```

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Z3 Dir = .26 g's

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INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	=	N./cm.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg

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```
  IGNORE SPRING HANGER STIFFNESS =   NO
  MISSING MASS ZPA =                EXTRACTED
  MIN WALL MILL TOLERANCE =           12.5000
  WRC-107 VERSION =                 MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =           LAST VALUE
  DEFAULT AMBIENT TEMPERATURE=        21.1111       C
  BOURDON PRESSURE=                 NONE
  COEFFICIENT OF FRICTION (MU) =         0.000000
  INCLUDE SPRG STIF IN HGR OPE =    NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =            B31.1(POST1980)
  USE WRC329                        NO
  NO REDUCED SIF FOR RFT AND WLT    NO
  B31.1 REDUCED Z FIX =             YES
  CLASS 1 BRANCH FLEX               NO
  ALL STRESS CASES CORRODED =       NO
  ADD TORSION IN SL STRESS =        DEFAULT
  ADD F/A IN STRESS =               DEFAULT
  OCCASIONAL LOAD FACTOR =               0.000000
  DEFAULT CODE =                    B31.3
  B31.3 SUS CASE SIF FACTOR =            0.000000
  ALLOW USERS BEND SIF =            NO
  USE SCHNEIDER                     NO
  YIELD CRITERION STRESS =          MAX 3D SHEAR
  USE PD/4T                          NO
  BASE HOOP STRESS ON ? =            ID
  EN13480 USE IN OUTPLANE SIFS=      NO
  LIBERAL EXPANSION ALLOWABLE=      YES
  B31.3 SEC 319.2.3C SAXIAL=        Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178      YES
  IGNORE B31.1/B31.3 Wc FACTOR=     YES
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152730
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
```

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```
    Uniform Load Option ........    1.000

    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
```

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COORDINATE REPORT

NODE	X (mm.)	Y (mm.)	Z (mm.)
10	-15700.080	-7395.683	7324.219
20	-15700.080	-7395.683	7416.294
25	-15700.080	-7395.683	8295.295
30	-15700.080	-7395.683	8859.295
35	-16114.080	-7395.683	8859.295
1110	-18486.080	-7395.683	8859.295
1120	-18486.080	-7395.683	8081.295
40	-18900.080	-7395.683	8081.295
50	-21595.080	-7395.683	8081.295
60	-21595.080	-6495.683	8081.295
70	-21595.080	-6495.683	8043.195
60	-21595.080	-6495.683	8081.295
80	-21595.080	-5984.683	8081.295
90	-21595.080	-5898.683	8081.295
100	-21595.080	-5806.608	8081.295
110	-21595.080	-5441.608	8081.295
120	-21595.080	-5349.533	8081.295
130	-21595.080	-5049.533	8081.295
140	-21595.080	-4960.533	8081.295
150	-21595.080	-4877.983	8081.295
160	-21595.080	-4831.983	8081.295
170	-21595.080	-4831.983	8145.220
180	-21595.080	-4831.983	8237.295
80	-21595.080	-5984.683	8081.295
190	-21243.080	-5984.683	8081.295
200	-21243.080	-5984.683	8158.295
210	-21243.080	-5984.683	8240.845
220	-21243.080	-5984.683	8541.845
230	-21243.080	-5984.683	8624.395
240	-21243.080	-5984.683	8749.895
250	-21243.080	-5984.683	8875.395
260	-21243.080	-5984.683	8957.944
270	-21243.080	-5984.683	9254.944
50	-21595.080	-7395.683	8081.295
280	-22161.080	-7395.683	8081.295
290	-22395.080	-7395.683	8081.295
300	-22395.080	-6495.683	8081.295
310	-22395.080	-6495.683	8043.195

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300	-22395.080	-6495.683	8081.295
320	-22395.080	-5898.683	8081.295
330	-22395.080	-5806.608	8081.295
340	-22395.080	-5441.608	8081.295
350	-22395.080	-5349.533	8081.295
360	-22395.080	-5049.533	8081.295
370	-22395.080	-4960.533	8081.295
380	-22395.080	-4877.983	8081.295
390	-22395.080	-4831.983	8081.295
400	-22395.080	-4831.983	8145.295
410	-22395.080	-4831.983	8237.370
180	-21595.080	-4831.983	8237.295
420	-21595.080	-4831.983	8310.320
430	-21595.080	-4871.983	8450.320
440	-21595.080	-4896.983	8603.320
450	-21595.080	-4896.983	8903.320
460	-21595.080	-4896.983	9408.320
470	-21595.080	-5201.983	9408.320
480	-21595.080	-5306.758	9408.320
490	-21595.080	-5768.758	9408.320
500	-21595.080	-5873.533	9408.320
510	-21595.080	-5984.533	9408.320
520	-21595.080	-6495.533	9408.320
530	-21595.080	-7557.533	9408.320
540	-22160.080	-7557.533	9408.320
550	-23331.080	-7557.533	9408.320
560	-23331.080	-7481.333	9408.320
550	-23331.080	-7557.533	9408.320
570	-23750.080	-7557.533	9408.320
580	-23750.080	-9342.533	9408.320
590	-23750.080	-10202.533	10268.320
410	-22395.080	-4831.983	8237.370
600	-22395.080	-4831.983	8310.396
610	-22395.080	-4871.983	8450.396
620	-22395.080	-4896.983	8603.396
630	-22395.080	-4896.983	8903.396
640	-22395.080	-4896.983	9408.396
650	-22395.080	-5201.983	9408.396
660	-22395.080	-5306.758	9408.396
670	-22395.080	-5768.758	9408.396
680	-22395.080	-5873.533	9408.396
690	-22395.080	-6395.533	9408.396
700	-22395.080	-6621.533	9408.396
560	-23331.080	-7481.333	9408.320
270	-21243.080	-5984.683	9254.944
710	-21243.080	-5984.683	9321.944
720	-21243.080	-5984.683	9408.320
720	-21243.080	-5984.608	9408.320
510	-21595.080	-5984.533	9408.320
10	-15700.080	-7395.683	7324.219
740	-15700.080	-7395.683	7232.144
750	-15700.080	-7395.683	7112.144
770	-15700.080	-7395.683	6640.144
780	-15700.080	-9795.684	6640.144
70	-21595.080	-6495.683	8043.195
790	-21595.080	-6495.683	7743.195

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310	-22395.080	-6495.683	8043.195
800	-22395.080	-6495.683	7743.195
810	-31750.080	-12147.208	36646.320
820	-31750.080	-12080.533	36646.320
830	-31750.080	-11902.533	36646.320
840	-31750.080	-11612.533	36646.320
850	-31750.080	-10202.533	36646.320
860	-25550.080	-10202.533	36646.320
870	-23750.080	-10202.533	34846.320
880	-23750.080	-10202.533	30646.320
870	-23750.080	-10202.533	34846.320
890	-23750.080	-10292.336	34936.125
810	-31750.080	-12147.208	36646.320
910	-31750.080	-12251.983	36646.320
920	-31750.080	-12454.983	36646.320
940	-31750.080	-12961.983	36646.320
950	-31840.080	-12961.983	36646.320
960	-31840.080	-13468.983	36646.320
890	-23750.080	-10292.336	34936.125
970	-23750.080	-10292.336	35436.125
980	-23750.080	-10202.533	646.320
990	-23750.080	-10202.533	6646.320
590	-23750.080	-10202.533	10268.320
1010	-23750.080	-10202.533	11126.320
1020	-29750.080	-10202.533	11126.320
1030	-29750.080	-10202.533	11643.320
1040	-29750.080	-10202.533	12143.320
1050	-29750.080	-10202.533	13126.320
1060	-23750.080	-10202.533	13126.320
1070	-23750.080	-10202.533	18646.320
1080	-23750.080	-10202.533	24646.320
880	-23750.080	-10202.533	30646.320
980	-23750.080	-10202.533	646.320
1090	-23750.080	-10202.533	-2353.680
1100	-23750.080	-10202.533	-5353.680

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OPE) W+T2+P1+F2
17 (OCC) L17=L10-L4
18 (OCC) L18=L11-L4
19 (OCC) L19=L12-L4
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17+L8
25 (OCC) L25=L18+L8
26 (OCC) L26=L19+L8
27 (OCC) L27=L20+L8
28 (OCC) L28=L21+L8
29 (OCC) L29=L22+L8
30 (OCC) L30=L23+L8
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8
33 (EXP) L33=L6-L8
34 (EXP) L34=L2-L6
35 (EXP) L35=L4-L6

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1+U3
CASE 14 (OPE) W+T2+P1-U3
CASE 15 (OPE) W+T2+P1+F1
CASE 16 (OPE) W+T2+P1+F2
CASE 17 (OCC) L17=L10-L4
CASE 18 (OCC) L18=L11-L4
CASE 19 (OCC) L19=L12-L4
CASE 20 (OCC) L20=L13-L4
CASE 21 (OCC) L21=L14-L4
CASE 22 (OCC) L22=L15-L4
CASE 23 (OCC) L23=L16-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid ANC;					
	1(HYD)	0	-143	1	-44	0	31
	2(OPE)	901	-650	-800	768	827	153
	4(OPE)	304	-304	-235	294	229	75
	6(OPE)	165	-337	11	300	213	89
	8(SUS)	0	-132	-1	-35	0	25
	9(SUS)	0	-132	-1	-35	0	24
	10(OPE)	723	-304	-223	288	660	83
	11(OPE)	-230	-304	-195	295	-334	73
	12(OPE)	354	-283	-225	293	287	75
	13(OPE)	381	-293	-95	287	327	77
	14(OPE)	244	-315	-363	300	150	74
	15(OPE)	378	-310	-237	289	318	86
	16(OPE)	281	-301	-236	294	200	73
	17(OCC)	418	-1	12	-5	431	8
	18(OCC)	-534	-0	40	1	-563	-2
	19(OCC)	50	20	10	-0	59	0
	20(OCC)	77	11	140	-7	99	2
	21(OCC)	-61	-11	-128	6	-79	-1
	22(OCC)	74	-7	-2	-5	89	11
	23(OCC)	-24	2	-1	1	-29	-2
	MAX	901/L2	-650/L2	-800/L2	768/L2	827/L2	153/L2
25		TYPE=Rigid +Y;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	1(HYD)	0	0	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	0	0	0	0	0	0
	9(SUS)	0	0	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
35		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	2	-605	-1	0	0	0
	2(OPE)	187	127	753	0	0	0
	4(OPE)	13	-264	78	0	0	0
	6(OPE)	23	-279	81	0	0	0
	8(SUS)	-3	-481	1	0	0	0
	9(SUS)	-3	-474	1	0	0	0
	10(OPE)	61	-286	61	0	0	0
	11(OPE)	-69	-260	36	0	0	0
	12(OPE)	19	-219	63	0	0	0
	13(OPE)	31	-277	77	0	0	0
	14(OPE)	-4	-253	76	0	0	0
	15(OPE)	31	-290	81	0	0	0
	16(OPE)	7	-260	78	0	0	0
	17(OCC)	48	-21	-18	0	0	0
	18(OCC)	-82	5	-42	0	0	0
	19(OCC)	6	45	-15	0	0	0
	20(OCC)	18	-13	-1	0	0	0
	21(OCC)	-17	11	-2	0	0	0
	22(OCC)	18	-26	3	0	0	0
	23(OCC)	-6	5	-1	0	0	0
	MAX	187/L2	-605/L1	753/L2			
40		TYPE=Rigid +Y; Rigid Z;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	1(HYD)	-71	-682	12	0	0	0
	2(OPE)	-305	-1017	602	0	0	0
	4(OPE)	-266	-886	736	0	0	0
	6(OPE)	104	-570	-265	0	0	0
	8(SUS)	-70	-537	4	0	0	0
	9(SUS)	-69	-530	4	0	0	0
	10(OPE)	-58	-750	736	0	0	0
	11(OPE)	-273	-909	750	0	0	0
	12(OPE)	-234	-779	765	0	0	0
	13(OPE)	-268	-894	975	0	0	0
	14(OPE)	-260	-868	497	0	0	0
	15(OPE)	-204	-681	719	0	0	0
	16(OPE)	-279	-931	742	0	0	0
	17(OCC)	208	136	0	0	0	0
	18(OCC)	-7	-23	14	0	0	0
	19(OCC)	32	107	29	0	0	0
	20(OCC)	-2	-8	239	0	0	0
	21(OCC)	6	18	-239	0	0	0
	22(OCC)	62	205	-17	0	0	0
	23(OCC)	-13	-45	6	0	0	0
	MAX	-305/L2	-1017/L2	975/L13			
240		TYPE=Rigid +Y;					
	1(HYD)	90	-978	279	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	-0	-74	-22	0	0	0
	8(SUS)	90	-914	259	0	0	0
	9(SUS)	90	-912	259	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	MAX	90/L1	-978/L1	279/L1			
280		TYPE=Rigid +Y; Rigid Z w/gap;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	1(HYD)	0	-266	0	0	0	0
	2(OPE)	-791	-10500	2637	0	0	0
	4(OPE)	-1037	-7667	3458	0	0	0
	6(OPE)	-29	11	-103	0	0	0
	8(SUS)	0	-510	0	0	0	0
	9(SUS)	0	-502	0	0	0	0
	10(OPE)	-1044	-5453	3479	0	0	0
	11(OPE)	-1040	-9423	3467	0	0	0
	12(OPE)	-1070	-6673	3565	0	0	0
	13(OPE)	-1144	-8350	3814	0	0	0
	14(OPE)	-932	-6808	3105	0	0	0
	15(OPE)	-1011	-4642	3371	0	0	0
	16(OPE)	-1047	-5320	3491	0	0	0
	17(OCC)	-6	2214	21	0	0	0
	18(OCC)	-3	-1756	9	0	0	0
	19(OCC)	-32	995	107	0	0	0
	20(OCC)	-107	-682	356	0	0	0
	21(OCC)	106	860	-353	0	0	0
	22(OCC)	26	3026	-87	0	0	0
	23(OCC)	-10	2348	33	0	0	0
	MAX	-1144/L13	-10500/L2	3814/L13			
450		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z;					
	1(HYD)	19	-4552	-260	0	0	0
	2(OPE)	557	0	-54	0	0	0
	4(OPE)	936	0	11	0	0	0
	6(OPE)	-270	-7076	-64	0	0	0
	8(SUS)	31	-4072	-189	0	0	0
	9(SUS)	31	-4057	-188	0	0	0
	10(OPE)	2569	0	-483	0	0	0
	11(OPE)	0	0	332	0	0	0
	12(OPE)	798	0	-56	0	0	0
	13(OPE)	877	0	1502	0	0	0
	14(OPE)	1020	0	-1517	0	0	0
	15(OPE)	752	0	-2779	0	0	0
	16(OPE)	998	0	-159	0	0	0
	17(OCC)	1633	0	-494	0	0	0
	18(OCC)	-936	0	321	0	0	0
	19(OCC)	-138	0	-67	0	0	0
	20(OCC)	-59	0	1490	0	0	0
	21(OCC)	84	0	-1529	0	0	0
	22(OCC)	-184	0	-2790	0	0	0
	23(OCC)	62	0	-170	0	0	0
	MAX	2569/L10	-7076/L6	-2790/L22			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
540		TYPE=Rigid +Y;					
	1(HYD)	-205	-5102	-396	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	-136	-3527	-346	0	0	0
	9(SUS)	-137	-3536	-347	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	MAX	-205/L1	-5102/L1	-396/L1			
630		TYPE=Rigid +Y; Rigid X; Rigid Z;					
	1(HYD)	-294	-6906	289	0	0	0
	2(OPE)	283	0	3475	0	0	0
	4(OPE)	1305	0	2070	0	0	0
	6(OPE)	-1741	-12477	1237	0	0	0
	8(SUS)	-156	-5279	229	0	0	0
	9(SUS)	-156	-5274	229	0	0	0
	10(OPE)	3266	0	1743	0	0	0
	11(OPE)	-1104	0	2452	0	0	0
	12(OPE)	1164	0	1976	0	0	0
	13(OPE)	1166	0	3409	0	0	0
	14(OPE)	1494	0	702	0	0	0
	15(OPE)	1286	0	1847	0	0	0
	16(OPE)	1362	0	-808	0	0	0
	17(OCC)	1961	0	-328	0	0	0
	18(OCC)	-2409	0	381	0	0	0
	19(OCC)	-141	0	-95	0	0	0
	20(OCC)	-139	0	1339	0	0	0
	21(OCC)	189	0	-1368	0	0	0
	22(OCC)	-19	0	-224	0	0	0
	23(OCC)	57	0	-2878	0	0	0
	MAX	3266/L10	-12477/L6	3475/L2			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
750		TYPE=Rigid ANC;					
	1(HYD)	0	-277	1	6	0	31
	2(OPE)	901	-775	-800	925	1018	153
	4(OPE)	304	-429	-235	377	293	75
	6(OPE)	165	-462	11	390	248	89
	8(SUS)	0	-258	-1	12	0	25
	9(SUS)	0	-256	-1	12	0	24
	10(OPE)	755	-429	-223	372	818	83
	11(OPE)	-262	-429	-195	378	-388	73
	12(OPE)	354	-394	-225	370	363	75
	13(OPE)	381	-418	-63	368	408	77
	14(OPE)	244	-440	-395	386	202	74
	15(OPE)	378	-435	-237	374	398	86
	16(OPE)	281	-426	-236	377	259	73
	17(OCC)	451	-1	12	-5	525	8
	18(OCC)	-567	-0	40	1	-681	-2
	19(OCC)	50	35	10	-7	69	0
	20(OCC)	77	11	172	-9	115	2
	21(OCC)	-61	-11	-160	9	-91	-1
	22(OCC)	74	-7	-2	-3	105	11
	23(OCC)	-24	2	-1	0	-34	-2
	MAX	901/L2	-775/L2	-800/L2	925/L2	1018/L2	153/L2
780		TYPE=Rigid ANC;					
	1(HYD)	0	-277	1	138	0	31
	2(OPE)	901	-775	-800	-629	1443	-2010
	4(OPE)	304	-429	-235	15	437	-656
	6(OPE)	165	-462	11	636	326	-307
	8(SUS)	0	-258	-1	131	0	25
	9(SUS)	0	-256	-1	131	0	24
	10(OPE)	755	-429	-223	39	1174	-1730
	11(OPE)	-262	-429	-195	112	-512	703
	12(OPE)	354	-394	-225	15	530	-775
	13(OPE)	381	-418	-63	414	588	-838
	14(OPE)	244	-440	-395	-356	317	-511
	15(OPE)	378	-435	-237	10	577	-822
	16(OPE)	281	-426	-236	13	392	-601
	17(OCC)	451	-1	12	23	738	-1074
	18(OCC)	-567	-0	40	96	-949	1358
	19(OCC)	50	35	10	0	93	-120
	20(OCC)	77	11	172	399	151	-182
	21(OCC)	-61	-11	-160	-371	-120	145
	22(OCC)	74	-7	-2	-5	140	-166
	23(OCC)	-24	2	-1	-3	-45	55
	MAX	901/L2	-775/L2	-800/L2	636/L6	1443/L2	-2010/L2

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
790		TYPE=Flex +Y;					
	1(HYD)	0	-0	0	0	0	0
	2(OPE)	0	-0	0	0	0	0
	4(OPE)	0	-1	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	0	-0	0	0	0	0
	9(SUS)	0	-0	0	0	0	0
	10(OPE)	0	-0	0	0	0	0
	11(OPE)	0	-1	0	0	0	0
	12(OPE)	0	-1	0	0	0	0
	13(OPE)	0	-1	0	0	0	0
	14(OPE)	0	-1	0	0	0	0
	15(OPE)	0	-0	0	0	0	0
	16(OPE)	0	-1	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	-0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	-0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	1	0	0	0	0
	23(OCC)	0	-0	0	0	0	0
	MAX		-1/L16				
800		TYPE=Rigid +Y;					
	1(HYD)	0	0	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	-144	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	0	0	0	0	0	0
	9(SUS)	0	0	0	0	0	0
	10(OPE)	0	-489	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	-165	0	0	0	0
	13(OPE)	0	-16	0	0	0	0
	14(OPE)	0	-296	0	0	0	0
	15(OPE)	0	-783	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OCC)	0	-345	0	0	0	0
	18(OCC)	0	144	0	0	0	0
	19(OCC)	0	-20	0	0	0	0
	20(OCC)	0	128	0	0	0	0
	21(OCC)	0	-152	0	0	0	0
	22(OCC)	0	-638	0	0	0	0
	23(OCC)	0	144	0	0	0	0
	MAX		-783/L15				

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
810		TYPE=Rigid ANC;					
	1(HYD)	-1636	-6803	203	1335	-100	-1042
	2(OPE)	-3302	-4152	2943	4929	-8503	1140
	4(OPE)	-3333	-4154	2970	4972	-8575	1173
	6(OPE)	1423	-3558	-841	-732	2507	-3881
	8(SUS)	-888	-3702	110	725	-54	-565
	9(SUS)	-887	-3698	110	724	-54	-565
	10(OPE)	-1057	-4054	2744	4631	-8245	-2210
	11(OPE)	-5609	-4254	3195	5313	-8905	4556
	12(OPE)	-3178	-3708	2941	4858	-8545	1164
	13(OPE)	-3225	-4152	3812	6193	-8911	987
	14(OPE)	-3438	-4156	2126	3748	-8236	1353
	15(OPE)	-3326	-4154	2967	4966	-8570	1161
	16(OPE)	-3328	-4154	2968	4968	-8572	1166
	17(OCC)	2277	100	-226	-341	330	-3383
	18(OCC)	-2276	-99	225	341	-330	3382
	19(OCC)	155	446	-29	-114	30	-10
	20(OCC)	109	2	842	1221	-336	-186
	21(OCC)	-104	-1	-844	-1224	339	179
	22(OCC)	8	0	-3	-5	5	-12
	23(OCC)	5	0	-2	-3	3	-8
	MAX	-5609/L11	-6803/L1	3812/L13	6193/L13	-8911/L13	4556/L11
880		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-256	-5585	261	0	0	0
	2(OPE)	786	-2670	5805	0	0	0
	4(OPE)	785	-2666	5718	0	0	0
	6(OPE)	-522	-3136	-1867	0	0	0
	8(SUS)	-139	-3032	141	0	0	0
	9(SUS)	-139	-3028	141	0	0	0
	10(OPE)	784	-2653	6578	0	0	0
	11(OPE)	784	-2677	5068	0	0	0
	12(OPE)	679	-2306	5419	0	0	0
	13(OPE)	773	-2626	10789	0	0	0
	14(OPE)	796	-2705	603	0	0	0
	15(OPE)	785	-2666	5782	0	0	0
	16(OPE)	785	-2665	5756	0	0	0
	17(OCC)	-1	12	860	0	0	0
	18(OCC)	-1	-11	-650	0	0	0
	19(OCC)	-106	359	-300	0	0	0
	20(OCC)	-12	40	5071	0	0	0
	21(OCC)	12	-39	-5115	0	0	0
	22(OCC)	0	-0	63	0	0	0
	23(OCC)	0	0	37	0	0	0
	MAX	796/L14	-5585/L1	10789/L13			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
920		TYPE=Rigid ANC;					
	1(HYD)	-1636	-7180	203	1398	-100	-538
	2(OPE)	-3302	-4435	2943	5835	-8503	2157
	4(OPE)	-3333	-4438	2970	5886	-8575	2199
	6(OPE)	1423	-3842	-841	-990	2507	-4319
	8(SUS)	-888	-3986	110	758	-54	-292
	9(SUS)	-887	-3981	110	757	-54	-292
	10(OPE)	-983	-4337	2744	5476	-8245	-1899
	11(OPE)	-5683	-4537	3195	6296	-8905	6297
	12(OPE)	-3178	-3958	2941	5763	-8545	2142
	13(OPE)	-3225	-4436	3885	7380	-8911	1980
	14(OPE)	-3438	-4439	2052	4388	-8236	2411
	15(OPE)	-3326	-4437	2967	5879	-8570	2185
	16(OPE)	-3328	-4437	2968	5882	-8572	2190
	17(OCC)	2351	100	-226	-410	330	-4099
	18(OCC)	-2349	-99	225	410	-330	4097
	19(OCC)	155	480	-29	-123	30	-57
	20(OCC)	109	2	915	1494	-336	-219
	21(OCC)	-104	-1	-917	-1498	339	212
	22(OCC)	8	0	-3	-6	5	-14
	23(OCC)	5	0	-2	-4	3	-9
	MAX	-5683/L11	-7180/L1	3885/L13	7380/L13	-8911/L13	6297/L11
960		TYPE=Rigid ANC;					
	1(HYD)	-1636	-7180	203	1603	-119	475
	2(OPE)	-3302	-4435	2943	8819	-8768	5106
	4(OPE)	-3333	-4438	2970	8897	-8842	5180
	6(OPE)	1423	-3842	-841	-1843	2582	-6108
	8(SUS)	-888	-3986	110	870	-64	249
	9(SUS)	-887	-3981	110	869	-64	249
	10(OPE)	-983	-4337	2744	8258	-8492	-1293
	11(OPE)	-5683	-4537	3195	9536	-9192	11651
	12(OPE)	-3178	-3958	2941	8745	-8810	5008
	13(OPE)	-3225	-4436	3885	11320	-9261	4850
	14(OPE)	-3438	-4439	2052	6469	-8421	5497
	15(OPE)	-3326	-4437	2967	8887	-8837	5158
	16(OPE)	-3328	-4437	2968	8891	-8839	5166
	17(OCC)	2351	100	-226	-639	350	-6473
	18(OCC)	-2349	-99	225	639	-350	6471
	19(OCC)	155	480	-29	-152	32	-171
	20(OCC)	109	2	915	2423	-419	-330
	21(OCC)	-104	-1	-917	-2428	422	317
	22(OCC)	8	0	-3	-10	5	-22
	23(OCC)	5	0	-2	-6	3	-14
	MAX	-5683/L11	-7180/L1	3885/L13	11320/L13	-9261/L13	11651/L11

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
970		TYPE=Rigid +Y;					
	1(HYD)	1842	-6915	-675	0	0	0
	2(OPE)	926	-3579	544	0	0	0
	4(OPE)	926	-3579	544	0	0	0
	6(OPE)	-693	-3831	-917	0	0	0
	8(SUS)	999	-3766	-365	0	0	0
	9(SUS)	998	-3761	-365	0	0	0
	10(OPE)	962	-3690	548	0	0	0
	11(OPE)	890	-3470	540	0	0	0
	12(OPE)	809	-3126	475	0	0	0
	13(OPE)	933	-3616	553	0	0	0
	14(OPE)	919	-3544	535	0	0	0
	15(OPE)	926	-3580	544	0	0	0
	16(OPE)	926	-3580	544	0	0	0
	17(OCC)	36	-110	4	0	0	0
	18(OCC)	-36	109	-4	0	0	0
	19(OCC)	-117	453	-69	0	0	0
	20(OCC)	7	-36	9	0	0	0
	21(OCC)	-7	36	-9	0	0	0
	22(OCC)	0	-0	-0	0	0	0
	23(OCC)	0	-0	-0	0	0	0
	MAX	1842/L1	-6915/L1	-917/L6			
980		TYPE=Rigid +Y;					
	1(HYD)	-42	-7406	138	0	0	0
	2(OPE)	238	-2831	815	0	0	0
	4(OPE)	244	-2634	752	0	0	0
	6(OPE)	-370	-4410	-1270	0	0	0
	8(SUS)	-24	-4006	82	0	0	0
	9(SUS)	-24	-4001	82	0	0	0
	10(OPE)	230	-2547	729	0	0	0
	11(OPE)	217	-2703	781	0	0	0
	12(OPE)	206	-2205	629	0	0	0
	13(OPE)	256	-2704	770	0	0	0
	14(OPE)	224	-2559	734	0	0	0
	15(OPE)	234	-2642	757	0	0	0
	16(OPE)	240	-2639	754	0	0	0
	17(OCC)	-14	88	-23	0	0	0
	18(OCC)	-27	-68	30	0	0	0
	19(OCC)	-38	429	-123	0	0	0
	20(OCC)	12	-70	18	0	0	0
	21(OCC)	-20	75	-17	0	0	0
	22(OCC)	-10	-7	6	0	0	0
	23(OCC)	-4	-4	3	0	0	0
	MAX	-370/L6	-7406/L1	-1270/L6			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
990		TYPE=Rigid X; Rigid +Y;					
	1(HYD)	264	-6554	286	0	0	0
	2(OPE)	-1199	-10967	3290	0	0	0
	4(OPE)	-1606	-12112	3634	0	0	0
	6(OPE)	973	-1216	-365	0	0	0
	8(SUS)	150	-3633	170	0	0	0
	9(SUS)	150	-3628	170	0	0	0
	10(OPE)	1846	-12598	3779	0	0	0
	11(OPE)	-5286	-11760	3528	0	0	0
	12(OPE)	-1545	-11362	3409	0	0	0
	13(OPE)	-1993	-11679	3504	0	0	0
	14(OPE)	-1111	-12584	3775	0	0	0
	15(OPE)	-1442	-12063	3619	0	0	0
	16(OPE)	-1509	-12094	3628	0	0	0
	17(OCC)	3452	-486	146	0	0	0
	18(OCC)	-3681	352	-106	0	0	0
	19(OCC)	61	750	-225	0	0	0
	20(OCC)	-388	433	-130	0	0	0
	21(OCC)	494	-472	142	0	0	0
	22(OCC)	164	50	-15	0	0	0
	23(OCC)	96	18	-5	0	0	0
	MAX	-5286/L11	-12598/L10	3779/L10			
1010		TYPE=Rigid +Y;					
	1(HYD)	213	-6643	-408	0	0	0
	2(OPE)	-67	-779	224	0	0	0
	4(OPE)	-247	-2669	761	0	0	0
	6(OPE)	45	-437	-123	0	0	0
	8(SUS)	112	-3745	-223	0	0	0
	9(SUS)	112	-3740	-223	0	0	0
	10(OPE)	-296	-4294	1254	0	0	0
	11(OPE)	-143	-1241	344	0	0	0
	12(OPE)	-167	-1785	509	0	0	0
	13(OPE)	-231	-2492	711	0	0	0
	14(OPE)	-268	-2964	848	0	0	0
	15(OPE)	-249	-2776	795	0	0	0
	16(OPE)	-239	-2620	749	0	0	0
	17(OCC)	-49	-1626	492	0	0	0
	18(OCC)	104	1428	-418	0	0	0
	19(OCC)	80	884	-253	0	0	0
	20(OCC)	16	177	-51	0	0	0
	21(OCC)	-21	-296	86	0	0	0
	22(OCC)	-2	-107	33	0	0	0
	23(OCC)	8	49	-13	0	0	0
	MAX	-296/L10	-6643/L1	1254/L10			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1040		TYPE=Rigid +Y;					
	1(HYD)	33	-7882	-8	0	0	0
	2(OPE)	-1263	-4213	-40	0	0	0
	4(OPE)	-1244	-4150	-34	0	0	0
	6(OPE)	1287	-4309	-120	0	0	0
	8(SUS)	18	-4272	-5	0	0	0
	9(SUS)	18	-4266	-5	0	0	0
	10(OPE)	-1234	-4113	-3	0	0	0
	11(OPE)	-1266	-4226	-59	0	0	0
	12(OPE)	-1089	-3631	-33	0	0	0
	13(OPE)	-1232	-4133	142	0	0	0
	14(OPE)	-1235	-4177	-211	0	0	0
	15(OPE)	-1243	-4146	-34	0	0	0
	16(OPE)	-1250	-4166	-31	0	0	0
	17(OCC)	11	37	31	0	0	0
	18(OCC)	-22	-76	-25	0	0	0
	19(OCC)	156	519	2	0	0	0
	20(OCC)	13	17	176	0	0	0
	21(OCC)	9	-27	-177	0	0	0
	22(OCC)	1	3	-0	0	0	0
	23(OCC)	-5	-16	4	0	0	0
	MAX	1287/L6	-7882/L1	-211/L14			
1060		TYPE=Rigid +Y;					
	1(HYD)	-8	-5743	36	0	0	0
	2(OPE)	-203	-3315	-973	0	0	0
	4(OPE)	-220	-3317	-971	0	0	0
	6(OPE)	141	-3050	904	0	0	0
	8(SUS)	-4	-3116	19	0	0	0
	9(SUS)	-4	-3112	19	0	0	0
	10(OPE)	-139	-3311	-983	0	0	0
	11(OPE)	-298	-3336	-955	0	0	0
	12(OPE)	-198	-2937	-859	0	0	0
	13(OPE)	-196	-3311	-974	0	0	0
	14(OPE)	-237	-3327	-970	0	0	0
	15(OPE)	-211	-3317	-972	0	0	0
	16(OPE)	-214	-3321	-973	0	0	0
	17(OCC)	81	7	-13	0	0	0
	18(OCC)	-79	-18	16	0	0	0
	19(OCC)	22	380	112	0	0	0
	20(OCC)	23	6	-3	0	0	0
	21(OCC)	-18	-10	1	0	0	0
	22(OCC)	9	1	-2	0	0	0
	23(OCC)	5	-4	-2	0	0	0
	MAX	-298/L11	-5743/L1	-983/L10			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1070		TYPE=Rigid X; Rigid +Y;					
	1(HYD)	-16	-6450	56	0	0	0
	2(OPE)	-1475	-3319	-996	0	0	0
	4(OPE)	-1879	-3294	-988	0	0	0
	6(OPE)	-31	-3589	1077	0	0	0
	8(SUS)	-9	-3499	30	0	0	0
	9(SUS)	-9	-3495	30	0	0	0
	10(OPE)	623	-3280	-984	0	0	0
	11(OPE)	-4410	-3293	-988	0	0	0
	12(OPE)	-2012	-2887	-866	0	0	0
	13(OPE)	-791	-3306	-992	0	0	0
	14(OPE)	-2840	-3277	-983	0	0	0
	15(OPE)	-1667	-3295	-988	0	0	0
	16(OPE)	-1737	-3291	-987	0	0	0
	17(OCC)	2502	14	4	0	0	0
	18(OCC)	-2531	1	0	0	0	0
	19(OCC)	-133	408	122	0	0	0
	20(OCC)	1087	-12	-4	0	0	0
	21(OCC)	-961	17	5	0	0	0
	22(OCC)	212	-1	-0	0	0	0
	23(OCC)	141	3	1	0	0	0
	MAX	-4410/L11	-6450/L1	1077/L6			
1080		TYPE=Rigid X; Rigid +Y;					
	1(HYD)	63	-6733	119	0	0	0
	2(OPE)	4528	-3804	-1141	0	0	0
	4(OPE)	4750	-3810	-1143	0	0	0
	6(OPE)	-350	-3608	1082	0	0	0
	8(SUS)	34	-3654	64	0	0	0
	9(SUS)	34	-3649	64	0	0	0
	10(OPE)	5609	-3815	-1145	0	0	0
	11(OPE)	3906	-3809	-1143	0	0	0
	12(OPE)	4878	-3368	-1011	0	0	0
	13(OPE)	4298	-3815	-1144	0	0	0
	14(OPE)	5141	-3807	-1142	0	0	0
	15(OPE)	4654	-3810	-1143	0	0	0
	16(OPE)	4688	-3811	-1143	0	0	0
	17(OCC)	859	-5	-1	0	0	0
	18(OCC)	-844	1	0	0	0	0
	19(OCC)	128	442	133	0	0	0
	20(OCC)	-452	-4	-1	0	0	0
	21(OCC)	391	3	1	0	0	0
	22(OCC)	-96	0	0	0	0	0
	23(OCC)	-62	-1	-0	0	0	0
	MAX	5609/L10	-6733/L1	-1145/L10			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1100		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	1(HYD)	7	-2578	83	0	0	0
	2(OPE)	363	-1595	-17041	0	0	0
	4(OPE)	454	-1628	-17728	0	0	0
	6(OPE)	33	-1334	1732	0	0	0
	8(SUS)	4	-1401	49	0	0	0
	9(SUS)	4	-1399	49	0	0	0
	10(OPE)	956	-1643	-17441	0	0	0
	11(OPE)	13	-1617	-17044	0	0	0
	12(OPE)	460	-1451	-17256	0	0	0
	13(OPE)	471	-1617	-13545	0	0	0
	14(OPE)	414	-1641	-22162	0	0	0
	15(OPE)	416	-1627	-17807	0	0	0
	16(OPE)	440	-1627	-17728	0	0	0
	17(OCC)	502	-15	288	0	0	0
	18(OCC)	-440	11	685	0	0	0
	19(OCC)	7	177	473	0	0	0
	20(OCC)	17	12	4183	0	0	0
	21(OCC)	-40	-12	-4434	0	0	0
	22(OCC)	-37	1	-79	0	0	0
	23(OCC)	-13	1	1	0	0	0
	MAX	956/L10	-2578/L1	-22162/L14			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OPE) W+T2+P1+F2
17 (OCC) L17=L10-L4
18 (OCC) L18=L11-L4
19 (OCC) L19=L12-L4
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17+L8
25 (OCC) L25=L18+L8
26 (OCC) L26=L19+L8
27 (OCC) L27=L20+L8
28 (OCC) L28=L21+L8
29 (OCC) L29=L22+L8
30 (OCC) L30=L23+L8
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8
33 (EXP) L33=L6-L8
34 (EXP) L34=L2-L6
35 (EXP) L35=L4-L6

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 24 (OCC) L24=L17+L8
CASE 25 (OCC) L25=L18+L8
CASE 26 (OCC) L26=L19+L8
CASE 27 (OCC) L27=L20+L8
CASE 28 (OCC) L28=L21+L8
CASE 29 (OCC) L29=L22+L8
CASE 30 (OCC) L30=L23+L8
CASE 31 (EXP) L31=L2-L8
CASE 32 (EXP) L32=L4-L8
CASE 33 (EXP) L33=L6-L8
CASE 34 (EXP) L34=L2-L6
CASE 35 (EXP) L35=L4-L6

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	41.6	@Node	890
Code Stress:	100461.0	Allowable Stress:	241316.5
Axial Stress:	21028.2	@Node	360
Bending Stress:	133698.0	@Node	890
Torsion Stress:	3139.6	@Node	868
Hoop Stress:	44951.0	@Node	25
Max Stress Intensity:	133885.5	@Node	890

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	39.6	@Node	890
Code Stress:	54604.2	Allowable Stress:	137895.1
Axial Stress:	26120.6	@Node	130
Bending Stress:	72670.4	@Node	890
Torsion Stress:	4518.2	@Node	868
Hoop Stress:	53452.7	@Node	25
Max Stress Intensity:	72771.8	@Node	890

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	39.5	@Node	890
Code Stress:	54536.1	Allowable Stress:	137895.1
Axial Stress:	1368.3	@Node	920
Bending Stress:	72579.8	@Node	890
Torsion Stress:	4512.5	@Node	868
Hoop Stress:	0.0	@Node	20

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Max Stress Intensity:       72681.1       @Node    890

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L17+L8

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L17+L8
Ratio (%):                    30.6       @Node    890
Code Stress:                56196.3       Allowable Stress:     183400.5
Axial Stress:               26861.4       @Node    130
Bending Stress:             74791.7       @Node    890
Torsion Stress:              4594.6       @Node    868
Hoop Stress:                53452.7       @Node     25
Max Stress Intensity:       84353.3       @Node    750

 CODE STRESS CHECK PASSED      : LOADCASE 25 (OCC) L25=L18+L8

Highest Stresses: (   KPa    ) LOADCASE 25 (OCC) L25=L18+L8
Ratio (%):                    30.6       @Node    890
Code Stress:                56181.4       Allowable Stress:     183400.5
Axial Stress:               25679.7       @Node     35
Bending Stress:             74771.8       @Node    890
Torsion Stress:              6663.5       @Node    600
Hoop Stress:                53452.7       @Node     25
Max Stress Intensity:       90759.9       @Node    750

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L19+L8

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L19+L8
Ratio (%):                    33.4       @Node    890
Code Stress:                61170.5       Allowable Stress:     183400.5
Axial Stress:               26337.0       @Node    130
Bending Stress:             81400.0       @Node    890
Torsion Stress:              3980.9       @Node    868
Hoop Stress:                53452.7       @Node     25
Max Stress Intensity:       81520.5       @Node    890

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L20+L8

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L20+L8
Ratio (%):                    30.1       @Node    890
Code Stress:                55136.5       Allowable Stress:     183400.5
Axial Stress:               25881.8       @Node    130
Bending Stress:             73370.0       @Node    890
Torsion Stress:              4794.8       @Node    868
Hoop Stress:                53452.7       @Node     25
Max Stress Intensity:       76902.0       @Node     80

 CODE STRESS CHECK PASSED      : LOADCASE 28 (OCC) L28=L21+L8

Highest Stresses: (   KPa    ) LOADCASE 28 (OCC) L28=L21+L8
Ratio (%):                    30.1       @Node    890
Code Stress:                55129.6       Allowable Stress:     183400.5
Axial Stress:               26418.8       @Node    130
Bending Stress:             73360.8       @Node    890
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Torsion Stress:              4238.4       @Node    868
Hoop Stress:                53452.7       @Node     25
Max Stress Intensity:       77049.7       @Node     80

 CODE STRESS CHECK PASSED      : LOADCASE 29 (OCC) L29=L22+L8

Highest Stresses: (   KPa    ) LOADCASE 29 (OCC) L29=L22+L8
Ratio (%):                     29.8       @Node    890
Code Stress:                54607.9       Allowable Stress:     183400.5
Axial Stress:               27761.6       @Node    130
Bending Stress:             72675.3       @Node    890
Torsion Stress:              4517.6       @Node    868
Hoop Stress:                53452.7       @Node     25
Max Stress Intensity:       93087.5       @Node     50

 CODE STRESS CHECK PASSED      : LOADCASE 30 (OCC) L30=L23+L8

Highest Stresses: (   KPa    ) LOADCASE 30 (OCC) L30=L23+L8
Ratio (%):                     29.8       @Node    890
Code Stress:                54609.6       Allowable Stress:     183400.5
Axial Stress:               27788.9       @Node    360
Bending Stress:             72677.5       @Node    890
Torsion Stress:              4516.1       @Node    868
Hoop Stress:                53452.7       @Node     25
Max Stress Intensity:       75051.9       @Node    280

 CODE STRESS CHECK PASSED      : LOADCASE 31 (EXP) L31=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 31 (EXP) L31=L2-L8
Ratio (%):                     60.8       @Node    590
Code Stress:               157936.9       Allowable Stress:     259752.6
Axial Stress:                5553.7       @Node    190
Bending Stress:            154689.4       @Node    590
Torsion Stress:             41413.2       @Node    140
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      446914.4       @Node    590

 CODE STRESS CHECK PASSED      : LOADCASE 32 (EXP) L32=L4-L8

Highest Stresses: (   KPa    ) LOADCASE 32 (EXP) L32=L4-L8
Ratio (%):                     64.0       @Node    590
Code Stress:               166101.5       Allowable Stress:     259411.3
Axial Stress:                6678.4       @Node    190
Bending Stress:            170792.4       @Node     80
Torsion Stress:             49501.5       @Node    140
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      471559.3       @Node    590

 CODE STRESS CHECK PASSED      : LOADCASE 33 (EXP) L33=L6-L8

Highest Stresses: (   KPa    ) LOADCASE 33 (EXP) L33=L6-L8
Ratio (%):                     12.1       @Node    890
Code Stress:                35099.3       Allowable Stress:     290133.6
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Axial Stress:	1026.0	@Node	640
Bending Stress:	34091.1	@Node	890
Torsion Stress:	5378.3	@Node	80
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	76099.8	@Node	590

CODE STRESS CHECK PASSED : LOADCASE 34 (EXP) L34=L2-L6

Highest Stresses: (KPa) LOADCASE 34 (EXP) L34=L2-L6				
Ratio (%):	70.7	@Node	590	
Code Stress:	183725.7	Allowable Stress:		259752.6
Axial Stress:	6373.0	@Node	250	
Bending Stress:	180889.7	@Node	590	
Torsion Stress:	43740.9	@Node	140	
Hoop Stress:	0.0	@Node	20	
Max Stress Intensity:	520014.3	@Node	590	

CODE STRESS CHECK PASSED : LOADCASE 35 (EXP) L35=L4-L6

Highest Stresses: (KPa) LOADCASE 35 (EXP) L35=L4-L6				
Ratio (%):	74.6	@Node	590	
Code Stress:	193592.0	Allowable Stress:		259411.3
Axial Stress:	7497.7	@Node	250	
Bending Stress:	190113.0	@Node	590	
Torsion Stress:	51829.1	@Node	140	
Hoop Stress:	0.0	@Node	20	
Max Stress Intensity:	546300.7	@Node	590	

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OPE) W+T2+P1+F1
16 (OPE) W+T2+P1+F2
17 (OCC) L17=L10-L4
18 (OCC) L18=L11-L4
19 (OCC) L19=L12-L4
20 (OCC) L20=L13-L4
21 (OCC) L21=L14-L4
22 (OCC) L22=L15-L4
23 (OCC) L23=L16-L4
24 (OCC) L24=L17+L8
25 (OCC) L25=L18+L8
26 (OCC) L26=L19+L8
27 (OCC) L27=L20+L8
28 (OCC) L28=L21+L8
29 (OCC) L29=L22+L8
30 (OCC) L30=L23+L8
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8
33 (EXP) L33=L6-L8
34 (EXP) L34=L2-L6
35 (EXP) L35=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 15:0
Job:: BNK-GCS-CN-027-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

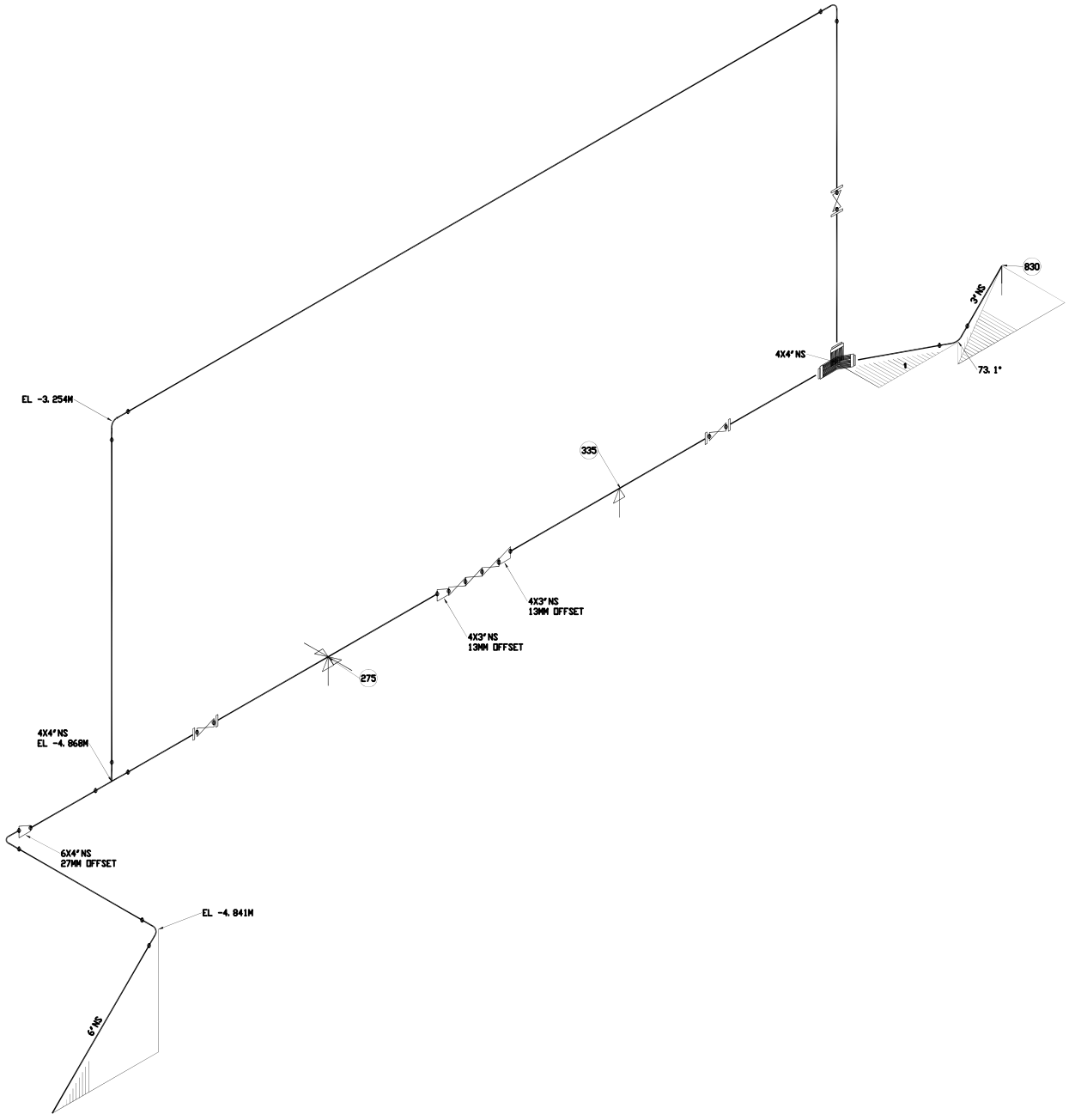
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
750		Absolute Method								
	Limits	4800	4800	3600		1080	720	940		
	2(OPE)	800	-775	901	0.250	-153	1018	925	1.413	*
	4(OPE)	235	-429	304	0.089	-75	293	377	0.407	
	6(OPE)	-11	-462	165	0.096	-89	248	390	0.415	
	8(SUS)	1	-258	0	0.054	-25	0	12	0.023	
	9(SUS)	1	-256	0	0.053	-24	0	12	0.023	
810		Absolute Method								
	Limits	11201	11201	8400		6720	4480	5820		
	2(OPE)	-4152	-3302	-2943	0.371	-8503	4929	-1140	1.265	*
	4(OPE)	-4154	-3333	-2970	0.371	-8575	4972	-1173	1.276	*
	6(OPE)	-3558	1423	841	0.318	2507	-732	3881	0.667	
	8(SUS)	-3702	-888	-110	0.331	-54	725	565	0.162	
	9(SUS)	-3698	-887	-110	0.330	-54	724	565	0.162	

BNK-GCS-CN-029

1. FL-112-0029-AN07-6"-PT
2. FL-112-0129-AN07-4"-PT
3. GAS-111-0052-FN05-4"-PT
4. GAS-111-0091-FN05-4"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 5

REV.	CHANGE	DATE
		20 MAY 2024

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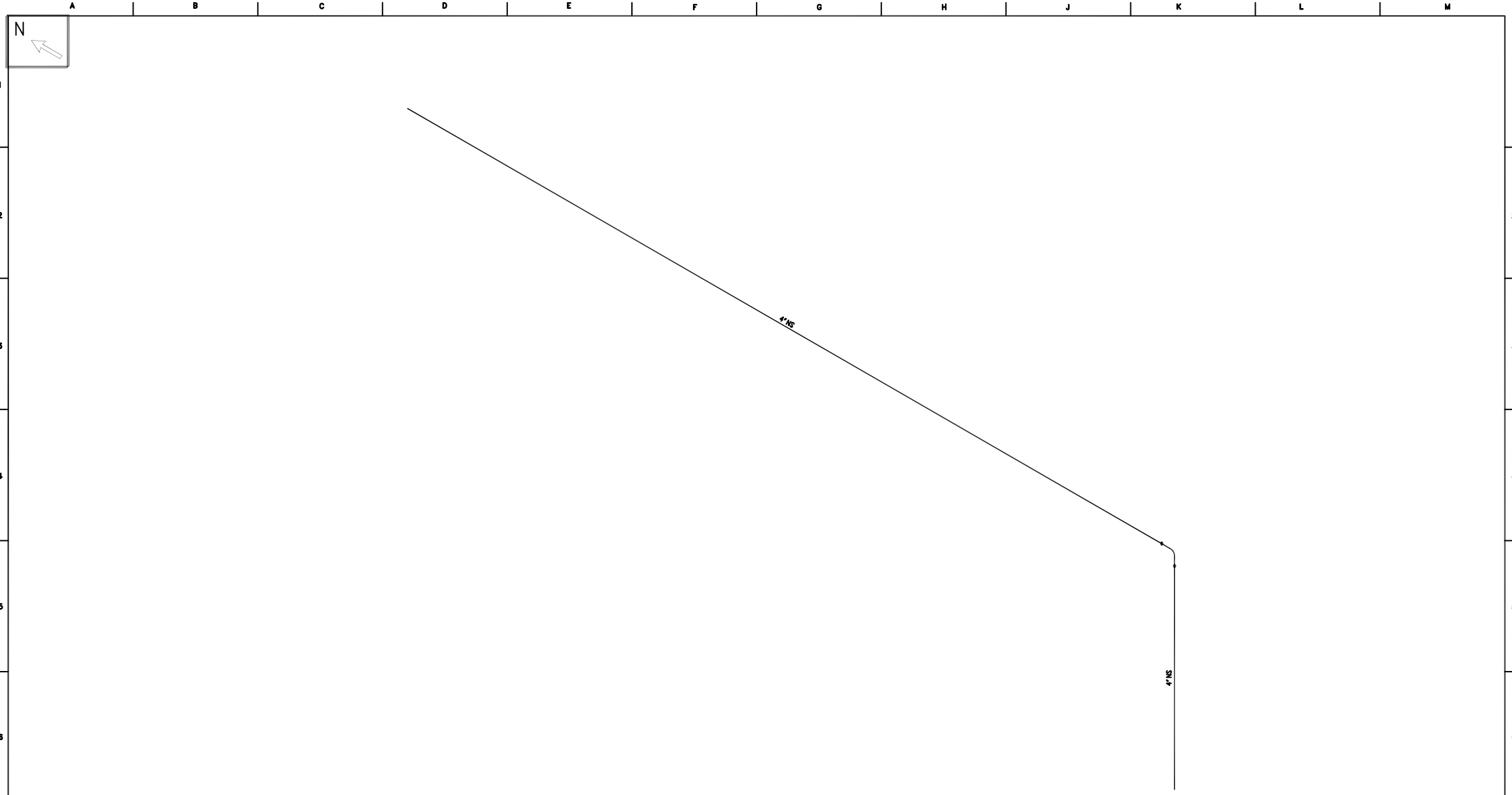

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

2 OF 5

REV.	CHANGE	DATE
		20 MAY 2024

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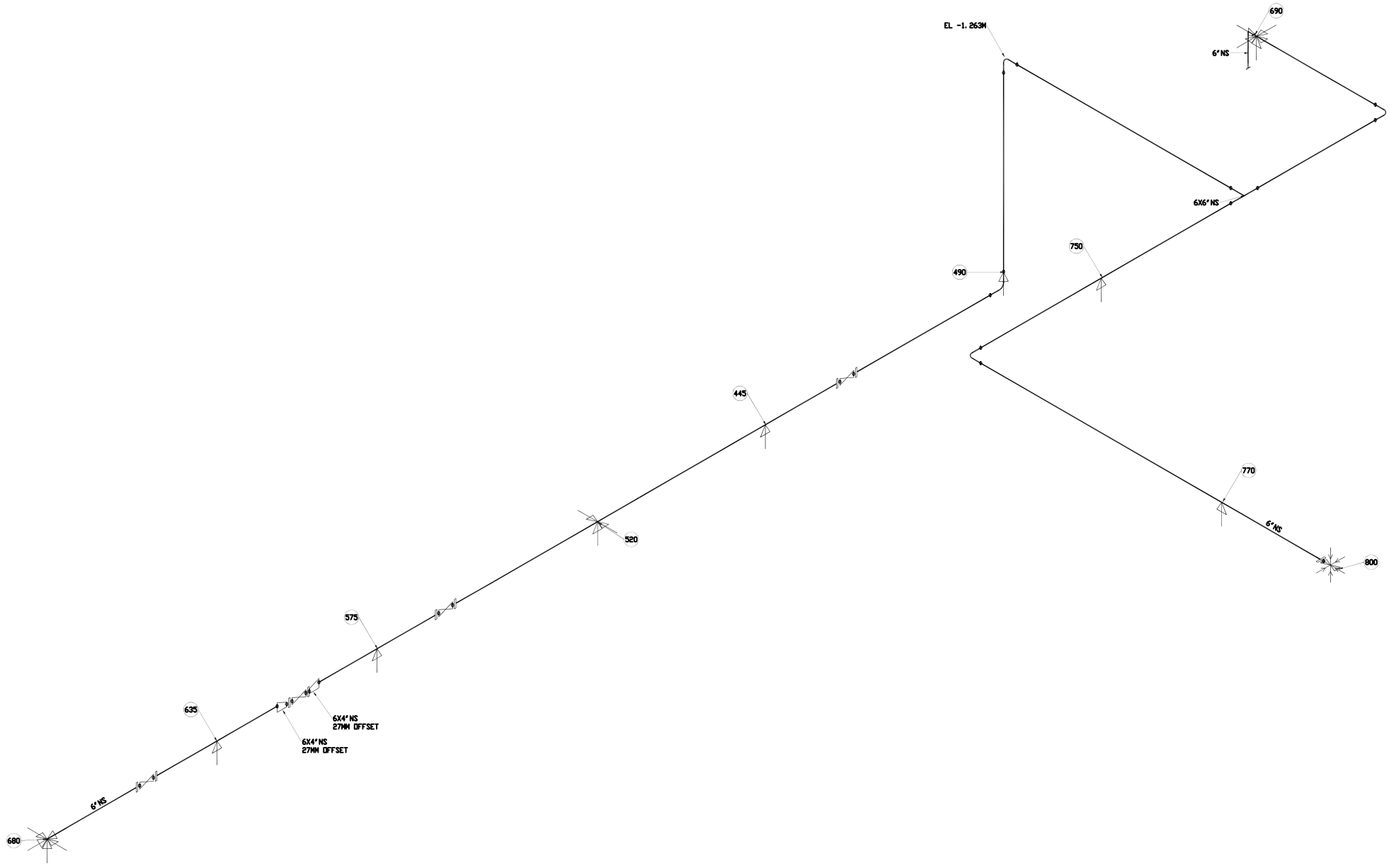

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

3 OF 5

REV.	CHANGE	DATE
		20 MAY 2024

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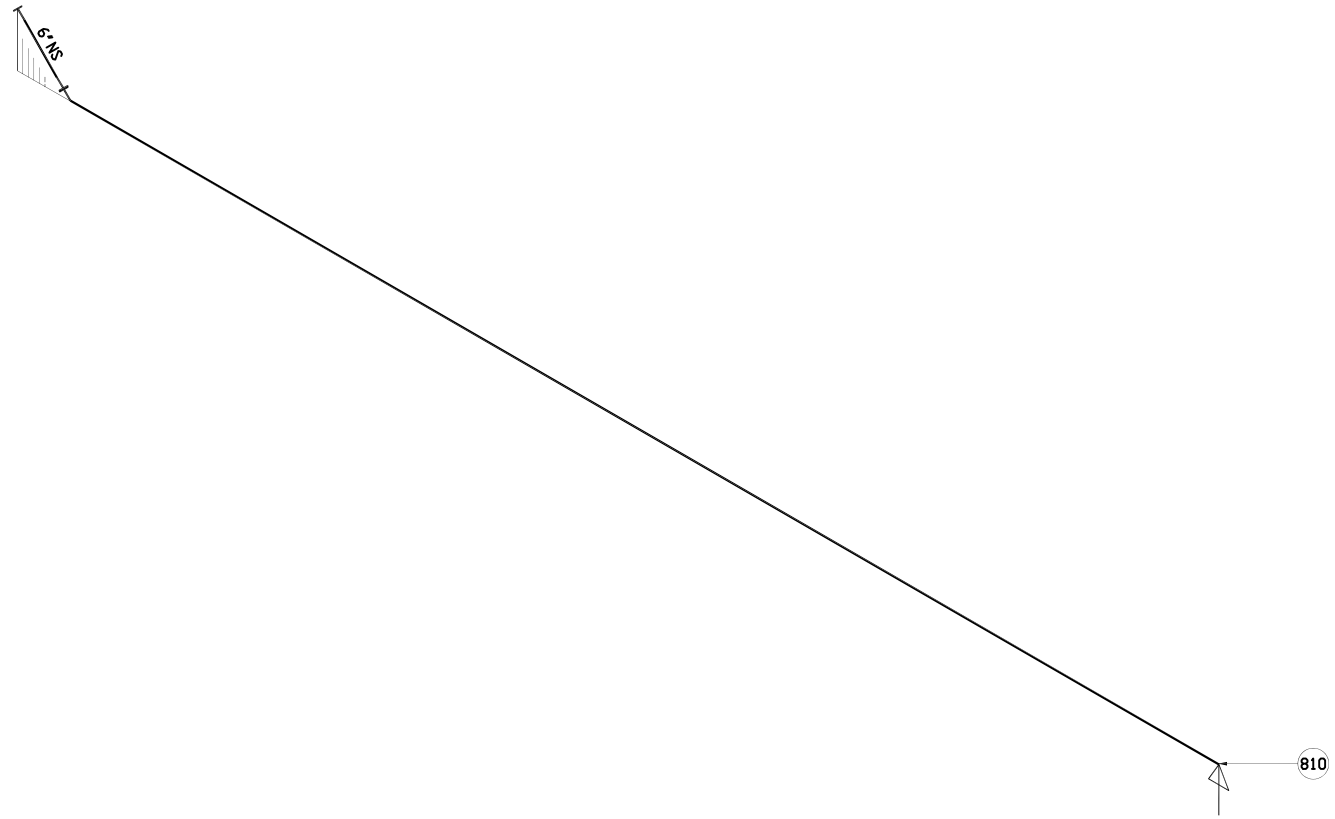

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PIPING SPEC.		OP. TEMP.		INTERGRAPH	REV.
INSULATION SPEC.		PROJECT NO.			
INSULATION THKS.		SYSTEM			DRG.
PAINTING SPEC.		AREA			
MATERIAL		DRAWN BY		PIPELINE REFERENCE	4 OF 5
OP. PRESSURE		E.L.DIAGRAM			

REV.	CHANGE	DATE
		20 MAY 2024

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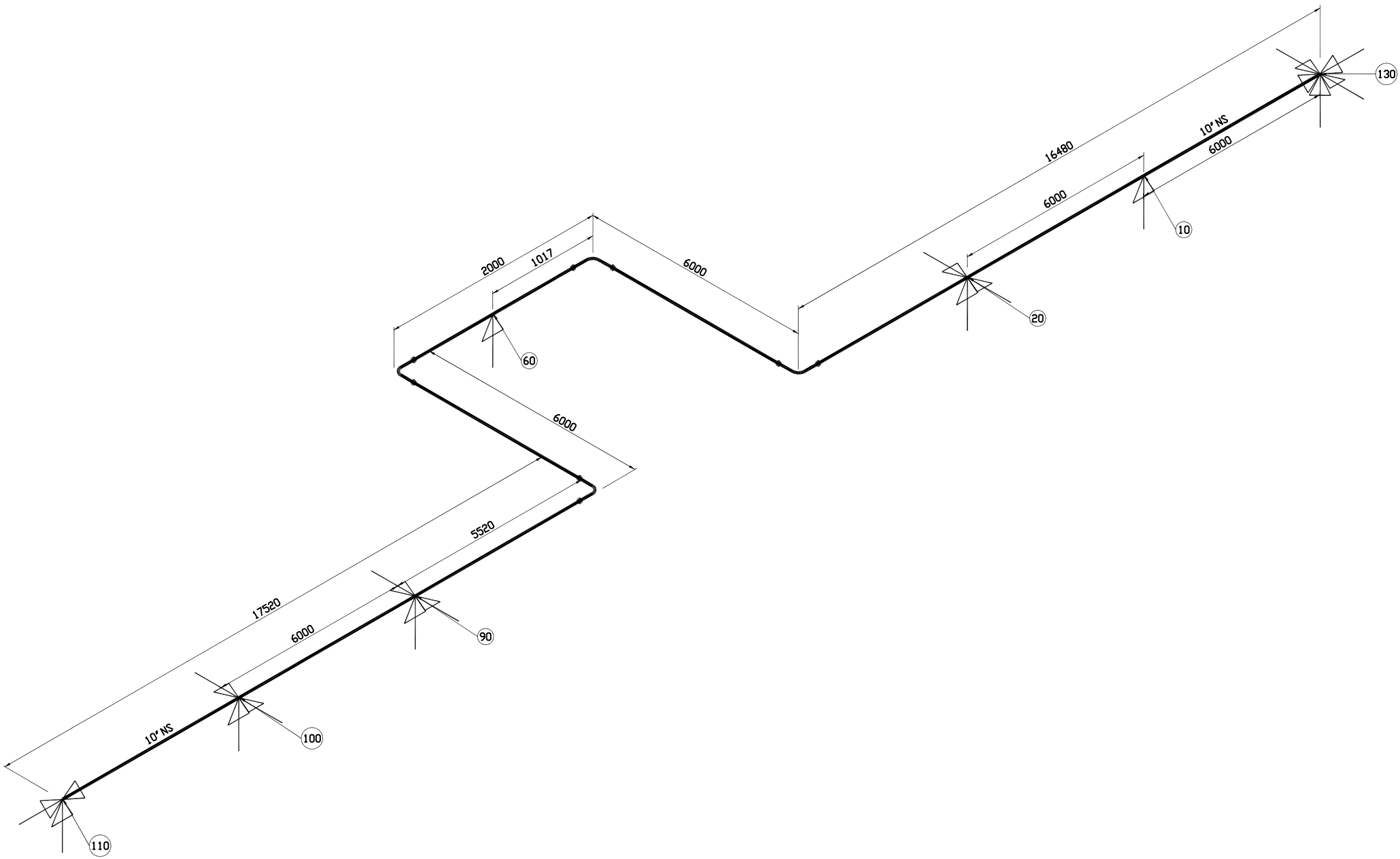

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

5 OF 5

REV.	CHANGE	DATE
		20 MAY 2024

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Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T2+P2
7 (Alt-SUS) W+P1
8 (OPE) W+T3+P1
9 (Alt-SUS) W+P1
10 (SUS) W+P1
11 (SUS) WNC
12 (OPE) W+T2+P1+U1
13 (OPE) W+T2+P1-U1
14 (OPE) W+T2+P1+U2
15 (OPE) W+T2+P1-U2
16 (OPE) W+T2+P1+U3
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15-L4
21 (OCC) L21=L16-L4
22 (OCC) L22=L17+L10
23 (OCC) L23=L18+L10
24 (OCC) L24=L19+L10
25 (OCC) L25=L20+L10
26 (OCC) L26=L21+L10
27 (EXP) L27=L2-L10
28 (EXP) L28=L4-L10
29 (EXP) L29=L2-L4
30 (EXP) L30=L8-L10
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
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CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 16:6
Job:: BNK-GCS-CN-029-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 20,2024 16: 6:42

PIPE DATA

From 10 To 20 DZ= 6,000.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
GENERAL
T1= 270 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,483,936 KPa
EH2= 187,335,024 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0001362 kg./cu.cm.
RESTRAINTS
Node 20 +Y Mu = .30
Node 20 X
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 20 To 30 DZ= 4,480.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 29
Angle/Node @2= .00 28

From 30 To 40 DX= -6,000.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 39
Angle/Node @2= .00 38

From 40 To 50 DZ= 517.000 mm.

From 50 To 60 DZ= 500.000 mm.
RESTRAINTS
Node 60 +Y Mu = .30

From 60 To 70 DZ= 983.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 69
Angle/Node @2= .00 68

INPUT LISTING

```
 ------------------------------------------------------------------------------
 From  70  To  80  DX= 6,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 79
    Angle/Node @2= .00 78
 ------------------------------------------------------------------------------
 From  80  To  90 DZ= 5,520.000 mm.
 RESTRAINTS
    Node  90  +Y
    Node  90  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  90  To  95 DZ= 4,026.000 mm.
 SIF's & TEE's
    Node  95   Welding Tee
 ------------------------------------------------------------------------------
 From  95  To  100 DZ= 1,974.000 mm.
 RESTRAINTS
    Node  100  +Y   Mu = .30
    Node  100  X
 ------------------------------------------------------------------------------
 From  100  To  110 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  110  +Y   Mu = .30
    Node  110  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  10  To  120 DZ= -3,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  10  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  120  To  130 DZ= -3,000.000 mm.
 RESTRAINTS
    Node  130  +Y   Mu = .30
    Node  130  Z   Gap= 3.000 mm.
    Node  130  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  95  To  150 DY= 610.000 mm.  DZ= -610.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
 GENERAL
    T1= 272 C   T2= 270 C   Insul Thk= .000 mm.
 BEND at "TO" end
```

INPUT LISTING
```
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 149
    Angle/Node @2= .00 148
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,638 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  150  To  160  DX= -800.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 159
    Angle/Node @2= .00 158
 ------------------------------------------------------------------------------
 From  160  To  170 DZ= -229.000 mm.
 ------------------------------------------------------------------------------
 From  170  To  180 DY= -27.000 mm.  DZ= -140.000 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 8.560 mm.
 ------------------------------------------------------------------------------
 From  180  To  190 DZ= -105.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 8.560 mm.
    Insul Thk= .000 mm.
 SIF's & TEE's
    Node  190   Welding Tee
 ------------------------------------------------------------------------------
 From  190  To  200 DZ= -105.000 mm.
 ------------------------------------------------------------------------------
 From  200  To  210 DZ= -79.375 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  190  To  220 DY= 1,614.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 219
    Angle/Node @2= .00 218
 ------------------------------------------------------------------------------
 From  220  To  230 DZ= -3,470.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 229
    Angle/Node @2= .00 228
 ------------------------------------------------------------------------------
 From  230  To  240 DY= -652.000 mm.
 ------------------------------------------------------------------------------
 From  240  To  250 DY= -79.375 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  210  To  260 DZ= -441.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 8.560 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 59 C   T2= 85 C   T3= 59 C   P1= 6,200.1411 KPa   P2= 5,290.1206 KPa
    PHyd= 9,300.2119 KPa   Insul Thk= .000 mm.
 RIGID  Weight= 1,717.01 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
```

INPUT LISTING
```
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  260  To  270 DZ= -111.125 mm.
 RIGID  Weight= 191.27 N.
 FLANGES
    Location= From   Method= Peq   Class/Grade= ASME-2009-600-3.19
    G/C= 135.001 mm.   T/P table ( 1)=  37.8 C   -> 10,342.1 KPa   ( 2)=  93.3 C
    -> 10,342.1 KPa   ( 3)=  148.9 C   -> 10,031.9 KPa   ( 4)=  204.4 C
    -> 9,721.6 KPa   ( 5)=  260.0 C   -> 9,170.0 KPa   ( 6)=  315.6 C
    -> 8,342.7 KPa   ( 7)=  343.3 C   -> 8,101.3 KPa   ( 8)=  371.1 C
    -> 7,825.5 KPa   ( 9)=  398.9 C   -> 7,342.9 KPa   (10)=  426.7 C
    -> 6,998.2 KPa   (11)=  454.4 C   -> 6,722.4 KPa   (12)=  482.2 C
    -> 6,205.3 KPa   (13)=  510.0 C   -> 5,343.4 KPa   (14)=  537.8 C
    -> 4,998.7 KPa   (15)=  565.6 C   -> 4,964.2 KPa   (16)=  593.3 C
    -> 4,447.1 KPa   (17)=  621.1 C   -> 3,792.1 KPa   (18)=  648.9 C
    -> 2,826.9 KPa   (19)=  676.7 C   -> 2,516.6 KPa   (20)=  704.4 C
    -> 1,896.1 KPa   (21)=  732.2 C   -> 1,413.4 KPa   (22)=  760.0 C
    -> 1,034.2 KPa   (23)=  787.8 C   -> 792.9 KPa   (24)=  815.6 C
    -> 586.1 KPa
 ---------------------------------------------------------------------------
 From  270  To  275 DZ= -300.000 mm.
 RESTRAINTS
    Node  275  +Y   Mu = .30
    Node  275  X   Gap= 3.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  275  To  280 DZ= -300.000 mm.
 ---------------------------------------------------------------------------
 From  280  To  290 DY= -12.700 mm.  DZ= -103.000 mm.
 REDUCER
    Diam2= 88.900 mm.   Wall2= 7.620 mm.
 ---------------------------------------------------------------------------
 From  290  To  300 DZ= -92.075 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 106.76 N.
 FLANGES
    Location= To   Method= Peq
 ---------------------------------------------------------------------------
 From  300  To  310 DZ= -365.000 mm.
 RIGID  Weight= 217.96 N.
 ---------------------------------------------------------------------------
 From  310  To  320 DZ= -92.075 mm.
 RIGID  Weight= 106.76 N.
 FLANGES
    Location= From   Method= Peq   Class/Grade= ASME-2009-600-3.19
    G/C= 111.125 mm.   T/P table ( 1)=  37.8 C   -> 10,342.1 KPa   ( 2)=  93.3 C
    -> 10,342.1 KPa   ( 3)=  148.9 C   -> 10,031.9 KPa   ( 4)=  204.4 C
    -> 9,721.6 KPa   ( 5)=  260.0 C   -> 9,170.0 KPa   ( 6)=  315.6 C
    -> 8,342.7 KPa   ( 7)=  343.3 C   -> 8,101.3 KPa   ( 8)=  371.1 C
    -> 7,825.5 KPa   ( 9)=  398.9 C   -> 7,342.9 KPa   (10)=  426.7 C
    -> 6,998.2 KPa   (11)=  454.4 C   -> 6,722.4 KPa   (12)=  482.2 C
    -> 6,205.3 KPa   (13)=  510.0 C   -> 5,343.4 KPa   (14)=  537.8 C
    -> 4,998.7 KPa   (15)=  565.6 C   -> 4,964.2 KPa   (16)=  593.3 C
    -> 4,447.1 KPa   (17)=  621.1 C   -> 3,792.1 KPa   (18)=  648.9 C
```

INPUT LISTING
-> 2,826.9 KPa (19)= 676.7 C -> 2,516.6 KPa (20)= 704.4 C
-> 1,896.1 KPa (21)= 732.2 C -> 1,413.4 KPa (22)= 760.0 C
-> 1,034.2 KPa (23)= 787.8 C -> 792.9 KPa (24)= 815.6 C
-> 586.1 KPa

From 320 To 330 DY= 12.700 mm. DZ= -103.000 mm.
REDUCER
Diam2= 114.300 mm. Wall2= 8.560 mm.

From 330 To 335 DZ= -300.000 mm.
PIPE
Dia= 114.300 mm. Wall= 8.560 mm.
Insul Thk= .000 mm.
RESTRAINTS
Node 335 +Y Mu = .30

From 335 To 340 DZ= -200.000 mm.

From 340 To 350 DZ= -111.125 mm.
RIGID Weight= 191.27 N.
FLANGES
Location= To Method= Peq Class/Grade= ASME-2009-600-3.19
G/C= 135.001 mm. T/P table (1)= 37.8 C -> 10,342.1 KPa (2)= 93.3 C
-> 10,342.1 KPa (3)= 148.9 C -> 10,031.9 KPa (4)= 204.4 C
-> 9,721.6 KPa (5)= 260.0 C -> 9,170.0 KPa (6)= 315.6 C
-> 8,342.7 KPa (7)= 343.3 C -> 8,101.3 KPa (8)= 371.1 C
-> 7,825.5 KPa (9)= 398.9 C -> 7,342.9 KPa (10)= 426.7 C
-> 6,998.2 KPa (11)= 454.4 C -> 6,722.4 KPa (12)= 482.2 C
-> 6,205.3 KPa (13)= 510.0 C -> 5,343.4 KPa (14)= 537.8 C
-> 4,998.7 KPa (15)= 565.6 C -> 4,964.2 KPa (16)= 593.3 C
-> 4,447.1 KPa (17)= 621.1 C -> 3,792.1 KPa (18)= 648.9 C
-> 2,826.9 KPa (19)= 676.7 C -> 2,516.6 KPa (20)= 704.4 C
-> 1,896.1 KPa (21)= 732.2 C -> 1,413.4 KPa (22)= 760.0 C
-> 1,034.2 KPa (23)= 787.8 C -> 792.9 KPa (24)= 815.6 C
-> 586.1 KPa

From 350 To 360 DZ= -441.000 mm.
RIGID Weight= 1,717.01 N.

From 360 To 370 DZ= -111.125 mm.
RIGID Weight= 191.27 N.
FLANGES
Location= From Method= Peq Class/Grade= ASME-2009-600-3.19
G/C= 135.001 mm. T/P table (1)= 37.8 C -> 10,342.1 KPa (2)= 93.3 C
-> 10,342.1 KPa (3)= 148.9 C -> 10,031.9 KPa (4)= 204.4 C
-> 9,721.6 KPa (5)= 260.0 C -> 9,170.0 KPa (6)= 315.6 C
-> 8,342.7 KPa (7)= 343.3 C -> 8,101.3 KPa (8)= 371.1 C
-> 7,825.5 KPa (9)= 398.9 C -> 7,342.9 KPa (10)= 426.7 C
-> 6,998.2 KPa (11)= 454.4 C -> 6,722.4 KPa (12)= 482.2 C
-> 6,205.3 KPa (13)= 510.0 C -> 5,343.4 KPa (14)= 537.8 C
-> 4,998.7 KPa (15)= 565.6 C -> 4,964.2 KPa (16)= 593.3 C
-> 4,447.1 KPa (17)= 621.1 C -> 3,792.1 KPa (18)= 648.9 C
-> 2,826.9 KPa (19)= 676.7 C -> 2,516.6 KPa (20)= 704.4 C
-> 1,896.1 KPa (21)= 732.2 C -> 1,413.4 KPa (22)= 760.0 C
-> 1,034.2 KPa (23)= 787.8 C -> 792.9 KPa (24)= 815.6 C
-> 586.1 KPa

INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  370  To  380 DZ= -215.000 mm.
 ----------------------------------------------------------------------------
 From  380  To  390 DZ= -257.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 389
    Angle/Node @2= .00 388
 ----------------------------------------------------------------------------
 From  390  To  395  DX= 2,338.000 mm.
 ----------------------------------------------------------------------------
 From  390  To  820 DY= -35.921 mm.  DZ= -35.921 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  820   Unreinforced Tee
 ----------------------------------------------------------------------------
 From  395  To  400  DX= 2,338.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 399
    Angle/Node @2= .00 398
 ----------------------------------------------------------------------------
 From  400  To  410 DY= -766.000 mm.
 ----------------------------------------------------------------------------
 From  250  To  420 DY= -441.000 mm.
 GENERAL
    P2= 5,090.1162 KPa
 RIGID  Weight= 1,805.98 N.
 ----------------------------------------------------------------------------
 From  420  To  430 DY= -111.125 mm.
 RIGID  Weight= 191.27 N.
 ----------------------------------------------------------------------------
 From  430  To  380  DX= .000 mm.  DY= -330.500 mm.  DZ= .100 mm.
 ----------------------------------------------------------------------------
 From  410  To  440 DZ= -1,318.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 ----------------------------------------------------------------------------
 From  440  To  445 DZ= -417.500 mm.
 RESTRAINTS
    Node  445  +Y   Mu = .30
 ----------------------------------------------------------------------------
 From  445  To  450 DZ= -417.500 mm.
 ----------------------------------------------------------------------------
 From  450  To  460 DZ= -127.000 mm.
 RIGID  Weight= 364.75 N.
 ----------------------------------------------------------------------------
 From  460  To  470 DZ= -568.000 mm.
 RIGID  Weight= 2,708.97 N.
 ----------------------------------------------------------------------------
 From  470  To  480 DZ= -127.000 mm.
 RIGID  Weight= 364.75 N.
 ----------------------------------------------------------------------------
 From  480  To  490 DZ= -1,690.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 489
    Angle/Node @2= .00 488
```

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```
 RESTRAINTS
    Node  490  +Y
 ------------------------------------------------------------------------------
 From  490  To  500 DY= 4,371.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 499
    Angle/Node @2= .00 498
 ------------------------------------------------------------------------------
 From  500  To  510  DX= 713.000 mm.
 ------------------------------------------------------------------------------
 From  410  To  520 DZ= 581.000 mm.
 RESTRAINTS
    Node  520  +Y   Mu = .30
    Node  520  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  520  To  530 DZ= 1,213.000 mm.
 ------------------------------------------------------------------------------
 From  530  To  540 DZ= 443.000 mm.
 ------------------------------------------------------------------------------
 From  540  To  550 DZ= 127.000 mm.
 RIGID  Weight= 364.75 N.
 ------------------------------------------------------------------------------
 From  550  To  560 DZ= 598.000 mm.
 RIGID  Weight= 3,576.37 N.
 ------------------------------------------------------------------------------
 From  560  To  570 DZ= 127.000 mm.
 RIGID  Weight= 364.75 N.
 ------------------------------------------------------------------------------
 From  570  To  575 DZ= 281.000 mm.
 RESTRAINTS
    Node  575  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  575  To  580 DZ= 281.000 mm.
 ------------------------------------------------------------------------------
 From  580  To  590 DY= -27.000 mm.  DZ= 140.000 mm.
 REDUCER
    Diam2= 114.300 mm.   Wall2= 8.560 mm.
 ------------------------------------------------------------------------------
 From  590  To  600 DZ= 111.125 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 8.560 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  600  To  610 DZ= 441.000 mm.
 RIGID  Weight= 387.00 N.
 ------------------------------------------------------------------------------
 From  610  To  620 DZ= 111.125 mm.
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  620  To  630 DY= 27.000 mm.  DZ= 140.000 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------------
 From  630  To  635 DZ= 300.000 mm.
 PIPE
```

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INPUT LISTING
```
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  635  +Y
 ------------------------------------------------------------------------------
 From  635  To  640 DZ= 300.000 mm.
 ------------------------------------------------------------------------------
 From  640  To  650 DZ= 127.000 mm.
 RIGID  Weight= 364.75 N.
 ------------------------------------------------------------------------------
 From  650  To  660 DZ= 441.000 mm.
 RIGID  Weight= 3,576.37 N.
 ------------------------------------------------------------------------------
 From  660  To  670 DZ= 127.000 mm.
 RIGID  Weight= 364.75 N.
 ------------------------------------------------------------------------------
 From  670  To  680 DZ= 655.000 mm.
 RESTRAINTS
    Node  680  +Y   Mu = .30
    Node  680  X   Gap= 3.000 mm.   Mu = .30
    Node  680  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  690  To  700 DY= -76.200 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 130 C   T2= 60 C   P1= 6,200.1411 KPa   PHyd= 9,300.2119 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 196,294,464 KPa
    EH2= 200,637,808 KPa   EH3= 200,675,040 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000562 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RIGID  Weight= .00 N.
 UNIFORM LOAD
   Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
   Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
   Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
 SIF's & TEE's
    Node  700   Reinforced Tee   Pad= 10.973 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  690  To  710  DX= 714.000 mm.
 RESTRAINTS
    Node  690  +Y   Mu = .30
    Node  690  X   Gap= 3.000 mm.
    Node  690  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  720  To  730  DX= 53.882 mm.  DY= -53.882 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  710  To  720  DX= 628.000 mm.
```

INPUT LISTING

```
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 719
    Angle/Node @2= .00 718
 ---------------------------------------------------------------------------
 From  720  To  510 DZ= 1,421.000 mm.
 ---------------------------------------------------------------------------
 From  510  To  750 DZ= 1,430.000 mm.
 RESTRAINTS
    Node  750  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  750  To  760 DZ= 1,430.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 759
    Angle/Node @2= .00 758
 ---------------------------------------------------------------------------
 From  760  To  770  DX= 5,018.000 mm.
 RESTRAINTS
    Node  770  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  770  To  780  DX= 800.000 mm.
 ---------------------------------------------------------------------------
 From  780  To  790  DX= 127.000 mm.
 RIGID  Weight= 364.75 N.
 ---------------------------------------------------------------------------
 From  790  To  800  DX= 568.000 mm.
 RIGID  Weight= 2,708.97 N.
 RESTRAINTS
    Node  800  ANC
 ---------------------------------------------------------------------------
 From  730  To  810  DX= 300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  810  +Y
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  820  To  830 DZ= -300.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
 GENERAL
    T1= 21 C   T3= 21 C   Insul Thk= .000 mm.
 RESTRAINTS
    Node  830  +Y   Mu = .30
 ALLOWABLE STRESSES
```

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INPUT LISTING
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa
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MATERIAL Changes:

10	20	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
10	120	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
690	700	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
730	810	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.

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ALLOWABLE STRESS Changes

10	20	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
10	120	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
95	150	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,365 KPa Sh2= 129,638 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
210	260	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
690	700	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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INPUT LISTING

```
   730             810              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
   820             830              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
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 BEND ELEMENTS
    20              30              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 29
                                    Angle/Node @2= .00 28
    30              40              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 39
                                    Angle/Node @2= .00 38
    60              70              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 69
                                    Angle/Node @2= .00 68
    70              80              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 79
                                    Angle/Node @2= .00 78
    95             150              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   149   Angle/Node @2= .00 148
   150             160              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   159   Angle/Node @2= .00 158
   190             220              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   219   Angle/Node @2= .00 218
   220             230              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   229   Angle/Node @2= .00 228
   380             390              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   389   Angle/Node @2= .00 388
   395             400              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   399   Angle/Node @2= .00 398
   480             490              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   489   Angle/Node @2= .00 488
   490             500              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   499   Angle/Node @2= .00 498
   710             720              Radius= 228.600 mm. (LONG)
```

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Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                719   Angle/Node @2= .00 718
  750             760             Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                759   Angle/Node @2= .00 758
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RIGIDS
  200             210           RIGID  Weight= 71.17 N.
  240             250           RIGID  Weight= 71.17 N.
  210             260           RIGID  Weight= 1,717.01 N.
  260             270           RIGID  Weight= 191.27 N.
  290             300           RIGID  Weight= 106.76 N.
  300             310           RIGID  Weight= 217.96 N.
  310             320           RIGID  Weight= 106.76 N.
  340             350           RIGID  Weight= 191.27 N.
  350             360           RIGID  Weight= 1,717.01 N.
  360             370           RIGID  Weight= 191.27 N.
  390             820           RIGID  Weight= .00 N.
  250             420           RIGID  Weight= 1,805.98 N.
  420             430           RIGID  Weight= 191.27 N.
  450             460           RIGID  Weight= 364.75 N.
  460             470           RIGID  Weight= 2,708.97 N.
  470             480           RIGID  Weight= 364.75 N.
  540             550           RIGID  Weight= 364.75 N.
  550             560           RIGID  Weight= 3,576.37 N.
  560             570           RIGID  Weight= 364.75 N.
  590             600           RIGID  Weight= 191.27 N.
  600             610           RIGID  Weight= 387.00 N.
  610             620           RIGID  Weight= 191.27 N.
  640             650           RIGID  Weight= 364.75 N.
  650             660           RIGID  Weight= 3,576.37 N.
  660             670           RIGID  Weight= 364.75 N.
  690             700           RIGID  Weight= .00 N.
  720             730           RIGID  Weight= .00 N.
  780             790           RIGID  Weight= 364.75 N.
  790             800           RIGID  Weight= 2,708.97 N.
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SIF's & TEE's
   90              95             Node  95   Welding Tee
  180             190             Node  190   Welding Tee
  390             820             Node  820   Unreinforced Tee
  690             700             Node  700   Reinforced Tee   Pad= 10.973 mm.
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REDUCERS
  170             180             Diam2= 114.300 mm.   Wall2= 8.560 mm.
  280             290             Diam2= 88.900 mm.   Wall2= 7.620 mm.
  320             330             Diam2= 114.300 mm.   Wall2= 8.560 mm.
```

INPUT LISTING
580 590 Diam2= 114.300 mm. Wall2= 8.560 mm.
620 630 Diam2= 168.275 mm. Wall2= 10.973 mm.

RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
20	+Y				.30	.000	1.000	.000
20	X					1.000	.000	.000
60	+Y				.30	.000	1.000	.000
90	+Y					.000	1.000	.000
90	X			3.00		1.000	.000	.000
100	+Y				.30	.000	1.000	.000
100	X					1.000	.000	.000
110	+Y				.30	.000	1.000	.000
110	Z			3.00	.30	.000	.000	1.000
10	+Y				.30	.000	1.000	.000
130	+Y				.30	.000	1.000	.000
130	Z			3.00		.000	.000	1.000
130	X			3.00		1.000	.000	.000
275	+Y				.30	.000	1.000	.000
275	X			3.00	.30	1.000	.000	.000
335	+Y				.30	.000	1.000	.000
445	+Y				.30	.000	1.000	.000
490	+Y					.000	1.000	.000
520	+Y				.30	.000	1.000	.000
520	X			3.00	.30	1.000	.000	.000
575	+Y				.30	.000	1.000	.000
635	+Y					.000	1.000	.000
680	+Y				.30	.000	1.000	.000
680	X			3.00	.30	1.000	.000	.000
680	Z			3.00	.30	.000	.000	1.000
690	+Y				.30	.000	1.000	.000
690	X			3.00		1.000	.000	.000
690	Z			3.00		.000	.000	1.000
750	+Y				.30	.000	1.000	.000
770	+Y				.30	.000	1.000	.000
800	ANC					.000	.000	.000
810	+Y					.000	1.000	.000
830	+Y				.30	.000	1.000	.000

FLANGES
260 270 Location= From Method= Peq
Class/Grade= ASME-2009-600-3.19
G/C= 135.001 mm. T/P table (1)= 37.8 C
-> 10,342.1 KPa (2)= 93.3 C
-> 10,342.1 KPa (3)= 148.9 C
-> 10,031.9 KPa (4)= 204.4 C
-> 9,721.6 KPa (5)= 260.0 C
-> 9,170.0 KPa (6)= 315.6 C
-> 8,342.7 KPa (7)= 343.3 C
-> 8,101.3 KPa (8)= 371.1 C

INPUT LISTING

```
                                -> 7,825.5 KPa   ( 9)=  398.9 C
                                -> 7,342.9 KPa   (10)=  426.7 C
                                -> 6,998.2 KPa   (11)=  454.4 C
                                -> 6,722.4 KPa   (12)=  482.2 C
                                -> 6,205.3 KPa   (13)=  510.0 C
                                -> 5,343.4 KPa   (14)=  537.8 C
                                -> 4,998.7 KPa   (15)=  565.6 C
                                -> 4,964.2 KPa   (16)=  593.3 C
                                -> 4,447.1 KPa   (17)=  621.1 C
                                -> 3,792.1 KPa   (18)=  648.9 C
                                -> 2,826.9 KPa   (19)=  676.7 C
                                -> 2,516.6 KPa   (20)=  704.4 C
                                -> 1,896.1 KPa   (21)=  732.2 C
                                -> 1,413.4 KPa   (22)=  760.0 C
                                -> 1,034.2 KPa   (23)=  787.8 C
                                -> 792.9 KPa   (24)=  815.6 C   -> 586.1 KPa
   290              300         Location= To   Method= Peq
   310              320         Location= From   Method= Peq
                                Class/Grade= ASME-2009-600-3.19
                                G/C= 111.125 mm.   T/P table ( 1)=  37.8 C
                                -> 10,342.1 KPa   ( 2)=  93.3 C
                                -> 10,342.1 KPa   ( 3)=  148.9 C
                                -> 10,031.9 KPa   ( 4)=  204.4 C
                                -> 9,721.6 KPa   ( 5)=  260.0 C
                                -> 9,170.0 KPa   ( 6)=  315.6 C
                                -> 8,342.7 KPa   ( 7)=  343.3 C
                                -> 8,101.3 KPa   ( 8)=  371.1 C
                                -> 7,825.5 KPa   ( 9)=  398.9 C
                                -> 7,342.9 KPa   (10)=  426.7 C
                                -> 6,998.2 KPa   (11)=  454.4 C
                                -> 6,722.4 KPa   (12)=  482.2 C
                                -> 6,205.3 KPa   (13)=  510.0 C
                                -> 5,343.4 KPa   (14)=  537.8 C
                                -> 4,998.7 KPa   (15)=  565.6 C
                                -> 4,964.2 KPa   (16)=  593.3 C
                                -> 4,447.1 KPa   (17)=  621.1 C
                                -> 3,792.1 KPa   (18)=  648.9 C
                                -> 2,826.9 KPa   (19)=  676.7 C
                                -> 2,516.6 KPa   (20)=  704.4 C
                                -> 1,896.1 KPa   (21)=  732.2 C
                                -> 1,413.4 KPa   (22)=  760.0 C
                                -> 1,034.2 KPa   (23)=  787.8 C
                                -> 792.9 KPa   (24)=  815.6 C   -> 586.1 KPa
   340              350         Location= To   Method= Peq
                                Class/Grade= ASME-2009-600-3.19
                                G/C= 135.001 mm.   T/P table ( 1)=  37.8 C
                                -> 10,342.1 KPa   ( 2)=  93.3 C
                                -> 10,342.1 KPa   ( 3)=  148.9 C
                                -> 10,031.9 KPa   ( 4)=  204.4 C
                                -> 9,721.6 KPa   ( 5)=  260.0 C
                                -> 9,170.0 KPa   ( 6)=  315.6 C
                                -> 8,342.7 KPa   ( 7)=  343.3 C
                                -> 8,101.3 KPa   ( 8)=  371.1 C
                                -> 7,825.5 KPa   ( 9)=  398.9 C
                                -> 7,342.9 KPa   (10)=  426.7 C
                                -> 6,998.2 KPa   (11)=  454.4 C
```

INPUT LISTING

```
                                   -> 6,722.4 KPa   (12)=  482.2 C
                                   -> 6,205.3 KPa   (13)=  510.0 C
                                   -> 5,343.4 KPa   (14)=  537.8 C
                                   -> 4,998.7 KPa   (15)=  565.6 C
                                   -> 4,964.2 KPa   (16)=  593.3 C
                                   -> 4,447.1 KPa   (17)=  621.1 C
                                   -> 3,792.1 KPa   (18)=  648.9 C
                                   -> 2,826.9 KPa   (19)=  676.7 C
                                   -> 2,516.6 KPa   (20)=  704.4 C
                                   -> 1,896.1 KPa   (21)=  732.2 C
                                   -> 1,413.4 KPa   (22)=  760.0 C
                                   -> 1,034.2 KPa   (23)=  787.8 C
                                   -> 792.9 KPa   (24)=  815.6 C   -> 586.1 KPa
  360              370             Location= From   Method= Peq
                                   Class/Grade= ASME-2009-600-3.19
                                   G/C= 135.001 mm.   T/P table ( 1)=  37.8 C
                                   -> 10,342.1 KPa   ( 2)=  93.3 C
                                   -> 10,342.1 KPa   ( 3)=  148.9 C
                                   -> 10,031.9 KPa   ( 4)=  204.4 C
                                   -> 9,721.6 KPa   ( 5)=  260.0 C
                                   -> 9,170.0 KPa   ( 6)=  315.6 C
                                   -> 8,342.7 KPa   ( 7)=  343.3 C
                                   -> 8,101.3 KPa   ( 8)=  371.1 C
                                   -> 7,825.5 KPa   ( 9)=  398.9 C
                                   -> 7,342.9 KPa   (10)=  426.7 C
                                   -> 6,998.2 KPa   (11)=  454.4 C
                                   -> 6,722.4 KPa   (12)=  482.2 C
                                   -> 6,205.3 KPa   (13)=  510.0 C
                                   -> 5,343.4 KPa   (14)=  537.8 C
                                   -> 4,998.7 KPa   (15)=  565.6 C
                                   -> 4,964.2 KPa   (16)=  593.3 C
                                   -> 4,447.1 KPa   (17)=  621.1 C
                                   -> 3,792.1 KPa   (18)=  648.9 C
                                   -> 2,826.9 KPa   (19)=  676.7 C
                                   -> 2,516.6 KPa   (20)=  704.4 C
                                   -> 1,896.1 KPa   (21)=  732.2 C
                                   -> 1,413.4 KPa   (22)=  760.0 C
                                   -> 1,034.2 KPa   (23)=  787.8 C
                                   -> 792.9 KPa   (24)=  815.6 C   -> 586.1 KPa
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UNIFORM LOAD Changes
   10               20             Vector1 in G-s
                                   X1 Dir = .26 g's  Y1 Dir = .00 g's
                                   Z1 Dir = .00 g's
                                   Vector2 in G-s
                                   X2 Dir = .00 g's  Y2 Dir = .12 g's
                                   Z2 Dir = .00 g's
                                   Vector3 in G-s
                                   X3 Dir = .00 g's  Y3 Dir = .00 g's
                                   Z3 Dir = .26 g's
  690              700             Vector1 in G-s
                                   X1 Dir = .26 g's  Y1 Dir = .00 g's
                                   Z1 Dir = .00 g's
```

INPUT LISTING

```
                                  Vector2 in G-s
                                  X2 Dir = .00 g's  Y2 Dir = .12 g's
                                  Z2 Dir = .00 g's
                                  Vector3 in G-s
                                  X3 Dir = .00 g's  Y3 Dir = .00 g's
                                  Z3 Dir = .26 g's
```


INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	=	N./cm.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

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SETUP FILE PARAMETERS

```
 CONNECT GEOMETRY THRU CNODES =    YES
 MIN ALLOWED BEND ANGLE =            5.00000
 MAX ALLOWED BEND ANGLE =            95.0000
 BEND LENGTH ATTACHMENT PERCENT =    1.00000
 MIN ANGLE TO ADJACENT BEND PT =     5.00000
 LOOP CLOSURE TOLERANCE =            25.4000     mm.
 THERMAL BOWING HORZ TOLERANCE =    0.100000E-03
 AUTO NODE NUMBER INCREMENT=         10.0000
 Z AXIS UP=                         NO
 USE PRESSURE STIFFENING =          DEFAULT
 ALPHA TOLERANCE =                   0.500000E-01
 RESLD-FORCE =                       NO
 HGR DEF RESWGT STIF =               0.175127E+13 N./cm.
 DECOMP SNG TOL =                    0.100000E+11
 BEND AXIAL SHAPE =                 YES
 FRICT STIF =                        0.175127E+07 N./cm.
 FRICT NORM FORCE VAR =              0.150000
 FRICT ANGLE VAR =                    15.0000
 FRICT SLIDE MULT =                   1.00000
 ROD TOLERANCE =                      1.00000
```

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INPUT LISTING

```
  ROD INC =                            2.00000
  INCORE NUMERICAL CHECK =            NO
  OUTCORE NUMERICAL CHECK =           NO
  DEFAULT TRANS RESTRAINT STIFF=      0.175127E+13    N./cm.
  DEFAULT ROT RESTRAINT STIFF=        0.112985E+12  N.m./deg
  IGNORE SPRING HANGER STIFFNESS =    NO
  MISSING MASS ZPA =                 EXTRACTED
  MIN WALL MILL TOLERANCE =            12.5000
  WRC-107 VERSION =                  MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =            LAST VALUE
  DEFAULT AMBIENT TEMPERATURE=         21.1111       C
  BOURDON PRESSURE=                  NONE
  COEFFICIENT OF FRICTION (MU) =          0.000000
  INCLUDE SPRG STIF IN HGR OPE =     NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =             B31.1(POST1980)
  USE WRC329                         NO
  NO REDUCED SIF FOR RFT AND WLT     NO
  B31.1 REDUCED Z FIX =              YES
  CLASS 1 BRANCH FLEX                NO
  ALL STRESS CASES CORRODED =        NO
  ADD TORSION IN SL STRESS =         DEFAULT
  ADD F/A IN STRESS =                DEFAULT
  OCCASIONAL LOAD FACTOR =                0.000000
  DEFAULT CODE =                     B31.3
  B31.3 SUS CASE SIF FACTOR =             0.000000
  ALLOW USERS BEND SIF =             NO
  USE SCHNEIDER                      NO
  YIELD CRITERION STRESS =           MAX 3D SHEAR
  USE PD/4T                           NO
  BASE HOOP STRESS ON ? =             ID
  EN13480 USE IN OUTPLANE SIFS=       NO
  LIBERAL EXPANSION ALLOWABLE=       YES
  B31.3 SEC 319.2.3C SAXIAL=         Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=    DEFAULT
  IMPLEMENT B313 APP-P                NO
  IMPLEMENT B313 CODE CASE 178       YES
  IGNORE B31.1/B31.3 Wc FACTOR=      YES
  USE FRP SIF =                      YES
  USE FRP FLEX =                     YES
  BS 7159 Pressure Stiffening=       Design Strain
  FRP Property Data File=            CAESAR.FRP
  FRP Emod (axial) =                  0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =       0.250000
  FRP Ea/Eh*Vh/a =                    0.152730
  FRP Laminate Type =                THREE
  FRP Alpha =                          21.6000              C
  FRP Density =                       0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =    NO
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 EXECUTION CONTROL PARAMETERS
```

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Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

Rigid/ExpJt Print Flag	1.000
Bourdon Option	.000
Loop Closure Flag	2.000
Thermal Bowing Delta Temp ..	.000 C
Liberal Allowable Flag	1.000
Uniform Load Option	1.000
Ambient Temperature	20.997 C
Plastic (FRP) Alpha	21.600
Plastic (FRP) GMOD/EMODa ...	.250
Plastic (FRP) Laminate Type.	3.000
Eqn Optimizer	.000
Node Selection	.000
Eqn Ordering	.000
Collins	.000
Degree Determination	.000
User Eqn Control	.000
North Direction	-X

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COORDINATE REPORT

NODE	X (mm.)	Y (mm.)	Z (mm.)
10	-7700.080	-5451.008	-28675.781
20	-7700.080	-5451.008	-22675.781
30	-7700.080	-5451.008	-18195.781
40	-13700.080	-5451.008	-18195.781
50	-13700.080	-5451.008	-17678.781
60	-13700.080	-5451.008	-17178.781
70	-13700.080	-5451.008	-16195.781
80	-7700.080	-5451.008	-16195.781
90	-7700.080	-5451.008	-10675.781
95	-7700.080	-5451.008	-6649.781
100	-7700.080	-5451.008	-4675.781
110	-7700.080	-5451.008	1324.219
10	-7700.080	-5451.008	-28675.781
120	-7700.080	-5451.008	-31675.781
130	-7700.080	-5451.008	-34675.781
95	-7700.080	-5451.008	-6649.781
150	-7700.080	-4841.008	-7259.781
160	-8500.080	-4841.008	-7259.781
170	-8500.080	-4841.008	-7488.781
180	-8500.080	-4868.008	-7628.781
190	-8500.080	-4868.008	-7733.781
200	-8500.080	-4868.008	-7838.781
210	-8500.080	-4868.008	-7918.156
190	-8500.080	-4868.008	-7733.781
220	-8500.080	-3254.008	-7733.781
230	-8500.080	-3254.008	-11203.781
240	-8500.080	-3906.008	-11203.781
250	-8500.080	-3985.383	-11203.781
210	-8500.080	-4868.008	-7918.156
260	-8500.080	-4868.008	-8359.156
270	-8500.080	-4868.008	-8470.281
275	-8500.080	-4868.008	-8770.281
280	-8500.080	-4868.008	-9070.281

INPUT LISTING

290	-8500.080	-4880.708	-9173.281
300	-8500.080	-4880.708	-9265.356
310	-8500.080	-4880.708	-9630.356
320	-8500.080	-4880.708	-9722.432
330	-8500.080	-4868.008	-9825.432
335	-8500.080	-4868.008	-10125.432
340	-8500.080	-4868.008	-10325.432
350	-8500.080	-4868.008	-10436.557
360	-8500.080	-4868.008	-10877.557
370	-8500.080	-4868.008	-10988.682
380	-8500.080	-4868.008	-11203.682
390	-8500.080	-4868.008	-11460.682
395	-6162.080	-4868.008	-11460.682
390	-8500.080	-4868.008	-11460.682
820	-8500.080	-4903.929	-11496.603
395	-6162.080	-4868.008	-11460.682
400	-3824.080	-4868.008	-11460.682
410	-3824.080	-5634.008	-11460.682
250	-8500.080	-3985.383	-11203.781
420	-8500.080	-4426.383	-11203.781
430	-8500.080	-4537.508	-11203.781
380	-8500.080	-4868.008	-11203.682
410	-3824.080	-5634.008	-11460.682
440	-3824.080	-5634.008	-12778.682
445	-3824.080	-5634.008	-13196.182
450	-3824.080	-5634.008	-13613.682
460	-3824.080	-5634.008	-13740.682
470	-3824.080	-5634.008	-14308.682
480	-3824.080	-5634.008	-14435.682
490	-3824.080	-5634.008	-16125.682
500	-3824.080	-1263.008	-16125.682
510	-3111.080	-1263.008	-16125.682
410	-3824.080	-5634.008	-11460.682
520	-3824.080	-5634.008	-10879.682
530	-3824.080	-5634.008	-9666.682
540	-3824.080	-5634.008	-9223.682
550	-3824.080	-5634.008	-9096.682
560	-3824.080	-5634.008	-8498.682
570	-3824.080	-5634.008	-8371.682
575	-3824.080	-5634.008	-8090.682
580	-3824.080	-5634.008	-7809.682
590	-3824.080	-5661.008	-7669.682
600	-3824.080	-5661.008	-7558.557
610	-3824.080	-5661.008	-7117.557
620	-3824.080	-5661.008	-7006.432
630	-3824.080	-5634.008	-6866.432
635	-3824.080	-5634.008	-6566.432
640	-3824.080	-5634.008	-6266.432
650	-3824.080	-5634.008	-6139.432
660	-3824.080	-5634.008	-5698.432
670	-3824.080	-5634.008	-5571.432
680	-3824.080	-5634.008	-4916.432
690	-4453.080	-1263.008	-17546.682
700	-4453.080	-1339.208	-17546.682
690	-4453.080	-1263.008	-17546.682
710	-3739.080	-1263.008	-17546.682

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INPUT LISTING

720	-3111.080	-1263.008	-17546.682
730	-3057.198	-1316.890	-17546.682
710	-3739.080	-1263.008	-17546.682
720	-3111.080	-1263.008	-17546.682
510	-3111.080	-1263.008	-16125.682
750	-3111.080	-1263.008	-14695.682
760	-3111.080	-1263.008	-13265.682
770	1906.920	-1263.008	-13265.682
780	2706.920	-1263.008	-13265.682
790	2833.920	-1263.008	-13265.682
800	3401.920	-1263.008	-13265.682
730	-3057.198	-1316.890	-17546.682
810	-2757.198	-1316.890	-17546.682
820	-8500.080	-4903.929	-11496.603
830	-8500.080	-4903.929	-11796.603

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T2+P2
7 (Alt-SUS) W+P1
8 (OPE) W+T3+P1
9 (Alt-SUS) W+P1
10 (SUS) W+P1
11 (SUS) WNC
12 (OPE) W+T2+P1+U1
13 (OPE) W+T2+P1-U1
14 (OPE) W+T2+P1+U2
15 (OPE) W+T2+P1-U2
16 (OPE) W+T2+P1+U3
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15-L4
21 (OCC) L21=L16-L4
22 (OCC) L22=L17+L10
23 (OCC) L23=L18+L10
24 (OCC) L24=L19+L10
25 (OCC) L25=L20+L10
26 (OCC) L26=L21+L10
27 (EXP) L27=L2-L10
28 (EXP) L28=L4-L10
29 (EXP) L29=L2-L4
30 (EXP) L30=L8-L10
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T2+P2
CASE 8 (OPE) W+T3+P1
CASE 10 (SUS) W+P1
CASE 11 (SUS) WNC
CASE 12 (OPE) W+T2+P1+U1
CASE 13 (OPE) W+T2+P1-U1
CASE 14 (OPE) W+T2+P1+U2
CASE 15 (OPE) W+T2+P1-U2
CASE 16 (OPE) W+T2+P1+U3
CASE 17 (OCC) L17=L12-L4
CASE 18 (OCC) L18=L13-L4
CASE 19 (OCC) L19=L14-L4
CASE 20 (OCC) L20=L15-L4
CASE 21 (OCC) L21=L16-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid +Y;					
	1(HYD)	0	-2863	-0	0	0	0
	2(OPE)	190	-1563	429	0	0	0
	4(OPE)	190	-1564	429	0	0	0
	6(OPE)	190	-1564	429	0	0	0
	8(OPE)	213	-1555	-415	0	0	0
	10(SUS)	0	-1556	-0	0	0	0
	11(SUS)	0	-1554	-0	0	0	0
	12(OPE)	152	-1565	444	0	0	0
	13(OPE)	180	-1561	433	0	0	0
	14(OPE)	170	-1375	376	0	0	0
	15(OPE)	206	-1752	483	0	0	0
	16(OPE)	188	-1561	429	0	0	0
	17(OCC)	-38	-2	15	0	0	0
	18(OCC)	-10	3	3	0	0	0
	19(OCC)	-20	188	-53	0	0	0
	20(OCC)	17	-188	54	0	0	0
	21(OCC)	-1	3	-0	0	0	0
	MAX	213/L8	-2863/L1	483/L15			
20		TYPE=Rigid X; Rigid +Y;					
	1(HYD)	-0	-15153	-0	0	0	0
	2(OPE)	-430	-8170	2451	0	0	0
	4(OPE)	-431	-8170	2451	0	0	0
	6(OPE)	-431	-8170	2451	0	0	0
	8(OPE)	-1076	-8231	-2469	0	0	0
	10(SUS)	-0	-8214	-0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	11(SUS)	-0	-8203	-0	0	0	0
	12(OPE)	3722	-8163	2449	0	0	0
	13(OPE)	-3701	-8172	2452	0	0	0
	14(OPE)	-503	-7191	2157	0	0	0
	15(OPE)	-302	-9148	2744	0	0	0
	16(OPE)	-905	-8176	2453	0	0	0
	17(OCC)	4152	7	-2	0	0	0
	18(OCC)	-3270	-2	1	0	0	0
	19(OCC)	-72	978	-293	0	0	0
	20(OCC)	129	-978	293	0	0	0
	21(OCC)	-474	-6	2	0	0	0
	MAX	4152/L17	-15153/L1	2744/L15			
60		TYPE=Rigid +Y;					
	1(HYD)	3	-8711	1	0	0	0
	2(OPE)	-1450	-4855	-140	0	0	0
	4(OPE)	-1449	-4851	-139	0	0	0
	6(OPE)	-1449	-4851	-139	0	0	0
	8(OPE)	1393	-4684	-186	0	0	0
	10(SUS)	2	-4749	1	0	0	0
	11(SUS)	2	-4743	1	0	0	0
	12(OPE)	-1457	-4865	77	0	0	0
	13(OPE)	-1450	-4865	-162	0	0	0
	14(OPE)	-1274	-4267	-124	0	0	0
	15(OPE)	-1626	-5439	-142	0	0	0
	16(OPE)	-1452	-4852	98	0	0	0
	17(OCC)	-9	-14	215	0	0	0
	18(OCC)	-2	-14	-23	0	0	0
	19(OCC)	174	583	15	0	0	0
	20(OCC)	-177	-588	-4	0	0	0
	21(OCC)	-4	-2	237	0	0	0
	MAX	-1626/L15	-8711/L1	237/L21			
90		TYPE=Rigid X w/gap; Rigid +Y;					
	1(HYD)	0	-17225	0	0	0	0
	2(OPE)	-9	-9534	0	0	0	0
	4(OPE)	0	-9563	0	0	0	0
	6(OPE)	0	-9563	0	0	0	0
	8(OPE)	0	-9435	0	0	0	0
	10(SUS)	0	-9406	0	0	0	0
	11(SUS)	0	-9395	0	0	0	0
	12(OPE)	388	-9627	0	0	0	0
	13(OPE)	-2740	-9459	0	0	0	0
	14(OPE)	-189	-8385	0	0	0	0
	15(OPE)	0	-10730	0	0	0	0
	16(OPE)	0	-9432	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OCC)	388	-64	0	0	0	0
	18(OCC)	-2740	104	0	0	0	0
	19(OCC)	-189	1178	0	0	0	0
	20(OCC)	0	-1167	0	0	0	0
	21(OCC)	0	132	0	0	0	0
	MAX	-2740/L13	-17225/L1				
100		TYPE=Rigid X; Rigid +Y;					
	1(HYD)	-133	-4732	-450	0	0	0
	2(OPE)	2343	-4834	-1450	0	0	0
	4(OPE)	2502	-4835	-1451	0	0	0
	6(OPE)	2502	-4835	-1451	0	0	0
	8(OPE)	-493	-2142	643	0	0	0
	10(SUS)	-68	-2876	-194	0	0	0
	11(SUS)	-68	-2873	-194	0	0	0
	12(OPE)	4160	-4749	-1425	0	0	0
	13(OPE)	2959	-4937	-1481	0	0	0
	14(OPE)	2444	-4272	-1282	0	0	0
	15(OPE)	2556	-5317	-1595	0	0	0
	16(OPE)	3332	-5191	-1557	0	0	0
	17(OCC)	1658	86	26	0	0	0
	18(OCC)	457	-102	-31	0	0	0
	19(OCC)	-58	563	169	0	0	0
	20(OCC)	54	-482	-144	0	0	0
	21(OCC)	830	-356	-107	0	0	0
	MAX	4160/L12	-5317/L15	-1595/L15			
110		TYPE=Rigid Z w/gap; Rigid +Y;					
	1(HYD)	7	-3080	-269	0	0	0
	2(OPE)	-1600	-1466	10416	0	0	0
	4(OPE)	-1631	-1463	10603	0	0	0
	6(OPE)	-1631	-1463	10603	0	0	0
	8(OPE)	920	-1700	-3312	0	0	0
	10(SUS)	3	-1638	-116	0	0	0
	11(SUS)	3	-1636	-116	0	0	0
	12(OPE)	-1660	-1456	10140	0	0	0
	13(OPE)	-2292	-1466	11199	0	0	0
	14(OPE)	-1626	-1291	10134	0	0	0
	15(OPE)	-1664	-1640	10965	0	0	0
	16(OPE)	-1833	-1458	16914	0	0	0
	17(OCC)	-29	7	-462	0	0	0
	18(OCC)	-662	-3	597	0	0	0
	19(OCC)	4	172	-468	0	0	0
	20(OCC)	-33	-177	362	0	0	0
	21(OCC)	-202	5	6312	0	0	0
	MAX	-2292/L13	-3080/L1	16914/L16			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
130		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	1(HYD)	-0	-3329	-0	0	0	0
	2(OPE)	709	-1805	-8316	0	0	0
	4(OPE)	717	-1805	-8365	0	0	0
	6(OPE)	717	-1805	-8365	0	0	0
	8(OPE)	-11	-1807	3852	0	0	0
	10(SUS)	-0	-1806	-0	0	0	0
	11(SUS)	-0	-1804	-0	0	0	0
	12(OPE)	1048	-1805	-9070	0	0	0
	13(OPE)	233	-1806	-7935	0	0	0
	14(OPE)	741	-1589	-7989	0	0	0
	15(OPE)	681	-2022	-8758	0	0	0
	16(OPE)	712	-1806	-4962	0	0	0
	17(OCC)	331	0	-705	0	0	0
	18(OCC)	-484	-0	430	0	0	0
	19(OCC)	24	216	376	0	0	0
	20(OCC)	-35	-217	-393	0	0	0
	21(OCC)	-5	-0	3403	0	0	0
	MAX	1048/L12	-3329/L1	-9070/L12			
275		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	0	0	0	0	0
	2(OPE)	-2340	26	-702	0	0	0
	4(OPE)	-2611	20	-783	0	0	0
	6(OPE)	-2611	20	-783	0	0	0
	8(OPE)	68	-1377	407	0	0	0
	10(SUS)	130	-1014	275	0	0	0
	11(SUS)	130	-1015	276	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	-5325	30	-1597	0	0	0
	14(OPE)	-2427	28	-728	0	0	0
	15(OPE)	-2595	11	-778	0	0	0
	16(OPE)	-2821	25	-846	0	0	0
	17(OCC)	2611	-20	783	0	0	0
	18(OCC)	-2713	10	-814	0	0	0
	19(OCC)	184	8	56	0	0	0
	20(OCC)	17	-9	5	0	0	0
	21(OCC)	-209	5	-63	0	0	0
	MAX	-5325/L13	-1377/L8	-1597/L13			
335		TYPE=Rigid +Y;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	1(HYD)	95	-4294	1285	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	-638	-5136	1402	0	0	0
	10(SUS)	-212	-3805	721	0	0	0
	11(SUS)	-212	-3804	719	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	-7	-212	-63	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	-7	-212	-63	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-638/L8	-5136/L8	1402/L8			
445		TYPE=Rigid +Y;					
	1(HYD)	123	-4074	-55	0	0	0
	2(OPE)	449	-4332	-1219	0	0	0
	4(OPE)	463	-4582	-1294	0	0	0
	6(OPE)	463	-4582	-1294	0	0	0
	8(OPE)	-33	-3880	-1164	0	0	0
	10(SUS)	91	-3566	-55	0	0	0
	11(SUS)	90	-3565	-55	0	0	0
	12(OPE)	1135	-4494	-727	0	0	0
	13(OPE)	-968	-4759	-1049	0	0	0
	14(OPE)	401	-4180	-1188	0	0	0
	15(OPE)	456	-5015	-1434	0	0	0
	16(OPE)	461	-5345	-1536	0	0	0
	17(OCC)	672	88	567	0	0	0
	18(OCC)	-1431	-177	245	0	0	0
	19(OCC)	-62	402	106	0	0	0
	20(OCC)	-7	-433	-140	0	0	0
	21(OCC)	-2	-763	-241	0	0	0
	MAX	-1431/L18	-5345/L16	-1536/L16			
490		TYPE=Rigid +Y;					
	1(HYD)	0	-3771	0	0	0	0
	2(OPE)	0	-5309	0	0	0	0
	4(OPE)	0	-5705	0	0	0	0
	6(OPE)	0	-5705	0	0	0	0
	8(OPE)	0	-5467	0	0	0	0
	10(SUS)	0	-2932	0	0	0	0
	11(SUS)	0	-2939	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	0	-5970	0	0	0	0
	13(OPE)	0	-5077	0	0	0	0
	14(OPE)	0	-5003	0	0	0	0
	15(OPE)	0	-6206	0	0	0	0
	16(OPE)	0	-4440	0	0	0	0
	17(OCC)	0	-265	0	0	0	0
	18(OCC)	0	627	0	0	0	0
	19(OCC)	0	702	0	0	0	0
	20(OCC)	0	-501	0	0	0	0
	21(OCC)	0	1265	0	0	0	0
	MAX		-6206/L15				
520		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	315	-3070	-47	0	0	0
	2(OPE)	233	-1885	-515	0	0	0
	4(OPE)	249	-1830	-490	0	0	0
	6(OPE)	249	-1830	-490	0	0	0
	8(OPE)	469	-2430	-558	0	0	0
	10(SUS)	229	-2459	-47	0	0	0
	11(SUS)	230	-2458	-47	0	0	0
	12(OPE)	2773	-1959	-972	0	0	0
	13(OPE)	-535	-1702	-362	0	0	0
	14(OPE)	202	-1538	-415	0	0	0
	15(OPE)	265	-2114	-576	0	0	0
	16(OPE)	229	-1593	-419	0	0	0
	17(OCC)	2524	-128	-482	0	0	0
	18(OCC)	-783	128	127	0	0	0
	19(OCC)	-47	293	75	0	0	0
	20(OCC)	17	-284	-86	0	0	0
	21(OCC)	-19	237	70	0	0	0
	MAX	2773/L12	-3070/L1	-972/L12			
575		TYPE=Rigid +Y;					
	1(HYD)	-26	-4832	-58	0	0	0
	2(OPE)	34	-4520	1	0	0	0
	4(OPE)	231	-4543	151	0	0	0
	6(OPE)	231	-4543	151	0	0	0
	8(OPE)	263	-4532	1334	0	0	0
	10(SUS)	-19	-4515	-57	0	0	0
	11(SUS)	-20	-4515	-57	0	0	0
	12(OPE)	1338	-4526	232	0	0	0
	13(OPE)	-1360	-4550	-118	0	0	0
	14(OPE)	195	-3996	388	0	0	0
	15(OPE)	200	-5089	412	0	0	0
	16(OPE)	283	-4635	1361	0	0	0
	17(OCC)	1107	17	81	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	18(OCC)	-1590	-7	-269	0	0	0
	19(OCC)	-35	547	237	0	0	0
	20(OCC)	-31	-546	260	0	0	0
	21(OCC)	53	-92	1210	0	0	0
	MAX	-1590/L18	-5089/L15	1361/L16			
635		TYPE=Rigid +Y;					
	1(HYD)	0	-3316	0	0	0	0
	2(OPE)	0	-3106	0	0	0	0
	4(OPE)	0	-3095	0	0	0	0
	6(OPE)	0	-3095	0	0	0	0
	8(OPE)	0	-3100	0	0	0	0
	10(SUS)	0	-3105	0	0	0	0
	11(SUS)	0	-3105	0	0	0	0
	12(OPE)	0	-3102	0	0	0	0
	13(OPE)	0	-3092	0	0	0	0
	14(OPE)	0	-2725	0	0	0	0
	15(OPE)	0	-3466	0	0	0	0
	16(OPE)	0	-3068	0	0	0	0
	17(OCC)	0	-7	0	0	0	0
	18(OCC)	0	3	0	0	0	0
	19(OCC)	0	371	0	0	0	0
	20(OCC)	0	-371	0	0	0	0
	21(OCC)	0	27	0	0	0	0
	MAX		-3466/L15				
680		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	3	-1905	93	0	0	0
	2(OPE)	-73	-1777	528	0	0	0
	4(OPE)	-142	-1779	514	0	0	0
	6(OPE)	-142	-1779	514	0	0	0
	8(OPE)	-46	-1778	531	0	0	0
	10(SUS)	2	-1779	89	0	0	0
	11(SUS)	3	-1779	89	0	0	0
	12(OPE)	608	-1778	434	0	0	0
	13(OPE)	-901	-1779	451	0	0	0
	14(OPE)	-126	-1565	452	0	0	0
	15(OPE)	-138	-1993	582	0	0	0
	16(OPE)	-171	-1773	4738	0	0	0
	17(OCC)	750	1	-80	0	0	0
	18(OCC)	-759	-0	-63	0	0	0
	19(OCC)	15	214	-62	0	0	0
	20(OCC)	4	-214	67	0	0	0
	21(OCC)	-29	6	4223	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-901/L13	-1993/L15	4738/L16			
690		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	-31	-566	-6	0	0	0
	2(OPE)	-912	0	-1073	0	0	0
	4(OPE)	0	0	-86	0	0	0
	6(OPE)	0	0	-86	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	-28	-415	-5	0	0	0
	11(SUS)	-28	-406	-5	0	0	0
	12(OPE)	371	0	-377	0	0	0
	13(OPE)	-544	0	-20	0	0	0
	14(OPE)	0	0	-99	0	0	0
	15(OPE)	0	0	-91	0	0	0
	16(OPE)	-34	0	0	0	0	0
	17(OCC)	371	0	-290	0	0	0
	18(OCC)	-544	0	66	0	0	0
	19(OCC)	0	0	-13	0	0	0
	20(OCC)	0	0	-5	0	0	0
	21(OCC)	-34	0	86	0	0	0
	MAX	-912/L2	-566/L1	-1073/L2			
750		TYPE=Rigid +Y;					
	1(HYD)	4	-3699	88	0	0	0
	2(OPE)	-221	-779	75	0	0	0
	4(OPE)	-13	-48	-6	0	0	0
	6(OPE)	-13	-48	-6	0	0	0
	8(OPE)	-212	-726	-51	0	0	0
	10(SUS)	8	-2702	83	0	0	0
	11(SUS)	9	-2643	83	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	-131	-490	-66	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	-86	-321	-42	0	0	0
	16(OPE)	-153	-767	172	0	0	0
	17(OCC)	13	48	6	0	0	0
	18(OCC)	-119	-443	-60	0	0	0
	19(OCC)	13	48	6	0	0	0
	20(OCC)	-74	-273	-36	0	0	0
	21(OCC)	-140	-720	179	0	0	0
	MAX	-221/L2	-3699/L1	179/L21			
770		TYPE=Rigid +Y;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	1(HYD)	0	-4870	1	0	0	0
	2(OPE)	-1478	-4965	184	0	0	0
	4(OPE)	-1770	-5901	40	0	0	0
	6(OPE)	-1770	-5901	40	0	0	0
	8(OPE)	-1500	-5005	64	0	0	0
	10(SUS)	0	-3577	1	0	0	0
	11(SUS)	0	-3500	1	0	0	0
	12(OPE)	-1606	-5400	216	0	0	0
	13(OPE)	-1770	-5902	-58	0	0	0
	14(OPE)	-1551	-5169	25	0	0	0
	15(OPE)	-1901	-6339	57	0	0	0
	16(OPE)	-1683	-5806	447	0	0	0
	17(OCC)	164	501	176	0	0	0
	18(OCC)	0	-1	-98	0	0	0
	19(OCC)	219	732	-15	0	0	0
	20(OCC)	-131	-438	17	0	0	0
	21(OCC)	86	95	407	0	0	0
	MAX	-1901/L15	-6339/L15	447/L16			
800		TYPE=Rigid ANC;					
	1(HYD)	2	-541	-1	265	-0	-1361
	2(OPE)	3040	72	856	683	3309	-1843
	4(OPE)	2152	831	109	873	256	-2519
	6(OPE)	2152	831	109	873	256	-2519
	8(OPE)	2056	47	109	539	394	-1820
	10(SUS)	1	-1131	-0	194	-0	-770
	11(SUS)	1	-1167	-0	190	-0	-735
	12(OPE)	4340	480	328	1007	1234	-2206
	13(OPE)	257	751	-2	658	-231	-2448
	14(OPE)	2145	715	98	823	200	-2202
	15(OPE)	2361	695	120	878	318	-2612
	16(OPE)	2262	785	1262	935	2525	-2478
	17(OCC)	2188	-352	219	133	978	313
	18(OCC)	-1895	-80	-111	-215	-486	72
	19(OCC)	-7	-117	-10	-50	-56	317
	20(OCC)	209	-136	11	5	62	-92
	21(OCC)	111	-46	1153	62	2270	41
	MAX	4340/L12	-1167/L11	1262/L16	1007/L12	3309/L2	-2612/L15
810		TYPE=Rigid +Y;					
	1(HYD)	0	-772	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	0	-565	0	0	0	0
	11(SUS)	0	-555	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX		-772/L1				
830		TYPE=Rigid +Y;					
	1(HYD)	-354	-3042	-484	0	0	0
	2(OPE)	11	-5584	-1675	0	0	0
	4(OPE)	-21	-5500	-1650	0	0	0
	6(OPE)	-21	-5500	-1650	0	0	0
	8(OPE)	-430	-1444	50	0	0	0
	10(SUS)	-151	-2572	-757	0	0	0
	11(SUS)	-151	-2571	-757	0	0	0
	12(OPE)	100	-5404	-1618	0	0	0
	13(OPE)	-247	-5548	-1646	0	0	0
	14(OPE)	-22	-4856	-1457	0	0	0
	15(OPE)	-28	-6012	-1803	0	0	0
	16(OPE)	-37	-5290	-1587	0	0	0
	17(OCC)	121	96	32	0	0	0
	18(OCC)	-226	-48	4	0	0	0
	19(OCC)	-2	644	193	0	0	0
	20(OCC)	-7	-512	-154	0	0	0
	21(OCC)	-16	210	63	0	0	0
	MAX	-430/L8	-6012/L15	-1803/L15			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T2+P2
7 (Alt-SUS) W+P1
8 (OPE) W+T3+P1
9 (Alt-SUS) W+P1
10 (SUS) W+P1
11 (SUS) WNC
12 (OPE) W+T2+P1+U1
13 (OPE) W+T2+P1-U1
14 (OPE) W+T2+P1+U2
15 (OPE) W+T2+P1-U2
16 (OPE) W+T2+P1+U3
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15-L4
21 (OCC) L21=L16-L4
22 (OCC) L22=L17+L10
23 (OCC) L23=L18+L10
24 (OCC) L24=L19+L10
25 (OCC) L25=L20+L10
26 (OCC) L26=L21+L10
27 (EXP) L27=L2-L10
28 (EXP) L28=L4-L10
29 (EXP) L29=L2-L4
30 (EXP) L30=L8-L10
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 10 (SUS) W+P1
CASE 11 (SUS) WNC
CASE 22 (OCC) L22=L17+L10
CASE 23 (OCC) L23=L18+L10
CASE 24 (OCC) L24=L19+L10
CASE 25 (OCC) L25=L20+L10
CASE 26 (OCC) L26=L21+L10
CASE 27 (EXP) L27=L2-L10
CASE 28 (EXP) L28=L4-L10
CASE 29 (EXP) L29=L2-L4
CASE 30 (EXP) L30=L8-L10
CASE 31 (EXP) L31=L2-L8
CASE 32 (EXP) L32=L4-L8

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	30.5	@Node	820
Code Stress:	73675.9	Allowable Stress:	241316.5
Axial Stress:	29148.6	@Node	490
Bending Stress:	97786.0	@Node	820
Torsion Stress:	6785.5	@Node	389
Hoop Stress:	62012.2	@Node	440
Max Stress Intensity:	98122.4	@Node	820

CODE STRESS CHECK PASSED : LOADCASE 10 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 10 (SUS) W+P1			
Ratio (%):	64.4	@Node	90
Code Stress:	83267.9	Allowable Stress:	129365.3
Axial Stress:	28496.9	@Node	490
Bending Stress:	82330.5	@Node	820
Torsion Stress:	8325.4	@Node	70
Hoop Stress:	59230.4	@Node	440
Max Stress Intensity:	83267.5	@Node	90

CODE STRESS CHECK PASSED : LOADCASE 11 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 11 (SUS) WNC			
Ratio (%):	55.0	@Node	90
Code Stress:	71153.4	Allowable Stress:	129365.3
Axial Stress:	1392.8	@Node	380
Bending Stress:	82310.7	@Node	820
Torsion Stress:	8314.7	@Node	70
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	82792.2	@Node	820

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
 CODE STRESS CHECK PASSED      : LOADCASE 22 (OCC) L22=L17+L10

Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L17+L10
Ratio (%):                 66.5       @Node     20
Code Stress:             114409.5       Allowable Stress:     172055.9
Axial Stress:             28513.9       @Node    490
Bending Stress:          102083.6       @Node     20
Torsion Stress:           12904.1       @Node    190
Hoop Stress:              59230.4       @Node    440
Max Stress Intensity:    114409.6       @Node     20

 CODE STRESS CHECK PASSED      : LOADCASE 23 (OCC) L23=L18+L10

Highest Stresses: (   KPa    ) LOADCASE 23 (OCC) L23=L18+L10
Ratio (%):                 61.8       @Node     90
Code Stress:             106413.9       Allowable Stress:     172055.9
Axial Stress:             28471.2       @Node    490
Bending Stress:           93892.4       @Node     90
Torsion Stress:           10406.3       @Node    389
Hoop Stress:              59230.4       @Node    440
Max Stress Intensity:    106413.5       @Node     90

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L19+L10

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L19+L10
Ratio (%):                 53.4       @Node     90
Code Stress:              91916.7       Allowable Stress:     172055.9
Axial Stress:             28452.9       @Node    490
Bending Stress:          102990.6       @Node    820
Torsion Stress:            7373.7       @Node     70
Hoop Stress:              59230.4       @Node    440
Max Stress Intensity:    103717.5       @Node    820

 CODE STRESS CHECK PASSED      : LOADCASE 25 (OCC) L25=L20+L10

Highest Stresses: (   KPa    ) LOADCASE 25 (OCC) L25=L20+L10
Ratio (%):                 53.3       @Node     90
Code Stress:              91658.6       Allowable Stress:     172055.9
Axial Stress:             28536.9       @Node    490
Bending Stress:           98750.1       @Node    820
Torsion Stress:            9713.3       @Node    389
Hoop Stress:              59230.4       @Node    440
Max Stress Intensity:     99314.4       @Node    820

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L21+L10

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L21+L10
Ratio (%):                 55.0       @Node     95
Code Stress:              94676.3       Allowable Stress:     172055.9
Axial Stress:             28349.1       @Node    490
Bending Stress:          117085.4       @Node     95
Torsion Stress:            8358.0       @Node     70
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Hoop Stress:                59230.4       @Node    440
Max Stress Intensity:      126831.6       @Node     95

 CODE STRESS CHECK PASSED      : LOADCASE 27 (EXP) L27=L2-L10

Highest Stresses: (   KPa    ) LOADCASE 27 (EXP) L27=L2-L10
Ratio (%):                    46.3       @Node    820
Code Stress:                99141.6       Allowable Stress:     214042.4
Axial Stress:                1369.7       @Node    110
Bending Stress:            107538.9       @Node     68
Torsion Stress:             15849.5       @Node    400
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      287207.0       @Node     68

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L4-L10

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L4-L10
Ratio (%):                    45.2       @Node    820
Code Stress:                96671.6       Allowable Stress:     214042.4
Axial Stress:                1393.4       @Node    110
Bending Stress:            108492.5       @Node     68
Torsion Stress:             15993.8       @Node    400
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      289753.4       @Node     68

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L2-L4
Ratio (%):                     6.2       @Node    759
Code Stress:                19488.2       Allowable Stress:     315483.6
Axial Stress:                 267.6       @Node    759
Bending Stress:             19205.7       @Node    759
Torsion Stress:              1434.9       @Node    499
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:       25416.3       @Node    759

 CODE STRESS CHECK PASSED      : LOADCASE 30 (EXP) L30=L8-L10

Highest Stresses: (   KPa    ) LOADCASE 30 (EXP) L30=L8-L10
Ratio (%):                    18.2       @Node    820
Code Stress:                38851.5       Allowable Stress:     214042.4
Axial Stress:                 535.3       @Node    190
Bending Stress:             37292.7       @Node    820
Torsion Stress:              3079.7       @Node    389
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:       75972.9       @Node    190

 CODE STRESS CHECK PASSED      : LOADCASE 31 (EXP) L31=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 31 (EXP) L31=L2-L8
Ratio (%):                    64.3       @Node    820
Code Stress:               137535.5       Allowable Stress:     214042.4
Axial Stress:                1843.0       @Node    190
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Bending Stress:	133863.1	@Node	820
Torsion Stress:	15732.4	@Node	400
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	322749.6	@Node	40

CODE STRESS CHECK PASSED : LOADCASE 32 (EXP) L32=L4-L8

Highest Stresses: (KPa) LOADCASE 32 (EXP) L32=L4-L8

Ratio (%):	63.1	@Node	820
Code Stress:	135017.3	Allowable Stress:	214042.4
Axial Stress:	1902.5	@Node	190
Bending Stress:	131056.4	@Node	820
Torsion Stress:	15876.8	@Node	400
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	325325.8	@Node	40

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Flange Peq : 6 (OPE) W+T2+P2 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T2+P2
7 (Alt-SUS) W+P1
8 (OPE) W+T3+P1
9 (Alt-SUS) W+P1
10 (SUS) W+P1
11 (SUS) WNC
12 (OPE) W+T2+P1+U1
13 (OPE) W+T2+P1-U1
14 (OPE) W+T2+P1+U2
15 (OPE) W+T2+P1-U2
16 (OPE) W+T2+P1+U3
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15-L4
21 (OCC) L21=L16-L4
22 (OCC) L22=L17+L10
23 (OCC) L23=L18+L10
24 (OCC) L24=L19+L10
25 (OCC) L25=L20+L10
26 (OCC) L26=L21+L10
27 (EXP) L27=L2-L10
28 (EXP) L28=L4-L10
29 (EXP) L29=L2-L4
30 (EXP) L30=L8-L10
31 (EXP) L31=L2-L8
32 (EXP) L32=L4-L8

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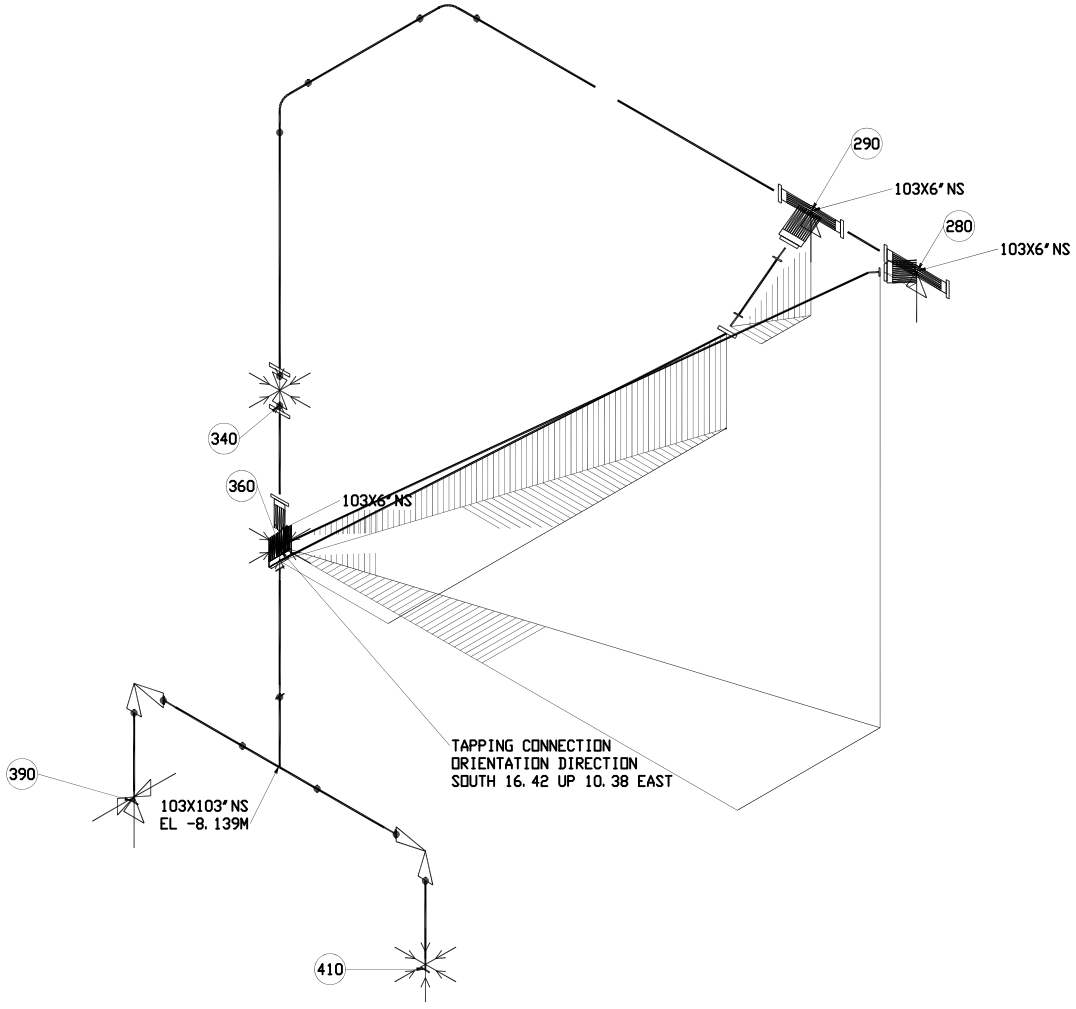
FLANGE PEQ REPORT: Flange (Equiv Pressure Method)
CASE 6 (OPE) W+T2+P2

Node	Axial Force N.	Bending Moment N.m.	G/C mm.	P Equivalent KPa	Rating Temperature C	Allowable Pressure /Stress	Ratio %	
260	223	802	135.00	6966.07	84.99	10342.14	67.36	
270								
290								
300	545	425	135.00	6208.64	84.99	10342.14	60.03	
310	545	524	111.13	7289.92	84.99	10342.14	70.49	
320								
340								
350	545	1376	135.00	8177.03	84.99	10342.14	79.07	
360	545	2077	135.00	9627.63	84.99	10342.14	93.09	
370								

BNK-GCS-CN-033

1. FL-112-0031-AN07-6"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

1 OF 3

REV.	CHANGE	DATE
		14 MAY 2024

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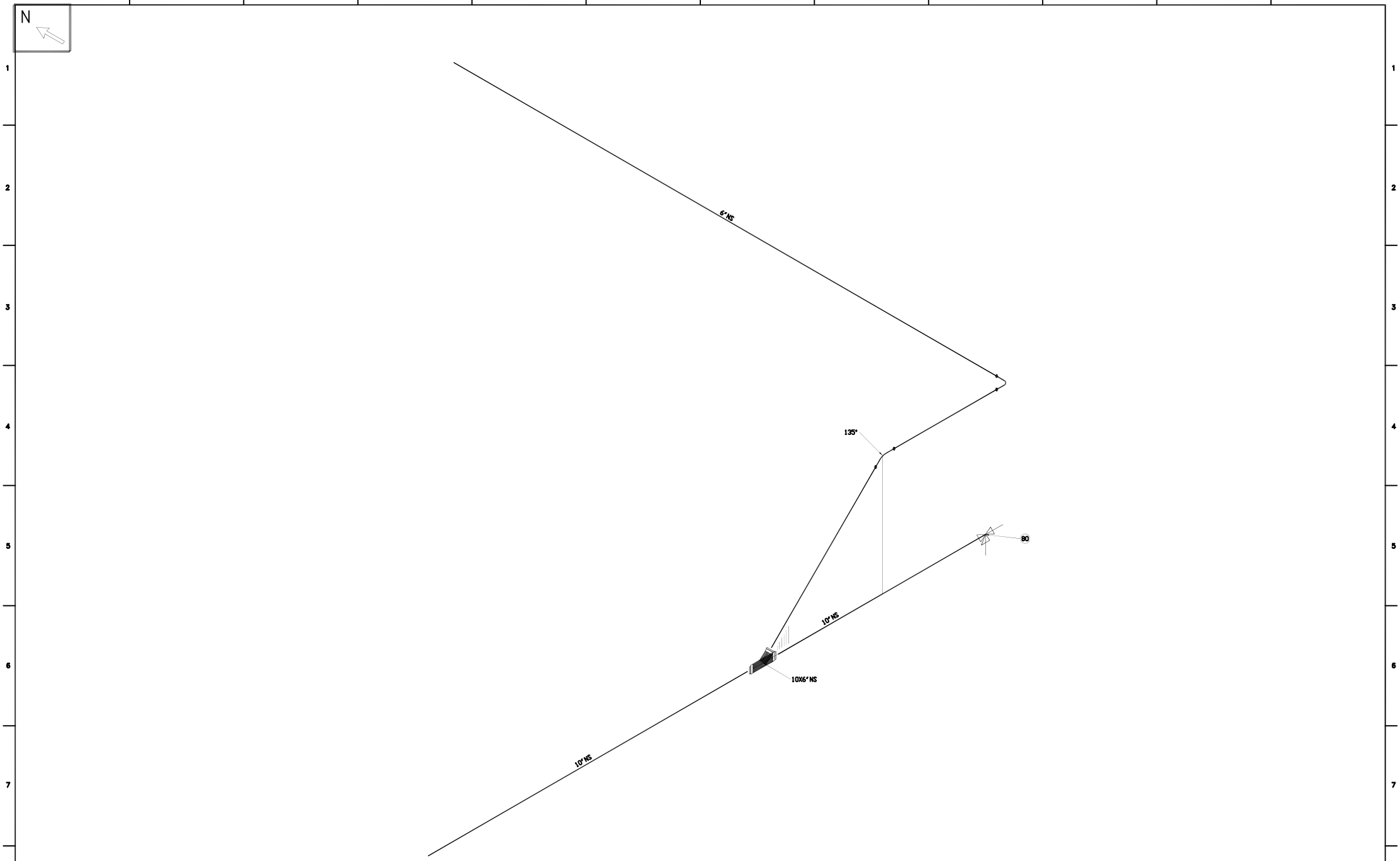

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
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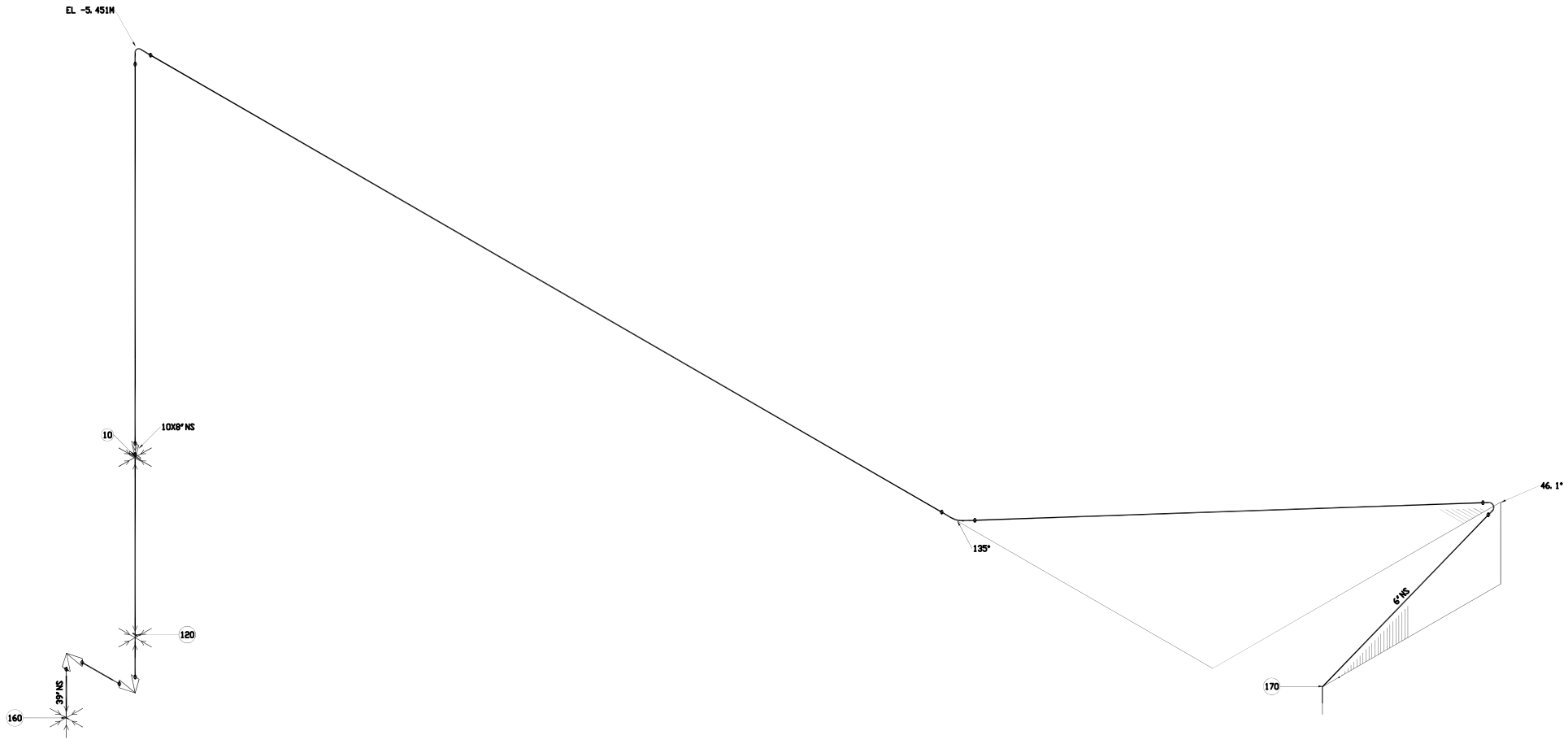

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 3

REV.	CHANGE	DATE
		14 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15+L8
21 (OCC) L21=L16+L8
22 (OCC) L22=L17+L8
23 (OCC) L23=L18+L8
24 (OCC) L24=L19+L8
25 (EXP) L25=L2-L8
26 (EXP) L26=L4-L8
27 (EXP) L27=L2-L4

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INPUT LISTING

Job Description:

PROJECT:

CLIENT :

ANALYST:

NOTES :

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INPUT LISTING

File created by FEATools
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PIPE DATA

From 10 To 20 DY= 66.675 mm.
PIPE
Dia= 219.075 mm. Wall= 10.312 mm. Cor= 6.0000 mm.
GENERAL
T1= 272 C T2= 270 C T3= -28 C P1= 550.0125 KPa PHyd= 825.0188 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,335,024 KPa
EH2= 187,483,936 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RIGID Weight= 31.14 N.
RESTRAINTS
Node 10 ANC Cnode 100
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,638 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 20 To 30 DY= 178.000 mm.
REDUCER
Diam2= 273.050 mm. Wall2= 9.271 mm.

From 30 To 40 DY= 290.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm.
Insul Thk= .000 mm.

From 40 To 50 DY= 1,410.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 49
Angle/Node @2= .00 48

From 50 To 60 DX= 6,200.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 59
Angle/Node @2= .00 58

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INPUT LISTING

From 60 To 70 DX= 1,800.000 mm. DZ= -1,800.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 69
Angle/Node @2= .00 68

From 70 To 180 DZ= -2,913.000 mm.
SIF's & TEE's
Node 180 Welding Tee

From 180 To 80 DZ= -1,287.000 mm.
RESTRAINTS
Node 80 +Y Mu = .30
Node 80 Z Gap= 3.000 mm.

From 70 To 90 DY= -89.803 mm. DZ= 89.803 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 90 Unreinforced Tee

From 100 To 110 DY= -104.775 mm.
PIPE
Dia= 219.075 mm. Wall= 10.312 mm. Cor= 6.0000 mm.
GENERAL
P1= 550.0125 KPa PHyd= 825.0188 KPa Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm.
RIGID Weight= 177.93 N.
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,638 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 110 To 120 DY= -203.000 mm.
RESTRAINTS
Node 120 ANC Cnode 130

From 130 To 140 DY= -507.000 mm.
PIPE
Dia= 1,014.000 mm. Wall= 10.312 mm.
Insul Thk= .000 mm.
RIGID Weight= .00 N.

From 140 To 150 DX= -90.000 mm.
RIGID Weight= .00 N.

From 150 To 160 DY= -507.000 mm.
RIGID Weight= .00 N.
RESTRAINTS
Node 160 ANC

From 90 To 170 DZ= 500.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm. Cor= .0000 mm.
GENERAL

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INPUT LISTING
T1= 21 C T2= 21 C T3= 21 C P1= .0000 KPa PHyd= .0000 KPa
Mat= (102)A53 Grade B E= 203,401,232 KPa EH1= 203,401,232 KPa
EH2= 203,401,232 KPa EH3= 203,401,232 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000000 kg./cu.cm.
Insul Thk= .000 mm.
RESTRAINTS
Node 170 +Y Mu = .30
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 180 To 190 DY= 764.000 mm. DZ= -764.000 mm.
PIPE
Dia= 168.275 mm. Wall= 10.973 mm. Cor= 6.0000 mm.
GENERAL
T1= 272 C T2= 270 C T3= -28 C P1= 550.0125 KPa PHyd= 825.0188 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,335,024 KPa
EH2= 187,483,936 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 189
Angle/Node @2= .00 188
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,365 KPa Sh2= 129,638 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 190 To 200 DZ= -524.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 199
Angle/Node @2= .00 198

From 200 To 280 DX= -7,105.000 mm.
RESTRAINTS
Node 280 +Y Cnode 281 Mu = .30

From 280 To 290 DX= -6,595.000 mm.
RESTRAINTS
Node 290 +Y Cnode 291 Mu = .30

From 290 To 300 DX= -500.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 299
Angle/Node @2= .00 298

From 300 To 310 DZ= 1,300.000 mm.
BEND at "TO" end

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INPUT LISTING
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 309
Angle/Node @2= .00 308

From 310 To 320 DY= -1,417.000 mm.

From 320 To 330 DY= -92.075 mm.
RIGID Weight= 111.21 N.

From 330 To 340 DY= -292.000 mm.
RIGID Weight= 1,005.30 N.
RESTRAINTS
Node 340 ANC Cnode 341

From 341 To 350 DY= -92.075 mm.
RIGID Weight= 111.21 N.

From 350 To 360 DY= -198.000 mm.
RESTRAINTS
Node 360 ANC Cnode 361
EQUIPMENT LIMITS
Nozzle Node = 360 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 8,400.42 N.
FB= 8,400.42 N. FC= 6,300.31 N. MA= 3,780.16 N.m. MB= 2,520.11 N.m.
MC= 3,280.14 N.m. Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute

From 361 To 370 DY= -1,361.000 mm.
PIPE
Dia= 2,620.000 mm. Wall= 10.973 mm.
Insul Thk= .000 mm.
RIGID Weight= .00 N.

From 361 To 291 DX= 500.000 mm. DY= 2,091.150 mm. DZ= -1,300.000 mm.
RIGID Weight= .00 N.

From 361 To 281 DX= 7,095.000 mm. DY= 2,091.150 mm. DZ= -1,300.000 mm.
RIGID Weight= .00 N.

From 370 To 380 DX= -400.000 mm.
RIGID Weight= .00 N.

From 380 To 390 DY= -1,310.000 mm.
RIGID Weight= .00 N.
RESTRAINTS
Node 390 +Y Mu = .30
Node 390 Z Gap= 3.000 mm.

From 370 To 400 DX= 5,400.000 mm.
RIGID Weight= .00 N.

From 400 To 410 DY= -1,010.000 mm.
RIGID Weight= .00 N.
RESTRAINTS
Node 410 ANC
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INPUT LISTING

MATERIAL Changes:
10 20 Mat= (106)A106 Grade B E= 203,401,232 KPa
v = .292 Density= .0078 kg./cu.cm.
90 170 Mat= (102)A53 Grade B E= 203,401,232 KPa
v = .292 Density= .0078 kg./cu.cm.
180 190 Mat= (106)A106 Grade B E= 203,401,232 KPa
v = .292 Density= .0078 kg./cu.cm.
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JOBNAME: D:\BINAK PRO\NATIVE CAESAR FILE\NATIVE CEASAR FILE-D03\BNK-GCS-CN-033-

ALLOWABLE STRESS Changes
10 20 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 129,365 KPa
Sh2= 129,638 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa
100 110 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 129,365 KPa
Sh2= 129,638 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa
90 170 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 137,895 KPa
Sh2= 137,895 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa
180 190 B31.3 (2016) Cycle Max Switch = ---
Sc= 137,895 KPa Sh1= 129,365 KPa
Sh2= 129,638 KPa Sh3= 137,895 KPa
Sh4= 137,895 KPa Sh5= 137,895 KPa
Sh6= 137,895 KPa Sh7= 137,895 KPa
Sh8= 137,895 KPa Sh9= 137,895 KPa
Sy= 241,316 KPa
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BEND ELEMENTS
40 50 Radius= 381.000 mm. (LONG)
Bend Angle= 90.000 Angle/Node @1= 45.00 49
Angle/Node @2= .00 48
50 60 Radius= 381.000 mm. (LONG)
Bend Angle= 45.000 Angle/Node @1= 22.50 59
Angle/Node @2= .00 58
60 70 Radius= 381.000 mm. (LONG)
Bend Angle= 45.000 Angle/Node @1= 22.50 69
Angle/Node @2= .00 68

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INPUT LISTING

180	190	Radius= 228.600 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		189 Angle/Node @2= .00 188
190	200	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		199 Angle/Node @2= .00 198
290	300	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		299 Angle/Node @2= .00 298
300	310	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		309 Angle/Node @2= .00 308

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RIGIDS

10	20	RIGID Weight= 31.14 N.
70	90	RIGID Weight= .00 N.
100	110	RIGID Weight= 177.93 N.
130	140	RIGID Weight= .00 N.
140	150	RIGID Weight= .00 N.
150	160	RIGID Weight= .00 N.
320	330	RIGID Weight= 111.21 N.
330	340	RIGID Weight= 1,005.30 N.
341	350	RIGID Weight= 111.21 N.
361	370	RIGID Weight= .00 N.
361	291	RIGID Weight= .00 N.
361	281	RIGID Weight= .00 N.
370	380	RIGID Weight= .00 N.
380	390	RIGID Weight= .00 N.
370	400	RIGID Weight= .00 N.
400	410	RIGID Weight= .00 N.

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SIF's & TEE's

70	180	Node 180 Welding Tee
70	90	Node 90 Unreinforced Tee

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REDUCERS

20	30	Diam2= 273.050 mm. Wall2= 9.271 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	STIF2	FORCE	Len / GAP	MU / YIELD	Dir / Vectors
10	ANC	100				.000	.000	.000
80	+Y					.30	.000	1.000 .000
80	Z				3.00		.000	.000 1.000

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INPUT LISTING

```
    120   ANC      130                          .000   .000   .000
    160   ANC                                 .000   .000   .000
    170   +Y                            .30    .000  1.000   .000
    280   +Y       281                    .30    .000  1.000   .000
    290   +Y       291                    .30    .000  1.000   .000
    340   ANC      341                          .000   .000   .000
    360   ANC      361                          .000   .000   .000
    390   +Y                            .30    .000  1.000   .000
    390   Z                    3.00            .000   .000  1.000
    410   ANC                                 .000   .000   .000
```

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EQUIPMENT LIMITS

```
  350          360          Nozzle Node = 360
```

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 8,400.42 N. FB= 8,400.42 N.
FC= 6,300.31 N. MA= 3,780.16 N.m. MB= 2,520.11 N.m. MC= 3,280.14 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute

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UNIFORM LOAD Changes

```
  10           20           Vector1 in G-s
                            X1 Dir = .26 g's  Y1 Dir = .00 g's
                            Z1 Dir = .00 g's
                            Vector2 in G-s
                            X2 Dir = .00 g's  Y2 Dir = .12 g's
                            Z2 Dir = .00 g's
                            Vector3 in G-s
                            X3 Dir = .00 g's  Y3 Dir = .00 g's
                            Z3 Dir = .26 g's
```

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INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	= mm.
FORCE	pounds	x	4.448	= N.
MASS(dynamics)	pounds	x	0.454	= Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	= N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	= N.m.
STRESS	lbs./sq.in.	x	6.895	= KPa
TEMP. SCALE	degrees F.	x	0.556	= C
PRESSURE	psig	x	6.895	= KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	= KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	= kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	= kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	= kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	= N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	= N.m./deg

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INPUT LISTING

UNIFORM LOAD	lb./in.	x	1.751	= N./cm.
G LOAD	g's	x	1.000	= g's
WIND LOAD	lbs./sq.in.	x	6.895	= KPa
ELEVATION	inches	x	0.025	= m.
COMPOUND LENGTH	inches	x	25.400	= mm.
DIAMETER	inches	x	25.400	= mm.
WALL THICKNESS	inches	x	25.400	= mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES = YES
MIN ALLOWED BEND ANGLE = 5.00000
MAX ALLOWED BEND ANGLE = 95.0000
BEND LENGTH ATTACHMENT PERCENT = 1.00000
MIN ANGLE TO ADJACENT BEND PT = 5.00000
LOOP CLOSURE TOLERANCE = 25.4000 mm.
THERMAL BOWING HORZ TOLERANCE = 0.100000E-03
AUTO NODE NUMBER INCREMENT= 10.0000
Z AXIS UP= NO
USE PRESSURE STIFFENING = DEFAULT
ALPHA TOLERANCE = 0.500000E-01
RESLD-FORCE = NO
HGR DEF RESWGT STIF = 0.175127E+13 N./cm.
DECOMP SNG TOL = 0.100000E+11
BEND AXIAL SHAPE = YES
FRICT STIF = 0.175127E+07 N./cm.
FRICT NORM FORCE VAR = 0.150000
FRICT ANGLE VAR = 15.0000
FRICT SLIDE MULT = 1.00000
ROD TOLERANCE = 1.00000
ROD INC = 2.00000
INCORE NUMERICAL CHECK = NO
OUTCORE NUMERICAL CHECK = NO
DEFAULT TRANS RESTRAINT STIFF= 0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF= 0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS = NO
MISSING MASS ZPA = EXTRACTED
MIN WALL MILL TOLERANCE = 12.5000
WRC-107 VERSION = MAR 79 1B1/2B1
WRC-107 INTERPOLATION = LAST VALUE
DEFAULT AMBIENT TEMPERATURE= 21.1111 C
BOURDON PRESSURE= NONE
COEFFICIENT OF FRICTION (MU) = 0.000000
INCLUDE SPRG STIF IN HGR OPE = NO
INCLUDE INSULATION IN HYDROTEST = NO
REDUCED INTERSECTION = B31.1(POST1980)
USE WRC329 NO
NO REDUCED SIF FOR RFT AND WLT NO
B31.1 REDUCED Z FIX = YES
CLASS 1 BRANCH FLEX NO
ALL STRESS CASES CORRODED = NO
ADD TORSION IN SL STRESS = DEFAULT
ADD F/A IN STRESS = DEFAULT
OCCASIONAL LOAD FACTOR = 0.000000

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INPUT LISTING
DEFAULT CODE = B31.3
B31.3 SUS CASE SIF FACTOR = 0.000000
ALLOW USERS BEND SIF = NO
USE SCHNEIDER NO
YIELD CRITERION STRESS = MAX 3D SHEAR
USE PD/4T NO
BASE HOOP STRESS ON ? = ID
EN13480 USE IN OUTPLANE SIFS= NO
LIBERAL EXPANSION ALLOWABLE= YES
B31.3 SEC 319.2.3C SAXIAL= Default
B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
PRESSURE VARIATION IN EXP CASE= DEFAULT
IMPLEMENT B313 APP-P NO
IMPLEMENT B313 CODE CASE 178 YES
IGNORE B31.1/B31.3 Wc FACTOR= YES
USE FRP SIF = YES
USE FRP FLEX = YES
BS 7159 Pressure Stiffening= Design Strain
FRP Property Data File= CAESAR.FRP
FRP Emod (axial) = 0.220632E+08 KPa
FRP Ratio Gmod/Emod (axial) = 0.250000
FRP Ea/Eh*Vh/a = 0.152730
FRP Laminate Type = THREE
FRP Alpha = 21.6000 C
FRP Density = 0.166079E-02 kg./cu.cm.
EXCLUDE f2 FROM UKOOA BENDING = NO

EXECUTION CONTROL PARAMETERS

Rigid/ExpJt Print Flag 1.000
Bourdon Option ..... .000
Loop Closure Flag 2.000
Thermal Bowing Delta Temp .. .000 C
Liberal Allowable Flag 1.000
Uniform Load Option 1.000

Ambient Temperature ..... 20.997 C
Plastic (FRP) Alpha 21.600
Plastic (FRP) GMOD/EMODa ... .250
Plastic (FRP) Laminate Type. 3.000
Eqn Optimizer ..... .000
Node Selection ..... .000
Eqn Ordering ..... .000
Collins ..... .000
Degree Determination ..... .000
User Eqn Control ..... .000
North Direction ..... -X

COORDINATE REPORT
/----------(mm.)----------/
NODE X Y Z

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INPUT LISTING

10	-15700.080	-7395.683	7324.219
20	-15700.080	-7329.008	7324.219
30	-15700.080	-7151.008	7324.219
40	-15700.080	-6861.008	7324.219
50	-15700.080	-5451.008	7324.219
60	-9500.080	-5451.008	7324.219
70	-7700.080	-5451.008	5524.219
180	-7700.080	-5451.008	2611.219
80	-7700.080	-5451.008	1324.219
70	-7700.080	-5451.008	5524.219
90	-7700.080	-5540.811	5614.022
10	-15700.080	-7395.683	7324.219
110	-15700.080	-7500.458	7324.219
120	-15700.080	-7703.458	7324.219
140	-15700.080	-8210.458	7324.219
150	-15790.080	-8210.458	7324.219
160	-15790.080	-8717.458	7324.219
90	-7700.080	-5540.811	5614.022
170	-7700.080	-5540.811	6114.022
180	-7700.080	-5451.008	2611.219
190	-7700.080	-4687.008	1847.219
200	-7700.080	-4687.008	1323.219
280	-14805.080	-4687.008	1323.219
290	-21400.080	-4687.008	1323.219
300	-21900.080	-4687.008	1323.219
310	-21900.080	-4687.008	2623.219
320	-21900.080	-6104.008	2623.219
330	-21900.080	-6196.083	2623.219
340	-21900.080	-6488.083	2623.219
350	-21900.080	-6580.159	2623.219
360	-21900.080	-6778.159	2623.219
370	-21900.080	-8139.159	2623.219
360	-21900.080	-6778.159	2623.219
290	-21400.080	-4687.008	1323.219
360	-21900.080	-6778.159	2623.219
280	-14805.080	-4687.008	1323.219
370	-21900.080	-8139.159	2623.219
380	-22300.080	-8139.159	2623.219
390	-22300.080	-9449.158	2623.219
370	-21900.080	-8139.159	2623.219
400	-16500.080	-8139.159	2623.219
410	-16500.080	-9149.158	2623.219

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15+L8
21 (OCC) L21=L16+L8
22 (OCC) L22=L17+L8
23 (OCC) L23=L18+L8
24 (OCC) L24=L19+L8
25 (EXP) L25=L2-L8
26 (EXP) L26=L4-L8
27 (EXP) L27=L2-L4

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1+U3
CASE 14 (OPE) W+T2+P1-U3
CASE 15 (OCC) L15=L10-L4
CASE 16 (OCC) L16=L11-L4
CASE 17 (OCC) L17=L12-L4
CASE 18 (OCC) L18=L13-L4
CASE 19 (OCC) L19=L14-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid ANC;					
	1(HYD)	-1622	-6714	168	1193	-60	-929
	2(OPE)	-2098	-4012	1538	2661	-5320	-632
	4(OPE)	-2087	-4009	1523	2640	-5267	-632
	6(OPE)	1138	-3668	-306	-58	786	-3543
	8(SUS)	-893	-3665	92	632	-35	-493
	9(SUS)	-892	-3660	92	632	-35	-492
	10(OPE)	-145	-3951	1387	2425	-5070	-3518
	11(OPE)	-3991	-4061	1636	2819	-5428	2199
	12(OPE)	-2072	-3574	1523	2581	-5278	-428
	13(OPE)	-1922	-3994	2352	3837	-5606	-893
	14(OPE)	-2252	-4025	705	1458	-4965	-374
	15(OCC)	1942	58	-137	-216	198	-2886
	16(OCC)	-1903	-52	113	178	-161	2831
	17(OCC)	15	435	-0	-60	-10	205
	18(OCC)	165	15	828	1197	-339	-261
	19(OCC)	-164	-16	-819	-1183	302	258
	MAX	-3991/L11	-6714/L1	2352/L13	3837/L13	-5606/L13	-3543/L6
80		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	1255	-4185	-25	0	0	0
	2(OPE)	711	-2381	-2029	0	0	0
	4(OPE)	711	-2384	-2011	0	0	0
	6(OPE)	-708	-2673	377	0	0	0
	8(SUS)	809	-2697	-17	0	0	0
	9(SUS)	808	-2695	-17	0	0	0
	10(OPE)	699	-2340	-1898	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	11(OPE)	723	-2425	-2082	0	0	0
	12(OPE)	615	-2060	-2013	0	0	0
	13(OPE)	684	-2291	-69	0	0	0
	14(OPE)	739	-2475	-3968	0	0	0
	15(OCC)	-13	44	113	0	0	0
	16(OCC)	12	-41	-71	0	0	0
	17(OCC)	-97	324	-2	0	0	0
	18(OCC)	-27	92	1943	0	0	0
	19(OCC)	27	-92	-1957	0	0	0
	MAX	1255/L1	-4185/L1	-3968/L14			
120		TYPE=Rigid ANC;					
	1(HYD)	-1622	-7091	168	1245	-60	-429
	2(OPE)	-2098	-4296	1538	3134	-5320	14
	4(OPE)	-2087	-4292	1523	3109	-5267	10
	6(OPE)	1138	-3951	-306	-152	786	-3893
	8(SUS)	-893	-3948	92	661	-35	-218
	9(SUS)	-892	-3943	92	660	-35	-218
	10(OPE)	-72	-4234	1387	2852	-5070	-3488
	11(OPE)	-4064	-4345	1636	3322	-5428	3441
	12(OPE)	-2072	-3823	1523	3049	-5278	210
	13(OPE)	-1922	-4277	2426	4576	-5606	-301
	14(OPE)	-2252	-4309	631	1660	-4965	319
	15(OCC)	2016	58	-137	-258	198	-3498
	16(OCC)	-1977	-52	113	213	-161	3431
	17(OCC)	15	469	-0	-60	-10	200
	18(OCC)	165	15	902	1466	-339	-311
	19(OCC)	-164	-16	-892	-1449	302	309
	MAX	-4064/L11	-7091/L1	2426/L13	4576/L13	-5606/L13	-3893/L6
160		TYPE=Rigid ANC;					
	1(HYD)	-1622	-7091	168	1415	-75	577
	2(OPE)	-2098	-4296	1538	4694	-5458	1755
	4(OPE)	-2087	-4292	1523	4654	-5404	1740
	6(OPE)	1138	-3951	-306	-463	814	-5403
	8(SUS)	-893	-3948	92	753	-44	332
	9(SUS)	-892	-3943	92	752	-44	332
	10(OPE)	-72	-4234	1387	4258	-5194	-3797
	11(OPE)	-4064	-4345	1636	4981	-5576	7171
	12(OPE)	-2072	-3823	1523	4594	-5415	1968
	13(OPE)	-1922	-4277	2426	7035	-5824	1263
	14(OPE)	-2252	-4309	631	2300	-5022	2214
	15(OCC)	2016	58	-137	-396	210	-5537
	16(OCC)	-1977	-52	113	327	-171	5431
	17(OCC)	15	469	-0	-60	-10	227
	18(OCC)	165	15	902	2381	-420	-477
	19(OCC)	-164	-16	-892	-2354	382	474

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-4064/L11	-7091/L1	2426/L13	7035/L13	-5824/L13	7171/L11
170		TYPE=Rigid +Y;					
	1(HYD)	1944	-7801	-39	0	0	0
	2(OPE)	1117	-3968	411	0	0	0
	4(OPE)	1119	-3971	410	0	0	0
	6(OPE)	-1257	-4220	-153	0	0	0
	8(SUS)	1081	-4269	-9	0	0	0
	9(SUS)	1079	-4264	-9	0	0	0
	10(OPE)	1139	-4034	408	0	0	0
	11(OPE)	1100	-3917	413	0	0	0
	12(OPE)	973	-3454	357	0	0	0
	13(OPE)	1149	-4089	429	0	0	0
	14(OPE)	1086	-3852	395	0	0	0
	15(OCC)	21	-63	-2	0	0	0
	16(OCC)	-18	54	2	0	0	0
	17(OCC)	-146	518	-53	0	0	0
	18(OCC)	31	-118	19	0	0	0
	19(OCC)	-33	119	-15	0	0	0
	MAX	1944/L1	-7801/L1	429/L13			
280		TYPE=Rigid +Y;					
	1(HYD)	-1025	-4778	-159	0	0	0
	2(OPE)	85	-3916	113	0	0	0
	4(OPE)	77	-3912	109	0	0	0
	6(OPE)	481	-3460	92	0	0	0
	8(SUS)	-632	-3400	-102	0	0	0
	9(SUS)	-632	-3398	-101	0	0	0
	10(OPE)	1176	-3999	237	0	0	0
	11(OPE)	-1150	-3833	3	0	0	0
	12(OPE)	168	-3504	120	0	0	0
	13(OPE)	120	-3898	959	0	0	0
	14(OPE)	263	-3926	-737	0	0	0
	15(OCC)	1099	-87	128	0	0	0
	16(OCC)	-1227	79	-106	0	0	0
	17(OCC)	91	407	11	0	0	0
	18(OCC)	43	14	850	0	0	0
	19(OCC)	187	-14	-846	0	0	0
	MAX	-1227/L16	-4778/L1	959/L13			
290		TYPE=Rigid +Y;					
	1(HYD)	-335	-2461	228	0	0	0
	2(OPE)	127	-1379	-55	0	0	0
	4(OPE)	123	-1382	-52	0	0	0
	6(OPE)	350	-1767	54	0	0	0
	8(SUS)	-191	-1777	161	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(SUS)	-190	-1776	161	0	0	0
	10(OPE)	435	-1460	54	0	0	0
	11(OPE)	-403	-1357	-56	0	0	0
	12(OPE)	154	-1169	-71	0	0	0
	13(OPE)	10	-1323	397	0	0	0
	14(OPE)	7	-1468	-440	0	0	0
	15(OCC)	311	-78	106	0	0	0
	16(OCC)	-527	25	-4	0	0	0
	17(OCC)	30	213	-19	0	0	0
	18(OCC)	-114	60	449	0	0	0
	19(OCC)	-116	-86	-389	0	0	0
	MAX	-527/L16	-2461/L1	449/L18			
340		TYPE=Rigid ANC;					
	1(HYD)	-148	-2017	-175	-48	128	-117
	2(OPE)	1	-1861	17	52	30	-69
	4(OPE)	-0	-1859	15	50	30	-69
	6(OPE)	-71	-1730	-77	40	105	-158
	8(SUS)	-105	-1709	-126	-32	93	-89
	9(SUS)	-105	-1709	-126	-32	93	-89
	10(OPE)	1373	-1733	-166	-121	-594	-1675
	11(OPE)	-1093	-1923	80	89	445	1115
	12(OPE)	12	-1654	30	54	19	-58
	13(OPE)	-79	-1922	527	317	19	41
	14(OPE)	94	-1771	-564	-303	41	-199
	15(OCC)	1373	126	-181	-171	-625	-1606
	16(OCC)	-1093	-64	65	39	415	1183
	17(OCC)	13	205	15	4	-11	11
	18(OCC)	-78	-63	512	267	-11	110
	19(OCC)	95	88	-579	-354	10	-131
	MAX	1373/L15	-2017/L1	-579/L19	-354/L19	-625/L15	-1675/L10
360		TYPE=Rigid ANC;					
	1(HYD)	-148	-2258	-175	-99	128	-74
	2(OPE)	1	-2054	17	57	30	-70
	4(OPE)	-0	-2053	15	55	30	-69
	6(OPE)	-71	-1923	-77	17	105	-137
	8(SUS)	-105	-1903	-126	-68	93	-58
	9(SUS)	-105	-1902	-126	-68	93	-58
	10(OPE)	1423	-1927	-166	-169	-594	-2082
	11(OPE)	-1143	-2117	80	113	445	1441
	12(OPE)	12	-1825	30	63	19	-61
	13(OPE)	-79	-2116	578	479	19	64
	14(OPE)	94	-1964	-614	-476	41	-227
	15(OCC)	1424	126	-181	-223	-625	-2014
	16(OCC)	-1143	-64	65	58	415	1510
	17(OCC)	13	228	15	8	-11	7

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	18(OCC)	-78	-63	563	424	-11	132
	19(OCC)	95	88	-629	-531	10	-158
	MAX	1424/L15	-2258/L1	-629/L19	-531/L19	-625/L15	-2082/L10
390		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-117	-3337	131	0	0	0
	2(OPE)	-426016	-1420053	6	0	0	0
	4(OPE)	-422421	-1408071	6	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	-83	-2572	89	0	0	0
	9(SUS)	-83	-2571	89	0	0	0
	10(OPE)	-421917	-1406391	-2	0	0	0
	11(OPE)	-422936	-1409786	16	0	0	0
	12(OPE)	-422319	-1407731	5	0	0	0
	13(OPE)	-422453	-1408177	10	0	0	0
	14(OPE)	-422387	-1407957	3	0	0	0
	15(OCC)	504	1680	-9	0	0	0
	16(OCC)	-514	-1715	9	0	0	0
	17(OCC)	102	340	-2	0	0	0
	18(OCC)	-32	-106	4	0	0	0
	19(OCC)	34	114	-4	0	0	0
	MAX	-426016/L2	-1420053/L2	131/L1			
410		TYPE=Rigid ANC;					
	1(HYD)	-1391	-6159	-237	-9576	1574	3176
	2(OPE)	403836	1412704	69	-6528	-651	-8105029
	4(OPE)	400416	1400724	66	-6536	-622	-8036476
	6(OPE)	759	-7150	69	-6310	-1285	9503
	8(SUS)	-844	-4508	-155	-6804	930	2190
	9(SUS)	-843	-4506	-155	-6800	929	2189
	10(OPE)	402675	1399005	96	-6500	-3451	-8038258
	11(OPE)	398115	1402479	19	-6648	2340	-8034663
	12(OPE)	400460	1401234	75	-5720	-814	-8036685
	13(OPE)	400286	1400841	1876	898	2998	-8036377
	14(OPE)	400566	1400599	-1739	-13952	-4280	-8036593
	15(OCC)	2259	-1719	30	36	-2829	-1782
	16(OCC)	-2301	1755	-47	-112	2962	1813
	17(OCC)	44	509	9	816	-192	-209
	18(OCC)	-130	116	1810	7434	3621	99
	19(OCC)	151	-125	-1805	-7416	-3657	-117
	MAX	403836/L2	1412704/L2	1876/L13	-13952/L14	-4280/L14	-8105029/L2

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15+L8
21 (OCC) L21=L16+L8
22 (OCC) L22=L17+L8
23 (OCC) L23=L18+L8
24 (OCC) L24=L19+L8
25 (EXP) L25=L2-L8
26 (EXP) L26=L4-L8
27 (EXP) L27=L2-L4

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 14, 2024 Time: 12:6
Job:: BNK-GCS-CN-033-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 20 (OCC) L20=L15+L8
CASE 21 (OCC) L21=L16+L8
CASE 22 (OCC) L22=L17+L8
CASE 23 (OCC) L23=L18+L8
CASE 24 (OCC) L24=L19+L8
CASE 25 (EXP) L25=L2-L8
CASE 26 (EXP) L26=L4-L8
CASE 27 (EXP) L27=L2-L4

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	46.8	@Node	90
Code Stress:	112850.9	Allowable Stress:	241316.5
Axial Stress:	5460.1	@Node	80
Bending Stress:	150453.6	@Node	90
Torsion Stress:	2896.3	@Node	60
Hoop Stress:	11324.2	@Node	30
Max Stress Intensity:	150464.4	@Node	90

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	44.8	@Node	90
Code Stress:	61724.4	Allowable Stress:	137895.1
Axial Stress:	11061.6	@Node	80
Bending Stress:	82295.7	@Node	90
Torsion Stress:	4294.6	@Node	60
Hoop Stress:	22406.4	@Node	30
Max Stress Intensity:	82298.3	@Node	90

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	44.7	@Node	90
Code Stress:	61648.4	Allowable Stress:	137895.1
Axial Stress:	1355.3	@Node	120
Bending Stress:	82194.4	@Node	90
Torsion Stress:	4289.5	@Node	60
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	82197.1	@Node	90

CODE STRESS CHECK PASSED : LOADCASE 20 (OCC) L20=L15+L8

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Highest Stresses: (   KPa    ) LOADCASE 20 (OCC) L20=L15+L8
Ratio (%):                39.5       @Node    180
Code Stress:             68047.7       Allowable Stress:     172055.9
Axial Stress:            11327.0       @Node     50
Bending Stress:          85297.3       @Node    180
Torsion Stress:           4664.7       @Node     60
Hoop Stress:             22406.4       @Node     30
Max Stress Intensity:    90721.2       @Node    180

 CODE STRESS CHECK PASSED      : LOADCASE 21 (OCC) L21=L16+L8

Highest Stresses: (   KPa    ) LOADCASE 21 (OCC) L21=L16+L8
Ratio (%):                39.7       @Node    180
Code Stress:             68341.1       Allowable Stress:     172055.9
Axial Stress:            11034.7       @Node     80
Bending Stress:          85750.4       @Node    180
Torsion Stress:           4330.8       @Node    180
Hoop Stress:             22406.4       @Node     30
Max Stress Intensity:    91082.4       @Node    180

 CODE STRESS CHECK PASSED      : LOADCASE 22 (OCC) L22=L17+L8

Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L17+L8
Ratio (%):                37.6       @Node     90
Code Stress:             68984.5       Allowable Stress:     183400.5
Axial Stress:            11062.1       @Node     80
Bending Stress:          91972.7       @Node     90
Torsion Stress:           3780.7       @Node     60
Hoop Stress:             22406.4       @Node     30
Max Stress Intensity:    91977.7       @Node     90

 CODE STRESS CHECK PASSED      : LOADCASE 23 (OCC) L23=L18+L8

Highest Stresses: (   KPa    ) LOADCASE 23 (OCC) L23=L18+L8
Ratio (%):                36.2       @Node    180
Code Stress:             62334.3       Allowable Stress:     172055.9
Axial Stress:            11763.1       @Node     80
Bending Stress:          84607.8       @Node     90
Torsion Stress:           4477.8       @Node     60
Hoop Stress:             22406.4       @Node     30
Max Stress Intensity:    84615.2       @Node     90

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L19+L8

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L19+L8
Ratio (%):                36.3       @Node    180
Code Stress:             62398.0       Allowable Stress:     172055.9
Axial Stress:            10740.6       @Node     70
Bending Stress:          84704.7       @Node     90
Torsion Stress:           4131.8       @Node     60
Hoop Stress:             22406.4       @Node     30
Max Stress Intensity:    84712.1       @Node     90
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

CODE STRESS CHECK PASSED : LOADCASE 25 (EXP) L25=L2-L8

Highest Stresses: (KPa) LOADCASE 25 (EXP) L25=L2-L8				
Ratio (%):	7.8	@Node	50	
Code Stress:	24290.4	Allowable Stress:		309988.2
Axial Stress:	262.5	@Node	80	
Bending Stress:	24080.8	@Node	50	
Torsion Stress:	7836.2	@Node	20	
Hoop Stress:	0.0	@Node	20	
Max Stress Intensity:	64442.9	@Node	50	

CODE STRESS CHECK PASSED : LOADCASE 26 (EXP) L26=L4-L8

Highest Stresses: (KPa) LOADCASE 26 (EXP) L26=L4-L8				
Ratio (%):	7.8	@Node	50	
Code Stress:	24055.7	Allowable Stress:		310329.4
Axial Stress:	260.2	@Node	80	
Bending Stress:	23848.1	@Node	50	
Torsion Stress:	7758.0	@Node	20	
Hoop Stress:	0.0	@Node	20	
Max Stress Intensity:	63820.3	@Node	50	

CODE STRESS CHECK PASSED : LOADCASE 27 (EXP) L27=L2-L4

Highest Stresses: (KPa) LOADCASE 27 (EXP) L27=L2-L4				
Ratio (%):	0.1	@Node	50	
Code Stress:	235.0	Allowable Stress:		299667.2
Axial Stress:	2.5	@Node	200	
Bending Stress:	233.0	@Node	50	
Torsion Stress:	78.2	@Node	20	
Hoop Stress:	0.0	@Node	20	
Max Stress Intensity:	623.6	@Node	50	

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS..... 2
Nozzle Check : Multiple..... 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1-U3
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15+L8
21 (OCC) L21=L16+L8
22 (OCC) L22=L17+L8
23 (OCC) L23=L18+L8
24 (OCC) L24=L19+L8
25 (EXP) L25=L2-L8
26 (EXP) L26=L4-L8
27 (EXP) L27=L2-L4

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 14, 2024 Time: 12:6
Job:: BNK-GCS-CN-033-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

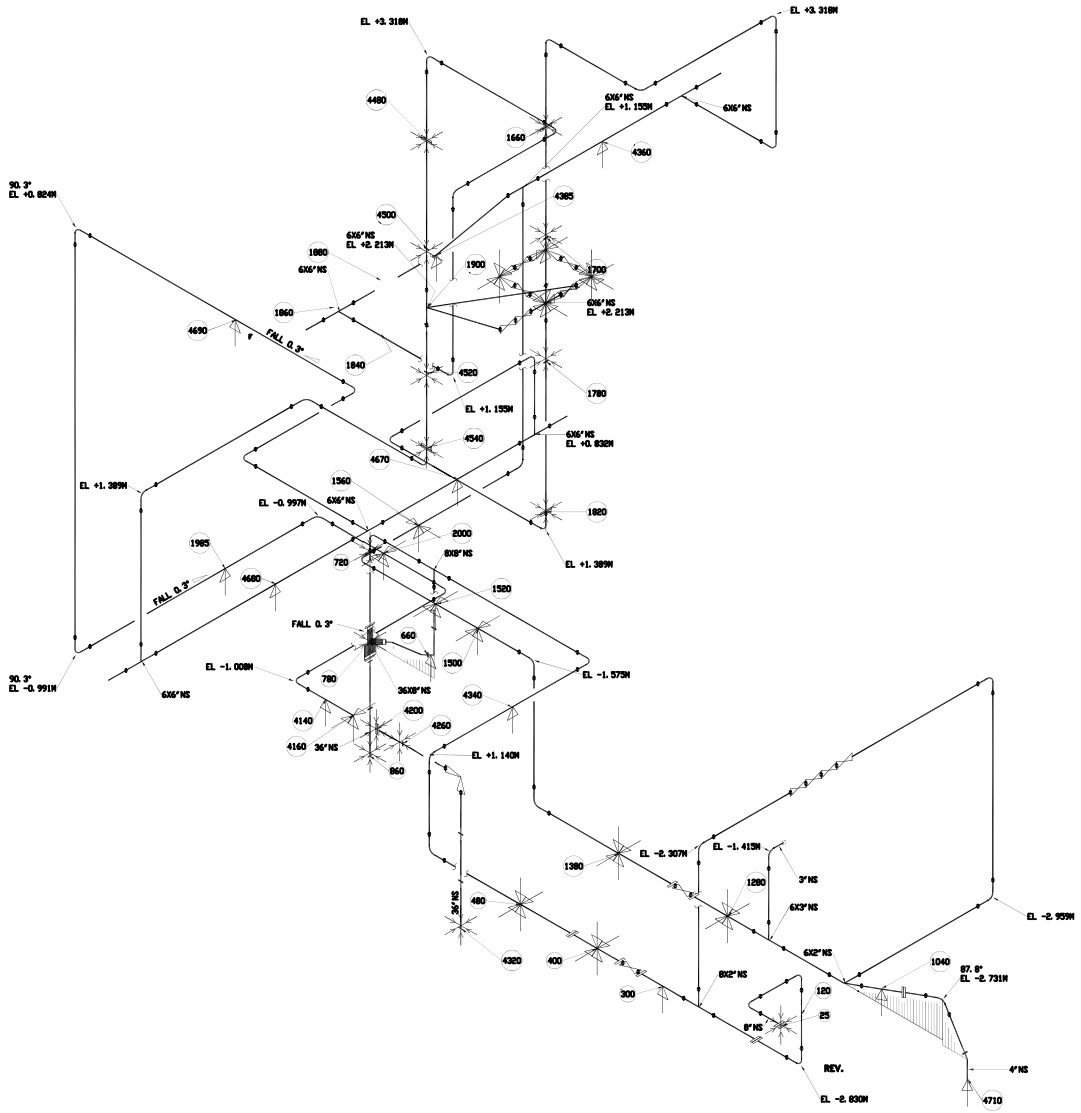
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
360		Absolute Method								
	Limits	8400	8400	6300		3780	2520	3280		
	2(OPE)	2054	17	-1	0.245	-30	-70	-57	0.028	
	4(OPE)	2053	15	0	0.244	-30	-69	-55	0.027	
	6(OPE)	1923	-77	71	0.229	-105	-137	-17	0.054	
	8(SUS)	1903	-126	105	0.227	-93	-58	68	0.025	
	9(SUS)	1902	-126	105	0.226	-93	-58	68	0.025	

BNK-GCS-CN-035

1. GAS-111-0031A-CN05-8"-ET
2. GAS-111-0034A-CN05-2"-PT
3. GAS-111-0035A-CN05-2"-PT
4. GAS-111-0036A-CN05-6"-IS
5. GAS-111-0037A-CS00-6"-IS
6. GAS-111-0032A-CN05-3"-PT
7. GAS-111-0033A-CN05-2"-PT
8. FL-112-0014A-AN07-6"-PT
9. FL-112-0016A-AN07-6"-PT
10. FL-112-0015A-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 1 OF 5

REV.	CHANGE	DATE
		14 MAY 2024

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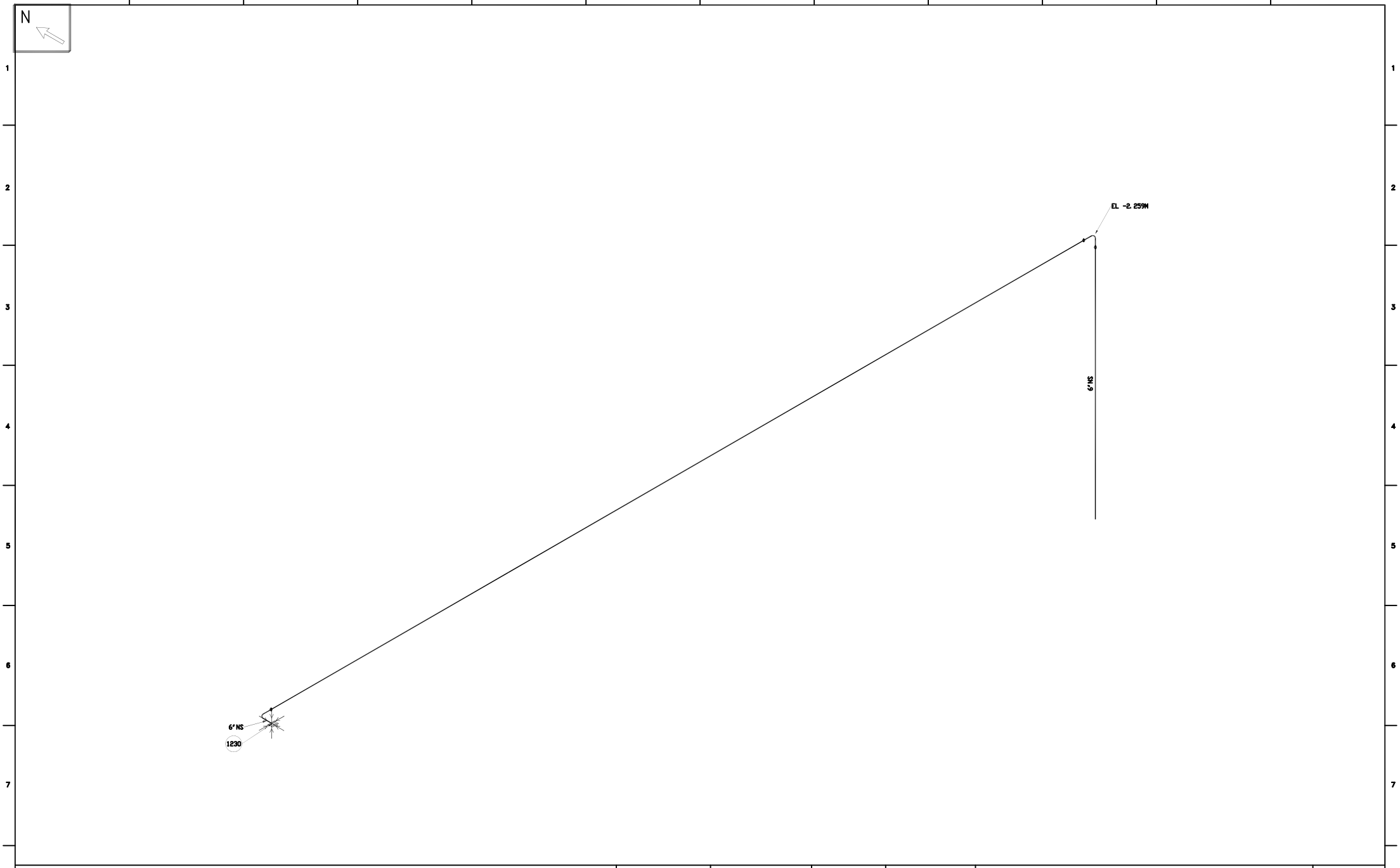

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

3 OF 3

REV.	CHANGE	DATE
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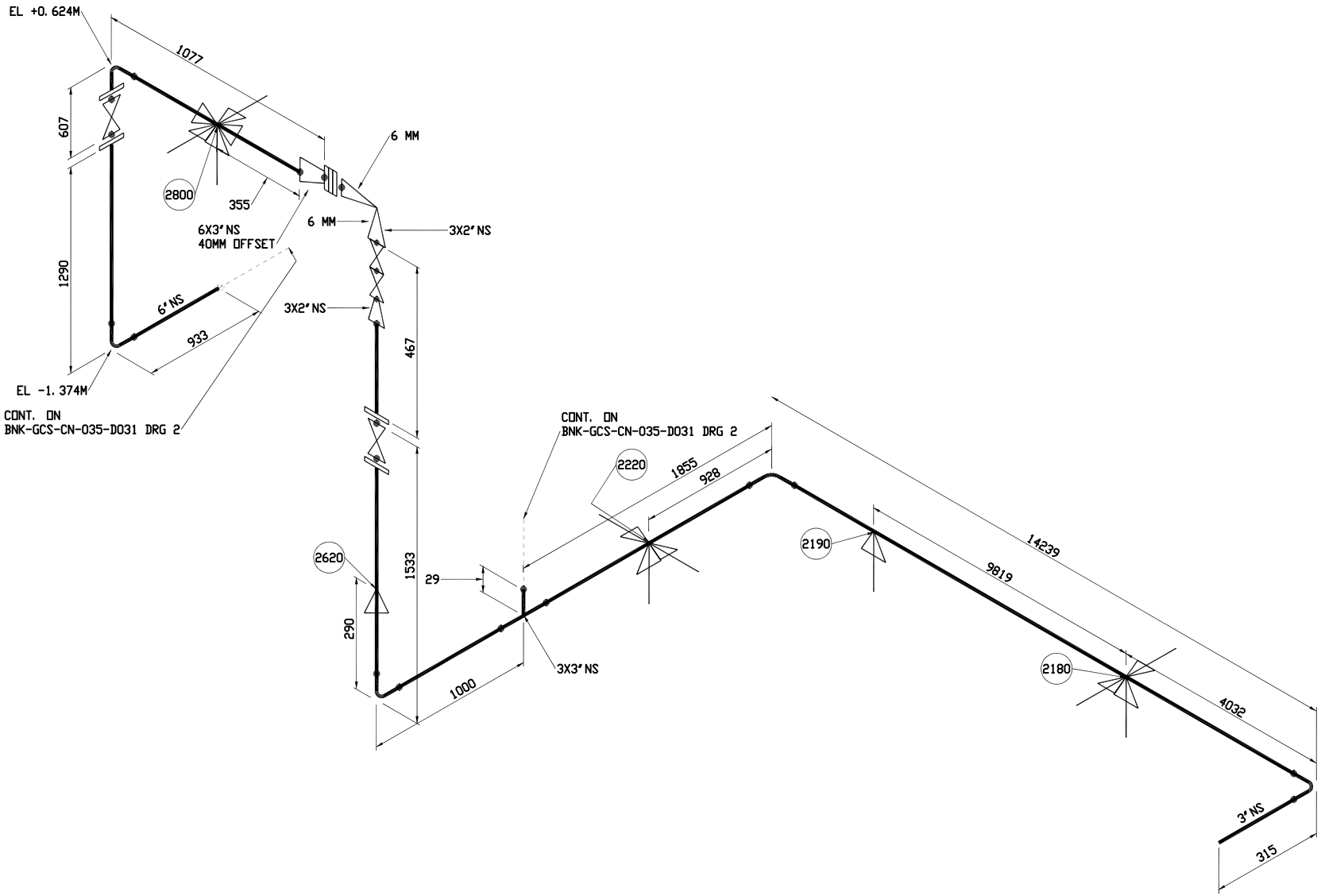

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

3 OF 5

REV.	CHANGE	DATE
		14 MAY 2024

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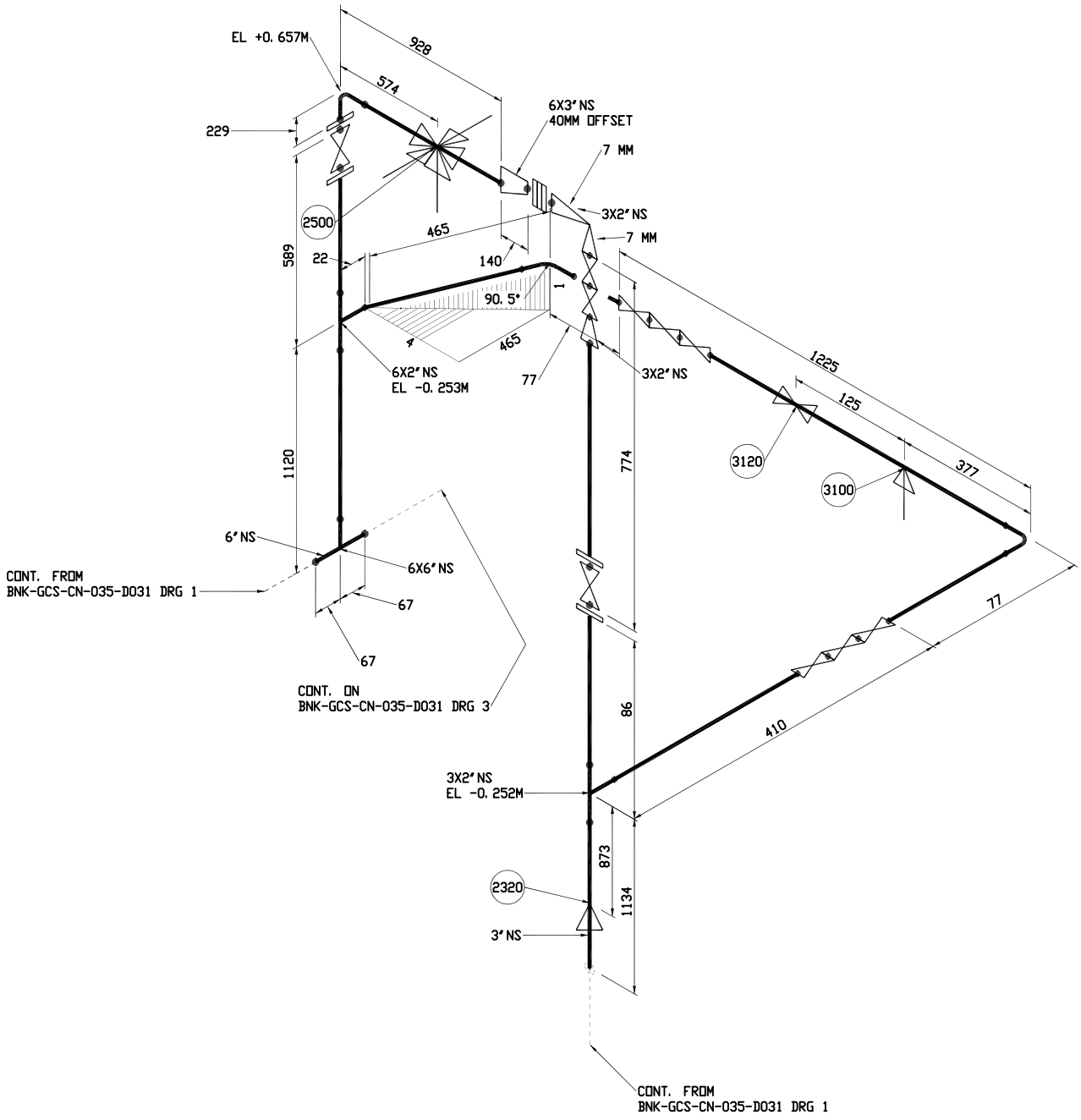

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

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REV.	CHANGE	DATE
		14 MAY 2024

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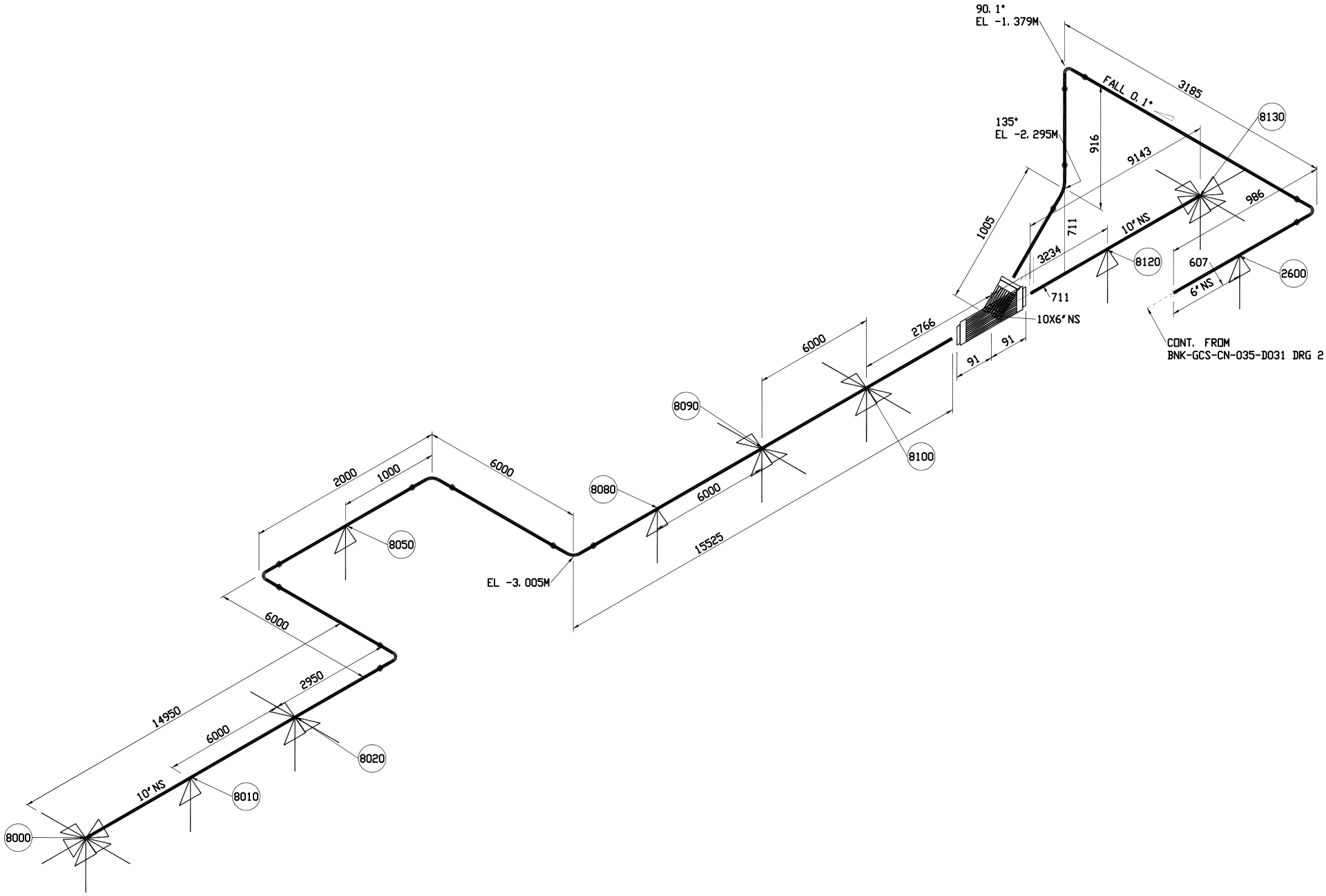

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

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REV.	CHANGE	DATE
		14 MAY 2024

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Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:58
Job:: BNK-GCS-CN-035-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 19,2024 14:58:30

PIPE DATA

From 40 To 60 DX= -805.000 mm.
PIPE
Dia= 219.075 mm. Wall= 8.179 mm. Cor= 3.0000 mm.
GENERAL
T1= 85 C T2= 36 C T3= 36 C P1= 2,200.0500 KPa PHyd= 3,300.0752 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 199,086,608 KPa
EH2= 202,163,808 KPa EH3= 202,163,808 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000058 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001500 kg./cu.cm.
BEND at "TO" end
Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 59
Angle/Node @2= .00 58
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 60 To 80 DY= .000 mm. DZ= -1,690.000 mm.
BEND at "TO" end
Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 79

From 80 To 100 DX= .000 mm. DY= -1,410.000 mm.

From 100 To 120 DY= -1,114.000 mm.

From 180 To 140 DX= 71.842 mm. DY= -71.842 mm.
RIGID Weight= .00 N.

From 140 To 160 DY= -200.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm.
GENERAL
T1= 21 C T2= 21 C T3= 21 C P1= .0000 KPa PHyd= .0000 KPa
Fluid Den= .0000000 kg./cu.cm. Insul Thk= 40.000 mm.
RESTRAINTS
Node 160 -X Mu = .30
Node 160 Z Cnode 121

INPUT LISTING
```
    Node  121  +Y   Mu = .10
    Node  160  X   Cnode  121
 HANGERS
    Hanger Node = 160   Hanger Connecting Node = 121
    Available Space = -1,000.0000 mm.   Allowed Load Variation = 25.0000
    No. Hangers = 0.0   Short Range Flag = -1   User Operating Load = .00 N.
    Free Node = 0   Free Node = 0   Free Code = 0.0   Spring Rate = .00 N./cm.
    Theoretical Cold Load = .00 N.
 SIF's & TEE's
    Node  140   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  120  To  180 DY= -306.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 8.179 mm.
 GENERAL
    T1= 85 C   T2= 36 C   T3= 36 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Fluid Den= .0000058 kg./cu.cm.   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 179
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  180  To  200  DX= -306.000 mm.
 ------------------------------------------------------------------------------
 From  200  To  220  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  220  To  240  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  240  To  260  DX= -398.000 mm.
 ------------------------------------------------------------------------------
 From  260  To  280  DX= -300.000 mm.
 SIF's & TEE's
    Node  280   Weldolet
 ------------------------------------------------------------------------------
 From  280  To  300  DX= -500.000 mm.
 RESTRAINTS
    Node  300  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  300  To  320  DX= -176.000 mm.
 ------------------------------------------------------------------------------
 From  320  To  340  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
```

INPUT LISTING

```
 From  340  To  360  DX= -587.000 mm.
    Element Name= GATE_NOFLG_300
 RIGID  Weight= 1,023.41 N.
 ------------------------------------------------------------------------------
 From  360  To  380  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  380  To  400  DX= -1,000.000 mm.
 RESTRAINTS
    Node  400  Y   Mu = .30
    Node  400  Z
 ------------------------------------------------------------------------------
 From  400  To  420  DX= -1,287.800 mm.
 ------------------------------------------------------------------------------
 From  420  To  440  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  440  To  460  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  460  To  480  DX= -1,500.000 mm.
 RESTRAINTS
    Node  480  Y   Mu = .30
    Node  480  Z
 ------------------------------------------------------------------------------
 From  480  To  500  DX= -3,460.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 499
    Angle/Node @2= .00 498
 ------------------------------------------------------------------------------
 From  500  To  520 DY= 305.000 mm.
 ------------------------------------------------------------------------------
 From  520  To  540 DY= -305.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  540  To  560 DY= -300.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Fluid Den= .0000000 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  560  +Y   Mu = .30
    Node  560  Z
 SIF's & TEE's
    Node  540   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  520  To  4330 DY= 3,665.000 mm.
```

INPUT LISTING
```
 PIPE
    Dia= 219.075 mm.   Wall= 8.179 mm.
 GENERAL
    T1= 85 C   T2= 36 C   T3= 36 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Fluid Den= .0000058 kg./cu.cm.   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4329
    Angle/Node @2= .00 4328
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4330  To  4340 DZ= -3,375.000 mm.
 RESTRAINTS
    Node  4340  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  4340  To  580 DZ= -3,375.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 579
    Angle/Node @2= .00 578
 ------------------------------------------------------------------------------
 From  580  To  600  DX= -730.000 mm.  DZ= .000 mm.
 ------------------------------------------------------------------------------
 From  600  To  620  DX= -462.000 mm.  DZ= .000 mm.
 ------------------------------------------------------------------------------
 From  620  To  640 DY= -84.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  640  To  660 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  660  +Y   Cnode  800   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  620  To  680  DX= -462.000 mm.  DZ= .000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 8.179 mm.
 GENERAL
    T1= 85 C   T2= 36 C   T3= 36 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 199,086,608 KPa
    EH2= 202,163,808 KPa   EH3= 202,163,808 KPa   EH4= 203,401,232 KPa
```

INPUT LISTING
```
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000058 kg./cu.cm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 679
    Angle/Node @2= .00 678
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  680  To  700 DY= -305.000 mm.
 ------------------------------------------------------------------------------
 From  700  To  720 DY= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 RESTRAINTS
    Node  720  ANC   Cnode  740
 ------------------------------------------------------------------------------
 From  740  To  760 DY= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  760  To  780 DY= -181.400 mm.
 RESTRAINTS
    Node  780  ANC   Cnode  820
 EQUIPMENT LIMITS
    Nozzle Node = 780
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,480.19 N.m.   MC= 5,820.25 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------------
 From  780  To  800  DX= 462.000 mm.  DY= 331.000 mm.  DZ= .000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  820  To  840 DY= -3,065.000 mm.
 PIPE
    Dia= 914.400 mm.   Wall= 15.000 mm.
 GENERAL
    Mat= (383)A516 70   E= 203,401,232 KPa   EH1= 199,086,608 KPa
    EH2= 202,163,808 KPa   EH3= 202,163,808 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Insul Thk= 40.000 mm.
 RIGID  Weight= .00 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 160,648 KPa
    Sh1= 160,062 KPa   Sh2= 160,648 KPa   Sh3= 160,648 KPa   Sh4= 160,648 KPa
    Sh5= 160,648 KPa   Sh6= 160,648 KPa   Sh7= 160,648 KPa   Sh8= 160,648 KPa
    Sh9= 160,648 KPa   Sy= 262,001 KPa
 ------------------------------------------------------------------------------
 From  840  To  860 DY= -1,200.000 mm.
 PIPE
```

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INPUT LISTING
```
    Dia= 914.400 mm.   Wall= 12.000 mm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  860  ANC
 ------------------------------------------------------------------------
 From  280  To  880 DY= 523.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
 GENERAL
    P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 199,086,608 KPa   EH2= 202,163,808 KPa
    EH3= 202,163,808 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 879
    Angle/Node @2= .00 878
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------
 From  880  To  900 DZ= -510.000 mm.
 ------------------------------------------------------------------------
 From  900  To  910 DZ= -73.025 mm.
    Element Name= BALL_FLG_600
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 1,900.0433 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000430 kg./cu.cm.
 RIGID  Weight= 44.48 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------
 From  910  To  920 DZ= -301.000 mm.
 RIGID  Weight= 66.72 N.
 ------------------------------------------------------------------------
 From  920  To  930 DZ= -275.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Element Name= CHECK_FLG_150
 GENERAL
    P1= 2,200.0500 KPa   Fluid Den= .0000154 kg./cu.cm.   Insul Thk= 40.000 mm.
 RIGID  Weight= 355.86 N.
 ------------------------------------------------------------------------
 From  930  To  940 DZ= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------
 From  940  To  960 DZ= -77.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 959
    Angle/Node @2= .00 958
```

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```
 ----------------------------------------------------------------------------
 From  960  To  980 DY= -652.400 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 979
    Angle/Node @2= .00 978
 ----------------------------------------------------------------------------
 From  980  To  1000 DZ= 77.000 mm.
 ----------------------------------------------------------------------------
 From  1000  To  1020 DZ= 621.000 mm.
    Element Name= CHECK_FLG_600
 SIF's & TEE's
    Node  1020   Weldolet
 ----------------------------------------------------------------------------
 From  1020  To  1040  DX= 300.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    Fluid Den= .0000154 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  1040  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  1040  To  1060  DX= 318.000 mm.
 ----------------------------------------------------------------------------
 From  1060  To  1080  DX= 101.600 mm.
    Element Name= FLG.PR_FLG_150
 RIGID  Weight= 191.27 N.
 ----------------------------------------------------------------------------
 From  1080  To  1100  DX= 101.600 mm.
    Element Name= FLG.PR_FLG_150
 RIGID  Weight= 191.27 N.
 ----------------------------------------------------------------------------
 From  1100  To  1120  DX= 990.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1119
    Angle/Node @2= .00 1118
 ----------------------------------------------------------------------------
 From  1120  To  1140 DY= 700.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1139
    Angle/Node @2= .00 1138
 ----------------------------------------------------------------------------
 From  1140  To  1160  DX= .000 mm.  DZ= 763.333 mm.
 ----------------------------------------------------------------------------
 From  1120  To  4700  DX= 53.882 mm.  DY= -53.882 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  1160  To  1180  DX= .000 mm.  DZ= 763.333 mm.
 ----------------------------------------------------------------------------
 From  1180  To  1200 DZ= 763.333 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1199
```

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INPUT LISTING
```
    Angle/Node @2= .00 1198
 ------------------------------------------------------------------------------
 From  1200  To  1220  DX= 229.000 mm.
 ------------------------------------------------------------------------------
 From  1220  To  1230  DX= 101.600 mm.
    Element Name= FLANGE_FLG_600
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1230  ANC   Cnode  1231
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 EQUIPMENT LIMITS
    Nozzle Node = 1230
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,500.42 N.   FB= 8,500.42 N.
    FC= 6,500.32 N.   MA= 6,000.25 N.m.   MB= 2,000.08 N.m.   MC= 5,000.21 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------------
 From  1231  To  1240  DX= 101.600 mm.
 RIGID  Weight= 191.27 N.
 DISPLACEMENTS
    Node  1231   DX1= 4.000 mm.   DY1= 2.100 mm.   DZ1= .900 mm.
 ------------------------------------------------------------------------------
 From  1020  To  1260  DX= -1,207.940 mm.
 SIF's & TEE's
    Node  1260   Welding Tee
 ------------------------------------------------------------------------------
 From  1260  To  1280  DX= -1,274.610 mm.
 RESTRAINTS
    Node  1280  Y   Mu = .30
    Node  1280  Z
 ------------------------------------------------------------------------------
 From  1280  To  1300  DX= -369.000 mm.
 ------------------------------------------------------------------------------
 From  1300  To  1320  DX= -101.600 mm.
    Element Name= FLANGE_FLG_600
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  1320  To  1340  DX= -453.000 mm.
    Element Name= CHECK_NOFLG_600
 RIGID  Weight= 1,850.46 N.
 ------------------------------------------------------------------------------
 From  1340  To  1360  DX= -101.600 mm.
    Element Name= FLANGE_NOFLG_600
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  1360  To  1380  DX= -1,973.000 mm.
 RESTRAINTS
    Node  1380  Y   Mu = .30
    Node  1380  Z
 ------------------------------------------------------------------------------
 From  1380  To  1400  DX= -3,826.000 mm.
 SINGLE FLANGED BEND at "TO" end
```

INPUT LISTING

```
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1399
    Angle/Node @2= .00 1398
 ---------------------------------------------------------------------------
 From  1400  To  1420 DY= 229.000 mm.
 ---------------------------------------------------------------------------
 From  1420  To  1440 DY= -229.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1440  To  1460 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Fluid Den= .0000000 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  1460  +Y   Mu = .30
    Node  1460  Z
 SIF's & TEE's
    Node  1440   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1420  To  1480 DY= 1,155.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 1,900.0433 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000154 kg./cu.cm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1479
    Angle/Node @2= .00 1478
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1480  To  1500  DX= -5,760.000 mm.
 RESTRAINTS
    Node  1500  +Y
    Node  1500  Z
 ---------------------------------------------------------------------------
 From  1500  To  1520  DX= -6,000.000 mm.
 RESTRAINTS
    Node  1520  +Y   Mu = .30
    Node  1520  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  1520  To  1540  DX= -2,481.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1539
    Angle/Node @2= .00 1538
 ---------------------------------------------------------------------------
```

INPUT LISTING

```
 From  1540  To  1560 DZ= -1,432.000 mm.
 RESTRAINTS
    Node  1560  +Y   Mu = .30
    Node  1560  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1560  To  1580 DZ= -629.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1579
    Angle/Node @2= .00 1578
 ------------------------------------------------------------------------------
 From  1580  To  4350 DY= 2,730.000 mm.
 SIF's & TEE's
    Node  4350   Welding Tee
 ------------------------------------------------------------------------------
 From  4350  To  4360 DZ= -482.500 mm.
 RESTRAINTS
    Node  4360  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  4360  To  4370 DZ= -432.500 mm.
 SIF's & TEE's
    Node  4370   Welding Tee
 ------------------------------------------------------------------------------
 From  4370  To  4380 DZ= -245.000 mm.
 ------------------------------------------------------------------------------
 From  4350  To  4385 DZ= 482.500 mm.
 RESTRAINTS
    Node  4385  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  4385  To  4420 DZ= 432.500 mm.
 ------------------------------------------------------------------------------
 From  4420  To  4430 DZ= 245.000 mm.
 ------------------------------------------------------------------------------
 From  4420  To  4440  DX= 472.000 mm.  DY= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4439
    Angle/Node @2= .00 4438
 ------------------------------------------------------------------------------
 From  4440  To  4450 DY= 2,163.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4449
    Angle/Node @2= .00 4448
 ------------------------------------------------------------------------------
 From  4450  To  4820 DZ= -325.000 mm.
 ------------------------------------------------------------------------------
 From  4820  To  4455 DZ= -325.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4454
    Angle/Node @2= .00 4453
 ------------------------------------------------------------------------------
 From  4455  To  4810  DX= -1,067.000 mm.
 ------------------------------------------------------------------------------
 From  4810  To  4460  DX= -1,173.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4459
    Angle/Node @2= .00 4458
 ------------------------------------------------------------------------------
```

INPUT LISTING

```
 From  4460  To  4470 DY= -510.000 mm.
 ------------------------------------------------------------------------
 From  4470  To  4480 DY= -126.000 mm.
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  4480  ANC   Cnode  4481
 ------------------------------------------------------------------------
 From  4481  To  4490 DY= -101.600 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 21.946 mm.
 GENERAL
    T1= 155 C   T2= 129 C   T3= 129 C   P1= 2,200.0500 KPa
    PHyd= 2,860.0652 KPa   Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------
 From  4490  To  4500 DY= -127.000 mm.
 RESTRAINTS
    Node  4500  ANC   Cnode  4501
 EQUIPMENT LIMITS
    Nozzle Node = 4500
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------
 From  4501  To  4400 DY= -240.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------
 From  4400  To  4510 DY= -240.000 mm.
 GENERAL
    T1= 129 C   T2= 60 C   T3= 60 C
 RIGID  Weight= .00 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------
 From  4520  To  4530 DY= -127.000 mm.
 RESTRAINTS
    Node  4520  ANC   Cnode  4510
 EQUIPMENT LIMITS
    Nozzle Node = 4520
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------
 From  4530  To  4540 DY= -101.600 mm.
 RIGID  Weight= 191.27 N.
 RESTRAINTS
```

INPUT LISTING

```
    Node  4540  ANC   Cnode  4541
 ------------------------------------------------------------------------
 From  4370  To  1600  DX= 472.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 1,900.0433 KPa
    PHyd= 3,300.0752 KPa   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1599
    Angle/Node @2= .00 1598
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------
 From  1600  To  4390 DY= 2,163.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4389
    Angle/Node @2= .00 4388
 ------------------------------------------------------------------------
 From  4390  To  4830 DZ= 325.000 mm.
 GENERAL
    T1= 155 C
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------
 From  4830  To  1610 DZ= 325.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1609
    Angle/Node @2= .00 1608
 ------------------------------------------------------------------------
 From  1610  To  4800  DX= -1,067.000 mm.
 ------------------------------------------------------------------------
 From  4800  To  1620  DX= -1,173.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1619
    Angle/Node @2= .00 1618
 ------------------------------------------------------------------------
 From  1620  To  1640 DY= -510.000 mm.
 ------------------------------------------------------------------------
 From  1640  To  1660 DY= -126.000 mm.
    Element Name= FLANGE_NOFLG_600
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1660  ANC   Cnode  1661
 ------------------------------------------------------------------------
 From  1661  To  1680 DY= -101.600 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 21.946 mm.   Element Name= FLANGE_NOFLG_600
 GENERAL
    T1= 155 C   T2= 129 C   T3= 129 C   P1= 2,200.0500 KPa
```

INPUT LISTING
```
    PHyd= 2,860.0652 KPa   Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1680  To  1700 DY= -127.000 mm.
 RESTRAINTS
    Node  1700  ANC   Cnode  1720
 EQUIPMENT LIMITS
    Nozzle Node = 1700
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1720  To  4410 DY= -240.000 mm.
 GENERAL
    P1= 2,200.0500 KPa
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  4410  To  1760 DY= -240.000 mm.
 GENERAL
    T1= 155 C   T2= 60 C   T3= 60 C
 RIGID  Weight= .00 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1780  To  1800 DY= -127.000 mm.
 GENERAL
    T1= 60 C
 RESTRAINTS
    Node  1780  ANC   Cnode  1760
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 EQUIPMENT LIMITS
    Nozzle Node = 1780
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1800  To  1820 DY= -101.600 mm.
    Element Name= FLANGE_NOFLG_150
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1820  ANC   Cnode  1821
 ---------------------------------------------------------------------------
```

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INPUT LISTING

```
 From  1740  To  4400 DZ= 265.000 mm.
 GENERAL
    T1= 155 C   T2= 94 C   T3= 94 C
 RIGID  Weight= 658.96 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4400  To  1840 DZ= 435.000 mm.
 RIGID  Weight= 1,591.15 N.
 RESTRAINTS
    Node  1840  Y   Mu = .10
    Node  1840  X   Mu = .30
    Node  1840  Z   Gap= 6.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1840  To  1860  DX= -5,100.000 mm.
 RIGID  Weight=10,500.52 N.
 RESTRAINTS
    Node  1860  Y   Mu = .10
    Node  1860  Z   Gap= 6.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1860  To  1880 DZ= -1,400.000 mm.
 RIGID  Weight= 4,500.22 N.
 RESTRAINTS
    Node  1880  Y   Mu = .10
    Node  1880  Z   Gap= 6.000 mm.
 ------------------------------------------------------------------------------
 From  1880  To  1900  DX= 5,100.000 mm.
 RIGID  Weight=10,500.52 N.
 RESTRAINTS
    Node  1900  Y   Mu = .10
    Node  1900  X
    Node  1900  Z   Gap= 6.000 mm.
 ------------------------------------------------------------------------------
 From  1900  To  4410 DZ= 435.000 mm.
 RIGID  Weight= 1,591.15 N.
 ------------------------------------------------------------------------------
 From  4410  To  1740 DZ= 265.000 mm.
 RIGID  Weight= 658.96 N.
 ------------------------------------------------------------------------------
 From  1821  To  1920 DY= -126.420 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 3.404 mm.   Cor= .0000 mm.
    Element Name= FLANGE_NOFLG_150
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 188,652,912 KPa
    EH2= 192,364,096 KPa   EH3= 192,364,096 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000183 kg./cu.cm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
```

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INPUT LISTING
B31.3 (2016) Cycle Max Switch = --- Sc= 115,142 KPa
Sh1= 115,142 KPa Sh2= 115,142 KPa Sh3= 115,142 KPa Sh4= 115,142 KPa
Sh5= 115,142 KPa Sh6= 115,142 KPa Sh7= 115,142 KPa Sh8= 115,142 KPa
Sh9= 115,142 KPa Sy= 172,369 KPa

From 1920 To 1930 DY= -229.000 mm.
GENERAL
P1= 2,200.0500 KPa Fluid Den= .0000183 kg./cu.cm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1929

From 1930 To 1940 DX= -611.000 mm. DY= .000 mm.
SINGLE FLANGED BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1939

From 1940 To 1945 DY= .000 mm. DZ= -650.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1944
Angle/Node @2= .00 1943

From 1945 To 1950 DY= -557.000 mm. DZ= .000 mm.
SIF's & TEE's
Node 1950 Welding Tee

From 1950 To 4550 DZ= -245.000 mm.

From 1950 To 4670 DZ= 457.500 mm.
RESTRAINTS
Node 4670 +Y

From 4670 To 4560 DZ= 457.500 mm.
SIF's & TEE's
Node 4560 Welding Tee

From 4560 To 4630 DX= -372.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4629
Angle/Node @2= .00 4628

From 4630 To 4640 DZ= -1,097.000 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4639
Angle/Node @2= .00 4638

From 4640 To 4690 DX= -828.500 mm. DY= -4.145 mm.
RESTRAINTS
Node 4690 Y

From 4690 To 4650 DX= -828.500 mm. DY= -4.145 mm.
BEND at "TO" end
Radius= 228.600 mm. (LONG) Bend Angle= 89.713 Angle/Node @1= 44.86 4649
Angle/Node @2= .00 4648

From 4650 To 4660 DY= -907.500 mm.

From 4560 To 4680 DZ= 457.500 mm.

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```
 RESTRAINTS
    Node  4680  +Y
 ------------------------------------------------------------------------------
 From  4680  To  4570 DZ= 457.500 mm.
 SIF's & TEE's
    Node  4570   Welding Tee
 ------------------------------------------------------------------------------
 From  4570  To  4580 DZ= 245.000 mm.
 ------------------------------------------------------------------------------
 From  4570  To  4590 DY= 557.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4589
    Angle/Node @2= .00 4588
 ------------------------------------------------------------------------------
 From  4590  To  4600 DZ= -650.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4599
    Angle/Node @2= .00 4598
 ------------------------------------------------------------------------------
 From  4600  To  4610  DX= 611.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4609
    Angle/Node @2= .00 4608
 ------------------------------------------------------------------------------
 From  4610  To  4620 DY= 229.000 mm.
 ------------------------------------------------------------------------------
 From  4541  To  4620 DY= -126.420 mm.
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  4660  To  1980 DY= -907.500 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 89.706   Angle/Node @1= 44.85 1979
    Angle/Node @2= .00 1978
 ------------------------------------------------------------------------------
 From  1980  To  1985 DY= -3.070 mm.  DZ= -599.000 mm.
 RESTRAINTS
    Node  1985  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1985  To  1990 DY= -3.070 mm.  DZ= -599.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1989
    Angle/Node @2= .00 1988
 ------------------------------------------------------------------------------
 From  1990  To  2000  DX= 1,952.000 mm.
 RESTRAINTS
    Node  2000  +Y   Mu = .30
    Node  2000  Z
 ------------------------------------------------------------------------------
 From  1260  To  2140 DY= 1,544.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 2,200.0500 KPa
    PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 194,667,600 KPa   EH2= 196,617,104 KPa   EH3= 196,617,104 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
```

INPUT LISTING
```
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000154 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2139
    Angle/Node @2= .00 2138
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  2140  To  2160  DX= .000 mm.  DZ= -429.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2159
    Angle/Node @2= .00 2158
 ---------------------------------------------------------------------------
 From  2160  To  2180  DX= -4,032.000 mm.
 RESTRAINTS
    Node  2180  +Y
    Node  2180  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  2180  To  2190  DX= -9,819.000 mm.
 RESTRAINTS
    Node  2190  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  2190  To  2200  DX= -388.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2199
    Angle/Node @2= .00 2198
 ---------------------------------------------------------------------------
 From  2200  To  2220 DZ= 927.500 mm.
 RESTRAINTS
    Node  2220  +Y   Mu = .30
    Node  2220  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  2220  To  2280 DZ= 927.500 mm.
 SIF's & TEE's
    Node  2280   Welding Tee
 ---------------------------------------------------------------------------
 From  2280  To  2290  DX= .000 mm.  DZ= 500.000 mm.
 ---------------------------------------------------------------------------
 From  2280  To  2320 DY= 290.000 mm.
 RESTRAINTS
    Node  2320  +Y
 ---------------------------------------------------------------------------
 From  2320  To  2330 DY= 873.000 mm.
 SIF's & TEE's
    Node  2330   Welding Tee
 ---------------------------------------------------------------------------
 From  2330  To  2340 DY= 86.000 mm.
 ---------------------------------------------------------------------------
 From  2340  To  2346 DY= 82.550 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Element Name= GATE_FLG_600
    Insul Thk= .000 mm.
```

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```
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  2346  To  2352 DY= 212.000 mm.
 RIGID  Weight= 258.00 N.
 ------------------------------------------------------------------------------
 From  2352  To  2360 DY= 82.550 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  2360  To  2380 DY= 250.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  2380  To  2400 DY= 90.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 5.537 mm.
 ------------------------------------------------------------------------------
 From  2400  To  2410 DY= 73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  2410  To  2420 DY= 73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 FORCES & MOMENTS
    Node  2420   FY1= 1,000.05 N.   FZ1= -2,000.10 N.
 ------------------------------------------------------------------------------
 From  2420  To  2430  DX= -82.550 mm.  DZ= .000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  2430  To  2440  DX= -82.550 mm.  DZ= .000 mm.
 RIGID  Weight= 71.17 N.
 ------------------------------------------------------------------------------
 From  2440  To  2460  DX= -73.025 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.   Cor= 6.0000 mm.
    Element Name= FLANGE_FLG_150
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 54.49 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2460  To  2480  DX= -140.000 mm.  DY= -39.700 mm.
 REDUCER
```

INPUT LISTING
```
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------------
 From  2480  To  2500  DX= -354.500 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2500  +Y   Mu = .30
    Node  2500  Z   Gap= 3.000 mm.
    Node  2500  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  2500  To  2520  DX= -573.500 mm.  DZ= .000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2519
    Angle/Node @2= .00 2518
 ------------------------------------------------------------------------------
 From  2520  To  2540 DY= -229.000 mm.
 ------------------------------------------------------------------------------
 From  2540  To  2546 DY= -92.075 mm.
    Element Name= BALL_FLG_150
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  2546  To  2552 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ------------------------------------------------------------------------------
 From  2552  To  2560 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  2560  To  2570 DY= -221.000 mm.
 ------------------------------------------------------------------------------
 From  2570  To  2580 DY= -1,120.000 mm.
 SIF's & TEE's
    Node  2580   Welding Tee
 ------------------------------------------------------------------------------
 From  2580  To  2600  DX= .000 mm.  DZ= -674.000 mm.
 RESTRAINTS
    Node  2600  +Y
 ------------------------------------------------------------------------------
 From  2290  To  2300 DZ= 500.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 2,200.0500 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000154 kg./cu.cm.   Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2301
    Angle/Node @2= .00 2302
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2300  To  2620 DY= 290.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= 3.0000 mm.
```

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```
 GENERAL
    T1= 155 C   T2= 125 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Fluid Den= .0000154 kg./cu.cm.   Insul Thk= .000 mm.
 RESTRAINTS
    Node  2620  +Y
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2620  To  2640 DY= 958.000 mm.
 ------------------------------------------------------------------------------
 From  2640  To  2646 DY= 73.025 mm.
    Element Name= GATE_FLG_600
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  2646  To  2652 DY= 212.000 mm.
 RIGID  Weight= 258.00 N.
 ------------------------------------------------------------------------------
 From  2652  To  2660 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  2660  To  2680 DY= 250.000 mm.
 ------------------------------------------------------------------------------
 From  2680  To  2700 DY= 90.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 5.537 mm.
 ------------------------------------------------------------------------------
 From  2700  To  2710 DY= 66.675 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  2710  To  2720 DY= 66.675 mm.
 RIGID  Weight= 31.14 N.
 FORCES & MOMENTS
    Node  2720   FX2= 2,000.10 N.   FY2= 1,000.05 N.   FZ2= .00 N.
 ------------------------------------------------------------------------------
 From  2720  To  2730  DX= -73.025 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 54.49 N.
 ------------------------------------------------------------------------------
 From  2730  To  2740  DX= -73.025 mm.
 RIGID  Weight= 54.49 N.
 ------------------------------------------------------------------------------
 From  2740  To  2760  DX= -82.550 mm.  DZ= .000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.   Cor= 6.0000 mm.
    Element Name= FLANGE_FLG_150
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
```

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INPUT LISTING

```
 RIGID  Weight= 71.17 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2760  To  2780  DX= -140.000 mm.  DY= -39.700 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------------
 From  2780  To  2800  DX= -354.500 mm.  DZ= .000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2800  +Y
    Node  2800  Z
    Node  2800  X
 ------------------------------------------------------------------------------
 From  2800  To  2820  DX= -583.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2819
    Angle/Node @2= .00 2818
 ------------------------------------------------------------------------------
 From  2820  To  2840 DY= -229.000 mm.
 ------------------------------------------------------------------------------
 From  2840  To  2846 DY= -101.600 mm.
    Element Name= BALL_FLG_150
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  2846  To  2852 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ------------------------------------------------------------------------------
 From  2852  To  2860 DY= -101.600 mm.
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  2860  To  2880 DY= -1,290.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2879
    Angle/Node @2= .00 2878
 ------------------------------------------------------------------------------
 From  2880  To  2580  DX= .551 mm.  DY= .000 mm.  DZ= -1,000.000 mm.
 ------------------------------------------------------------------------------
 From  2600  To  2920 DZ= -379.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2919
    Angle/Node @2= .00 2918
 ------------------------------------------------------------------------------
 From  2920  To  2940  DX= -3,185.000 mm.  DY= -6.370 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 89.885   Angle/Node @1= 44.94 2939
    Angle/Node @2= .00 2938
 ------------------------------------------------------------------------------
 From  2940  To  2980 DY= -916.000 mm.
 BEND at "TO" end
```

INPUT LISTING
```
    Radius= 228.600 mm. (LONG)   Bend Angle= 45.040   Angle/Node @1= 22.52 2979
    Angle/Node @2= .00 2978
 ---------------------------------------------------------------------------
 From  2980  To  2030 DY= -710.000 mm.  DZ= 711.000 mm.
 SIF's & TEE's
    Node  2030   <No Type Specified>   SIF(in)= 2.660   SIF(out)= 3.160
 ---------------------------------------------------------------------------
 From  2330  To  3000  DX= .000 mm.  DZ= -77.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 2,200.0500 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000154 kg./cu.cm.   Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  3000  To  3020 DZ= -73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  3020  To  3040 DY= .000 mm.  DZ= -187.000 mm.
 RIGID  Weight= 209.07 N.
 ---------------------------------------------------------------------------
 From  3040  To  3060 DY= .000 mm.  DZ= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  3060  To  3080 DY= .000 mm.  DZ= -77.000 mm.
    Element Name= BALL_FLG_600
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3079
    Angle/Node @2= .00 3078
 ---------------------------------------------------------------------------
 From  3080  To  3100  DX= -377.000 mm.  DY= .000 mm.
 RESTRAINTS
    Node  3100  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  3100  To  3120  DX= -125.000 mm.  DZ= .000 mm.
 RESTRAINTS
    Node  3120  X
 ---------------------------------------------------------------------------
 From  3120  To  3140  DX= -307.000 mm.
 ---------------------------------------------------------------------------
 From  3140  To  3146  DX= -73.025 mm.  DZ= .000 mm.
    Element Name= GLOBE_FLG_600
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  3146  To  3152  DX= -276.000 mm.  DZ= .000 mm.
 RIGID  Weight= 458.17 N.
 ---------------------------------------------------------------------------
 From  3152  To  3160  DX= -66.675 mm.  DZ= .000 mm.
 PIPE
```

INPUT LISTING
```
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  3160  To  3180  DX= -77.000 mm.  DZ= .000 mm.
 PIPE
    Cor= 6.0000 mm.
 GENERAL
    T1= 272 C   P1= 750.0171 KPa   PHyd= 825.0188 KPa
    Fluid Den= .0000015 kg./cu.cm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3179
    Angle/Node @2= .00 3178
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  3180  To  2570 DZ= 487.000 mm.
 SIF's & TEE's
    Node  2570   Welding Tee
 ------------------------------------------------------------------------------
 From  2000  To  4100  DX= 3,995.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 3.404 mm.   Cor= .0000 mm.
 GENERAL
    T1= 155 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 185,780,080 KPa
    EH2= 192,364,096 KPa   EH3= 192,364,096 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000183 kg./cu.cm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4099
    Angle/Node @2= .00 4098
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 114,386 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  4100  To  4120 DY= -11.040 mm.  DZ= 2,207.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4119
    Angle/Node @2= .00 4118
 ------------------------------------------------------------------------------
 From  4120  To  4140  DX= 555.000 mm.  DY= .000 mm.
```

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```
 RESTRAINTS
    Node  4140  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  4140  To  4160  DX= 6,000.000 mm.
 RESTRAINTS
    Node  4160  +Y   Mu = .30
    Node  4160  Z   Mu = .30
 ---------------------------------------------------------------------------
 From  4160  To  4180  DX= 3,596.000 mm.
 ---------------------------------------------------------------------------
 From  4180  To  4200  DX= 101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  4200  ANC   Cnode  4220
 ---------------------------------------------------------------------------
 From  4220  To  4240  DX= 101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ---------------------------------------------------------------------------
 From  4240  To  4260  DX= 150.000 mm.
 RESTRAINTS
    Node  4260  ANC   Cnode  4261
 EQUIPMENT LIMITS
    Nozzle Node = 4260
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,400.42 N.   FB= 8,400.42 N.
    FC= 6,300.31 N.   MA= 3,780.16 N.m.   MB= 2,520.11 N.m.   MC= 3,280.14 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  4261  To  4280  DX= 459.000 mm.
 PIPE
    Dia= 919.480 mm.   Wall= 12.000 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  4280  To  4300 DY= -1,300.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  4300  To  4310 DY= -1,000.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  4310  To  4320 DY= -300.000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  4320  ANC
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ---------------------------------------------------------------------------
 From  8000  To  8010 DZ= -6,000.000 mm.
 PIPE
```

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INPUT LISTING
```
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   P2= .0000 KPa
    PHyd= 900.0205 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 187,335,024 KPa   EH2= 187,335,024 KPa   EH3= 205,934,864 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  8010  +Y   Mu = .30
    Node  8000  +Y   Mu = .30
    Node  8000  X   Gap= 3.000 mm.
    Node  8000  Z   Gap= 3.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  8010  To  8020 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  8020  +Y   Mu = .30
    Node  8020  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  8020  To  8030 DZ= -2,950.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8029
    Angle/Node @2= .00 8028
 ---------------------------------------------------------------------------
 From  8030  To  8040  DX= -6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8039
    Angle/Node @2= .00 8038
 ---------------------------------------------------------------------------
 From  8040  To  8050 DZ= -1,000.000 mm.
 RESTRAINTS
    Node  8050  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  8050  To  8060 DZ= -1,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8059
    Angle/Node @2= .00 8058
 ---------------------------------------------------------------------------
 From  8060  To  8070  DX= 6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 8069
    Angle/Node @2= .00 8068
 ---------------------------------------------------------------------------
 From  8070  To  8080 DZ= -850.000 mm.
 RESTRAINTS
    Node  8080  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  8080  To  8090  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  8090  +Y   Mu = .30
```

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```
    Node  8090  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  8090  To  8100  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  8100  +Y
    Node  8100  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  8100  To  2030 DZ= -2,766.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 750.0171 KPa   PHyd= 1,125.0256 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,335,024 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0001362 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  2030  To  8120 DZ= -3,234.000 mm.
 RESTRAINTS
    Node  8120  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  8120  To  8130 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  8130  +Y   Mu = .30
    Node  8130  X
    Node  8130  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  10  To  20  DX= -114.300 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 8.179 mm.   Cor= 3.0000 mm.
    Element Name= FLANGE_FLG_150
 GENERAL
    T1= 85 C   T2= 36 C   T3= 36 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 199,086,608 KPa
    EH2= 202,163,808 KPa   EH3= 202,163,808 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000181 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001362 kg./cu.cm.
 RIGID  Weight= 302.48 N.
 DISPLACEMENTS
    Node  20   DX1= 4.000 mm.   DY1= 2.100 mm.   DZ1= .900 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  25  To  40  DX= -114.300 mm.
```

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INPUT LISTING

```
 RIGID  Weight= 302.48 N.
 RESTRAINTS
    Node  25  ANC   Cnode  20
 EQUIPMENT LIMITS
    Nozzle Node = 25   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,500.42 N.
    FB= 8,500.42 N.   FC= 6,500.32 N.   MA= 6,000.25 N.m.   MB= 2,000.08 N.m.
    MC= 5,000.21 N.m.   Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  4700  To  4710 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  4710  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
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 MATERIAL Changes:
    40              60             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   640             660             Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   620             680             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   820             840             Mat= (383)A516 70   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   280             880             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  1821            1920             Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                   v = .292   Density= .0080 kg./cu.cm.
  1260            2140             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  2000            4100             Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                   v = .292   Density= .0080 kg./cu.cm.
  8000            8010             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  8100            2030             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
    10              20             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  4700            4710             Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
```

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INPUT LISTING
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JOBNAME: D:\BINAK PRO\STRESS REPORT -D03\BNK-GCS-CN-035-D03\BNK-GCS-CN-035-D03

ALLOWABLE STRESS Changes

40	60	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
140	160	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
120	180	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
540	560	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
520	4330	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
640	660	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
620	680	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 137,895 KPa	Sh1= 137,895 KPa
		Sh2= 137,895 KPa	Sh3= 137,895 KPa
		Sh4= 137,895 KPa	Sh5= 137,895 KPa
		Sh6= 137,895 KPa	Sh7= 137,895 KPa
		Sh8= 137,895 KPa	Sh9= 137,895 KPa
		Sy= 241,316 KPa	
820	840	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 160,648 KPa	Sh1= 160,062 KPa
		Sh2= 160,648 KPa	Sh3= 160,648 KPa

INPUT LISTING

```
                                Sh4= 160,648 KPa   Sh5= 160,648 KPa
                                Sh6= 160,648 KPa   Sh7= 160,648 KPa
                                Sh8= 160,648 KPa   Sh9= 160,648 KPa
                                Sy= 262,001 KPa
   280              880         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   900              910         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1020             1040         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1220             1230         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1440             1460         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1420             1480         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4481             4490         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4400             4510         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
```

INPUT LISTING

```
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4370            1600          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4390            4830          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1661            1680          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4410            1760          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1780            1800          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1740            4400          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1821            1920          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  1260            2140          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
```

INPUT LISTING

```
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2440            2460          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2290            2300          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2300            2620          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2740            2760          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2330            3000          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  3152            3160          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  3160            3180          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2000            4100          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 114,386 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
```

INPUT LISTING

```
                                  Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                  Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                  Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                  Sy= 172,369 KPa
  4310            4320            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 115,142 KPa   Sh1= 115,142 KPa
                                  Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                  Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                  Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                  Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                  Sy= 172,369 KPa
  8000            8010            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,365 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  8100            2030            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,365 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
    10              20            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  4700            4710            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
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BEND ELEMENTS
    40              60            Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 59
                                  Angle/Node @2= .00 58
    60              80            Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 79
   120             180            Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 179
   480             500            Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 499   Angle/Node @2= .00 498
   520            4330            Radius= 304.800 mm. (LONG)
```

INPUT LISTING

		Bend Angle= 90.000 Angle/Node @1= 45.00 4329 Angle/Node @2= .00 4328
4340	580	Radius= 304.800 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 579 Angle/Node @2= .00 578
620	680	Radius= 304.800 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 679 Angle/Node @2= .00 678
280	880	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 879 Angle/Node @2= .00 878
940	960	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 959 Angle/Node @2= .00 958
960	980	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 979 Angle/Node @2= .00 978
1100	1120	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1119 Angle/Node @2= .00 1118
1120	1140	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1139 Angle/Node @2= .00 1138
1180	1200	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1199 Angle/Node @2= .00 1198
1380	1400	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1399 Angle/Node @2= .00 1398
1420	1480	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1479 Angle/Node @2= .00 1478
1520	1540	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1539 Angle/Node @2= .00 1538
1560	1580	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1579 Angle/Node @2= .00 1578
4420	4440	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 4439 Angle/Node @2= .00 4438
4440	4450	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 4449 Angle/Node @2= .00 4448
4820	4455	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 4454 Angle/Node @2= .00 4453
4810	4460	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 4459 Angle/Node @2= .00 4458
4370	1600	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 1599 Angle/Node @2= .00 1598
1600	4390	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 4389 Angle/Node @2= .00 4388

INPUT LISTING

4830	1610	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1609 Angle/Node @2= .00 1608
4800	1620	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1619 Angle/Node @2= .00 1618
1920	1930	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1929
1930	1940	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1939
1940	1945	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1944 Angle/Node @2= .00 1943
4560	4630	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4629 Angle/Node @2= .00 4628
4630	4640	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4639 Angle/Node @2= .00 4638
4690	4650	Radius= 228.600 mm. (LONG) Bend Angle= 89.713 Angle/Node @1= 44.86 4649 Angle/Node @2= .00 4648
4570	4590	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4589 Angle/Node @2= .00 4588
4590	4600	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4599 Angle/Node @2= .00 4598
4600	4610	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4609 Angle/Node @2= .00 4608
4660	1980	Radius= 228.600 mm. (LONG) Bend Angle= 89.706 Angle/Node @1= 44.85 1979 Angle/Node @2= .00 1978
1985	1990	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1989 Angle/Node @2= .00 1988
1260	2140	Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2139 Angle/Node @2= .00 2138
2140	2160	Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2159 Angle/Node @2= .00 2158
2190	2200	Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2199 Angle/Node @2= .00 2198
2500	2520	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2519 Angle/Node @2= .00 2518
2290	2300	Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2301 Angle/Node @2= .00 2302
2800	2820	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00

INPUT LISTING

```
                                  2819   Angle/Node @2= .00 2818
  2860            2880              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2879   Angle/Node @2= .00 2878
  2600            2920              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  2919   Angle/Node @2= .00 2918
  2920            2940              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 89.885   Angle/Node @1= 44.94
                                  2939   Angle/Node @2= .00 2938
  2940            2980              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 45.040   Angle/Node @1= 22.52
                                  2979   Angle/Node @2= .00 2978
  3060            3080              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  3079   Angle/Node @2= .00 3078
  3160            3180              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  3179   Angle/Node @2= .00 3178
  2000            4100              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4099   Angle/Node @2= .00 4098
  4100            4120              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4119   Angle/Node @2= .00 4118
  8020            8030              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  8029   Angle/Node @2= .00 8028
  8030            8040              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  8039   Angle/Node @2= .00 8038
  8050            8060              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  8059   Angle/Node @2= .00 8058
  8060            8070              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  8069   Angle/Node @2= .00 8068
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RIGIDS
   180             140          RIGID  Weight= .00 N.
   200             220          RIGID  Weight= 302.48 N.
   220             240          RIGID  Weight= 302.48 N.
   320             340          RIGID  Weight= 302.48 N.
   340             360          RIGID  Weight= 1,023.41 N.
   360             380          RIGID  Weight= 302.48 N.
   420             440          RIGID  Weight= 302.48 N.
   440             460          RIGID  Weight= 302.48 N.
   520             540          RIGID  Weight= .00 N.
   620             640          RIGID  Weight= .00 N.
   700             720          RIGID  Weight= 302.48 N.
   740             760          RIGID  Weight= 302.48 N.
   780             800          RIGID  Weight= .00 N.
   820             840          RIGID  Weight= .00 N.
```

INPUT LISTING

840	860	RIGID	Weight= .00 N.
900	910	RIGID	Weight= 44.48 N.
910	920	RIGID	Weight= 66.72 N.
920	930	RIGID	Weight= 355.86 N.
930	940	RIGID	Weight= 44.48 N.
1060	1080	RIGID	Weight= 191.27 N.
1080	1100	RIGID	Weight= 191.27 N.
1120	4700	RIGID	Weight= .00 N.
1220	1230	RIGID	Weight= 191.27 N.
1231	1240	RIGID	Weight= 191.27 N.
1300	1320	RIGID	Weight= 191.27 N.
1320	1340	RIGID	Weight= 1,850.46 N.
1340	1360	RIGID	Weight= 191.27 N.
1420	1440	RIGID	Weight= .00 N.
4470	4480	RIGID	Weight= 191.27 N.
4481	4490	RIGID	Weight= 191.27 N.
4501	4400	RIGID	Weight= .00 N.
4400	4510	RIGID	Weight= .00 N.
4530	4540	RIGID	Weight= 191.27 N.
1640	1660	RIGID	Weight= 191.27 N.
1661	1680	RIGID	Weight= 191.27 N.
1720	4410	RIGID	Weight= .00 N.
4410	1760	RIGID	Weight= .00 N.
1800	1820	RIGID	Weight= 191.27 N.
1740	4400	RIGID	Weight= 658.96 N.
4400	1840	RIGID	Weight= 1,591.15 N.
1840	1860	RIGID	Weight=10,500.52 N.
1860	1880	RIGID	Weight= 4,500.22 N.
1880	1900	RIGID	Weight=10,500.52 N.
1900	4410	RIGID	Weight= 1,591.15 N.
4410	1740	RIGID	Weight= 658.96 N.
1821	1920	RIGID	Weight= 191.27 N.
4541	4620	RIGID	Weight= 191.27 N.
2340	2346	RIGID	Weight= 71.17 N.
2346	2352	RIGID	Weight= 258.00 N.
2352	2360	RIGID	Weight= 71.17 N.
2400	2410	RIGID	Weight= 44.48 N.
2410	2420	RIGID	Weight= 44.48 N.
2420	2430	RIGID	Weight= 71.17 N.
2430	2440	RIGID	Weight= 71.17 N.
2440	2460	RIGID	Weight= 54.49 N.
2540	2546	RIGID	Weight= 111.21 N.
2546	2552	RIGID	Weight= 1,005.30 N.
2552	2560	RIGID	Weight= 111.21 N.
2640	2646	RIGID	Weight= 44.48 N.
2646	2652	RIGID	Weight= 258.00 N.
2652	2660	RIGID	Weight= 44.48 N.
2700	2710	RIGID	Weight= 31.14 N.
2710	2720	RIGID	Weight= 31.14 N.
2720	2730	RIGID	Weight= 54.49 N.
2730	2740	RIGID	Weight= 54.49 N.
2740	2760	RIGID	Weight= 71.17 N.
2840	2846	RIGID	Weight= 191.27 N.
2846	2852	RIGID	Weight= 1,005.30 N.
2852	2860	RIGID	Weight= 191.27 N.
3000	3020	RIGID	Weight= 44.48 N.

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INPUT LISTING

3020	3040	RIGID	Weight= 209.07 N.
3040	3060	RIGID	Weight= 44.48 N.
3140	3146	RIGID	Weight= 44.48 N.
3146	3152	RIGID	Weight= 458.17 N.
3152	3160	RIGID	Weight= 31.14 N.
4180	4200	RIGID	Weight= 191.27 N.
4220	4240	RIGID	Weight= 191.27 N.
4261	4280	RIGID	Weight= .00 N.
4280	4300	RIGID	Weight= .00 N.
4300	4310	RIGID	Weight= .00 N.
4310	4320	RIGID	Weight= .00 N.
10	20	RIGID	Weight= 302.48 N.
25	40	RIGID	Weight= 302.48 N.

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SIF's & TEE's

140	160	Node 140	Unreinforced Tee
260	280	Node 280	Weldolet
540	560	Node 540	Unreinforced Tee
1000	1020	Node 1020	Weldolet
1020	1260	Node 1260	Welding Tee
1440	1460	Node 1440	Unreinforced Tee
1580	4350	Node 4350	Welding Tee
4360	4370	Node 4370	Welding Tee
1945	1950	Node 1950	Welding Tee
4670	4560	Node 4560	Welding Tee
4680	4570	Node 4570	Welding Tee
2220	2280	Node 2280	Welding Tee
2320	2330	Node 2330	Welding Tee
2570	2580	Node 2580	Welding Tee
2980	2030	Node 2030	<No Type Specified>
		SIF(in)= 2.660	SIF(out)= 3.160
3180	2570	Node 2570	Welding Tee

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REDUCERS

2380	2400	Diam2= 60.325 mm.	Wall2= 5.537 mm.
2460	2480	Diam2= 168.275 mm.	Wall2= 10.973 mm.
2680	2700	Diam2= 60.325 mm.	Wall2= 5.537 mm.
2760	2780	Diam2= 168.275 mm.	Wall2= 10.973 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
160	-X				.30	1.000	.000	.000
160	Z	121				.000	.000	1.000
121	+Y				.10	.000	1.000	.000
160	X	121				1.000	.000	.000
300	+Y				.30	.000	1.000	.000
400	Y				.30	.000	1.000	.000

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400	Z				.000	.000	1.000
480	Y			.30	.000	1.000	.000
480	Z				.000	.000	1.000
560	+Y			.30	.000	1.000	.000
560	Z				.000	.000	1.000
4340	+Y			.30	.000	1.000	.000
660	+Y	800		.30	.000	1.000	.000
720	ANC	740			.000	.000	.000
780	ANC	820			.000	.000	.000
860	ANC				.000	.000	.000
1040	+Y			.30	.000	1.000	.000
1230	ANC	1231			.000	.000	.000
1280	Y			.30	.000	1.000	.000
1280	Z				.000	.000	1.000
1380	Y			.30	.000	1.000	.000
1380	Z				.000	.000	1.000
1460	+Y			.30	.000	1.000	.000
1460	Z				.000	.000	1.000
1500	+Y				.000	1.000	.000
1500	Z				.000	.000	1.000
1520	+Y			.30	.000	1.000	.000
1520	Z		3.00		.000	.000	1.000
1560	+Y			.30	.000	1.000	.000
1560	X		3.00	.30	1.000	.000	.000
4360	+Y			.30	.000	1.000	.000
4385	+Y			.30	.000	1.000	.000
4480	ANC	4481			.000	.000	.000
4500	ANC	4501			.000	.000	.000
4520	ANC	4510			.000	.000	.000
4540	ANC	4541			.000	.000	.000
1660	ANC	1661			.000	.000	.000
1700	ANC	1720			.000	.000	.000
1780	ANC	1760			.000	.000	.000
1820	ANC	1821			.000	.000	.000
1840	Y			.10	.000	1.000	.000
1840	X			.30	1.000	.000	.000
1840	Z		6.00	.30	.000	.000	1.000
1860	Y			.10	.000	1.000	.000
1860	Z		6.00	.30	.000	.000	1.000
1880	Y			.10	.000	1.000	.000
1880	Z		6.00		.000	.000	1.000
1900	Y			.10	.000	1.000	.000
1900	X				1.000	.000	.000
1900	Z		6.00		.000	.000	1.000
4670	+Y				.000	1.000	.000
4690	Y				.000	1.000	.000
4680	+Y				.000	1.000	.000
1985	+Y			.30	.000	1.000	.000
2000	+Y			.30	.000	1.000	.000
2000	Z				.000	.000	1.000
2180	+Y				.000	1.000	.000
2180	Z		3.00		.000	.000	1.000
2190	+Y			.30	.000	1.000	.000
2220	+Y			.30	.000	1.000	.000
2220	X		3.00		1.000	.000	.000
2320	+Y				.000	1.000	.000

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INPUT LISTING

```
    2500   +Y                                        .30    .000  1.000   .000
    2500   Z                          3.00                  .000   .000  1.000
    2500   X                          3.00                1.000   .000   .000
    2600   +Y                                                .000  1.000   .000
    2620   +Y                                                .000  1.000   .000
    2800   +Y                                                .000  1.000   .000
    2800   Z                                                 .000   .000  1.000
    2800   X                                                1.000   .000   .000
    3100   +Y                                        .30     .000  1.000   .000
    3120   X                                                1.000   .000   .000
    4140   +Y                                        .30     .000  1.000   .000
    4160   +Y                                        .30     .000  1.000   .000
    4160   Z                                         .30     .000   .000  1.000
    4200   ANC     4220                                      .000   .000   .000
    4260   ANC     4261                                      .000   .000   .000
    4320   ANC                                               .000   .000   .000
    8010   +Y                                        .30     .000  1.000   .000
    8000   +Y                                        .30     .000  1.000   .000
    8000   X                          3.00                1.000   .000   .000
    8000   Z                          3.00                  .000   .000  1.000
    8020   +Y                                        .30     .000  1.000   .000
    8020   X                          3.00                1.000   .000   .000
    8050   +Y                                        .30     .000  1.000   .000
    8080   +Y                                        .30     .000  1.000   .000
    8090   +Y                                        .30     .000  1.000   .000
    8090   X                          3.00                1.000   .000   .000
    8100   +Y                                                .000  1.000   .000
    8100   X                          3.00                1.000   .000   .000
    8120   +Y                                        .30     .000  1.000   .000
    8130   +Y                                        .30     .000  1.000   .000
    8130   X                                                1.000   .000   .000
    8130   Z                          3.00                  .000   .000  1.000
      25   ANC       20                                      .000   .000   .000
    4710   +Y                                        .30     .000  1.000   .000
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DISPLACEMENTS
 1231            1240             Node  1231  DX1= 4.000 mm.  DY1= 2.100 mm.
                                  DZ1= .900 mm.
   10              20             Node    20  DX1= 4.000 mm.  DY1= 2.100 mm.
                                  DZ1= .900 mm.
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HANGER CONTROL AND LOCATION DATA

                                   No. of Hanger Design Load Cases = 1
                                   Actual Cold Load Flag = 0.0
                                   Short Range Spring Flag = 1
                                   Allowed Load Variation (%) = 25.0000
                                   Default Hanger Table = 5

  140             160              Hanger Node = 160
                                   Hanger Connecting Node = 121
                                   Available Space = -1,000.0000 mm.
```

INPUT LISTING

```
                                    Allowed Load Variation = 25.0000
                                    No. Hangers = 0.0   Short Range Flag = -1
                                    User Operating Load = .00 N.   Free Node = 0
                                    Free Node = 0   Free Code = 0.0
                                    Spring Rate = .00 N./cm.
                                    Theoretical Cold Load = .00 N.

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 EQUIPMENT LIMITS
   760             780             Nozzle Node = 780


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,480.19 N.m.   MC= 5,820.25 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  1220            1230            Nozzle Node = 1230


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,500.42 N.   FB= 8,500.42 N.
    FC= 6,500.32 N.   MA= 6,000.25 N.m.   MB= 2,000.08 N.m.   MC= 5,000.21 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
  4490            4500            Nozzle Node = 4500


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  4520            4530            Nozzle Node = 4520


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  1680            1700            Nozzle Node = 1700


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  1780            1800            Nozzle Node = 1780


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  4240            4260            Nozzle Node = 4260
```

INPUT LISTING

```
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,400.42 N.   FB= 8,400.42 N.
    FC= 6,300.31 N.   MA= 3,780.16 N.m.   MB= 2,520.11 N.m.   MC= 3,280.14 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
    25              40              Nozzle Node = 25


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,500.42 N.   FB= 8,500.42 N.
    FC= 6,500.32 N.   MA= 6,000.25 N.m.   MB= 2,000.08 N.m.   MC= 5,000.21 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
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FORCES AND MOMENTS
 2410            2420              Node  2420   FY1= 1,000.05 N.
                                   FZ1= -2,000.10 N.
 2710            2720              Node  2720   FX2= 2,000.10 N.
                                   FY2= 1,000.05 N.   FZ2= .00 N.
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UNIFORM LOAD Changes
   40              60             Vector1 in G-s
                                  X1 Dir = .26 g's  Y1 Dir = .00 g's
                                  Z1 Dir = .00 g's
                                  Vector2 in G-s
                                  X2 Dir = .00 g's  Y2 Dir = .12 g's
                                  Z2 Dir = .00 g's
                                  Vector3 in G-s
                                  X3 Dir = .00 g's  Y3 Dir = .00 g's
                                  Z3 Dir = .26 g's
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INPUT UNITS USED...

UNITS=    SI (m NOM/SCH INPUT= ON
      LENGTH             inches        x     25.400   =   mm.
      FORCE              pounds        x      4.448   =    N.
      MASS(dynamics)     pounds        x      0.454   =   Kg.
      MOMENTS(INPUT)     inch-pounds   x      0.113   =    N.m.
      MOMENTS(OUTPUT)    inch-pounds   x      0.113   =    N.m.
      STRESS             lbs./sq.in.   x      6.895   =      KPa
      TEMP. SCALE        degrees F.    x      0.556   =   C
      PRESSURE           psig          x      6.895   =      KPa
      ELASTIC MODULUS    lbs./sq.in.   x      6.895   =      KPa
      PIPE DENSITY       lbs./cu.in.   x      0.028   =   kg./cu.cm.
      INSULATION DENS.   lbs./cu.in.   x      0.028   =   kg./cu.cm.
      FLUID DENSITY      lbs./cu.in.   x      0.028   =   kg./cu.cm.
      TRANSL. STIF       lbs./in.      x      1.751   =   N./cm.
      ROTATIONAL STIF    in.lb./deg.   x      0.113   =    N.m./deg
      UNIFORM LOAD       lb./in.       x      1.751   =   N./cm.
      G LOAD             g's           x      1.000   =   g's
```

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INPUT LISTING

WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS =	NO
MISSING MASS ZPA =	EXTRACTED
MIN WALL MILL TOLERANCE =	12.5000
WRC-107 VERSION =	MAR 79 1B1/2B1
WRC-107 INTERPOLATION =	LAST VALUE
DEFAULT AMBIENT TEMPERATURE=	21.1111 C
BOURDON PRESSURE=	NONE
COEFFICIENT OF FRICTION (MU) =	0.000000
INCLUDE SPRG STIF IN HGR OPE =	NO
INCLUDE INSULATION IN HYDROTEST =	NO
REDUCED INTERSECTION =	B31.1(POST1980)
USE WRC329	NO
NO REDUCED SIF FOR RFT AND WLT	NO
B31.1 REDUCED Z FIX =	YES
CLASS 1 BRANCH FLEX	NO
ALL STRESS CASES CORRODED =	NO
ADD TORSION IN SL STRESS =	DEFAULT
ADD F/A IN STRESS =	DEFAULT
OCCASIONAL LOAD FACTOR =	0.000000
DEFAULT CODE =	B31.3
B31.3 SUS CASE SIF FACTOR =	0.000000
ALLOW USERS BEND SIF =	NO

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INPUT LISTING

```
  USE SCHNEIDER                      NO
  YIELD CRITERION STRESS =           MAX 3D SHEAR
  USE PD/4T                           NO
  BASE HOOP STRESS ON ? =             ID
  EN13480 USE IN OUTPLANE SIFS=       NO
  LIBERAL EXPANSION ALLOWABLE=       YES
  B31.3 SEC 319.2.3C SAXIAL=         Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=    DEFAULT
  IMPLEMENT B313 APP-P                NO
  IMPLEMENT B313 CODE CASE 178       YES
  IGNORE B31.1/B31.3 Wc FACTOR=      YES
  USE FRP SIF =                      YES
  USE FRP FLEX =                     YES
  BS 7159 Pressure Stiffening=       Design Strain
  FRP Property Data File=            CAESAR.FRP
  FRP Emod (axial) =                  0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =       0.250000
  FRP Ea/Eh*Vh/a =                    0.152730
  FRP Laminate Type =                THREE
  FRP Alpha =                          21.6000              C
  FRP Density =                       0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =    NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....     1.000
    Bourdon Option .............      .000
    Loop Closure Flag ..........     2.000
    Thermal Bowing Delta Temp ..      .000 C
    Liberal Allowable Flag .....     1.000
    Uniform Load Option ........     1.000

    Ambient Temperature ........    20.997 C
    Plastic (FRP) Alpha ........    21.600
    Plastic (FRP) GMOD/EMODa ...      .250
    Plastic (FRP) Laminate Type.     3.000
    Eqn Optimizer ..............      .000
    Node Selection .............      .000
    Eqn Ordering ...............      .000
    Collins ....................      .000
    Degree Determination .......      .000
    User Eqn Control ...........      .000
    North Direction ............       -X
 CAESAR II 2018  Ver.10.00.00.7700,  (Build 170726)  MAY 19,2024  14:58:30

 COORDINATE REPORT
          /--------------------(mm.)----------------------/
  NODE           X              Y              Z
    40          .000          .000          .000
    60      -805.000          .000          .000
    80      -805.000          .000     -1690.000
   100      -805.000     -1410.000     -1690.000
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:58
Job:: BNK-GCS-CN-035-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

120	-805.000	-2524.000	-1690.000
180	-805.000	-2830.000	-1690.000
140	-733.158	-2901.842	-1690.000
160	-733.158	-3101.842	-1690.000
120	-805.000	-2524.000	-1690.000
180	-805.000	-2830.000	-1690.000
200	-1111.000	-2830.000	-1690.000
220	-1225.300	-2830.000	-1690.000
240	-1339.600	-2830.000	-1690.000
260	-1737.600	-2830.000	-1690.000
280	-2037.600	-2830.000	-1690.000
300	-2537.600	-2830.000	-1690.000
320	-2713.600	-2830.000	-1690.000
340	-2827.900	-2830.000	-1690.000
360	-3414.900	-2830.000	-1690.000
380	-3529.200	-2830.000	-1690.000
400	-4529.200	-2830.000	-1690.000
420	-5817.000	-2830.000	-1690.000
440	-5931.300	-2830.000	-1690.000
460	-6045.600	-2830.000	-1690.000
480	-7545.600	-2830.000	-1690.000
500	-11005.600	-2830.000	-1690.000
520	-11005.600	-2525.000	-1690.000
540	-11005.600	-2830.000	-1690.000
560	-11005.600	-3130.000	-1690.000
520	-11005.600	-2525.000	-1690.000
4330	-11005.600	1140.000	-1690.000
4340	-11005.600	1140.000	-5065.000
580	-11005.600	1140.000	-8440.000
600	-11735.600	1140.000	-8440.000
620	-12197.600	1140.000	-8440.000
640	-12197.600	1056.000	-8440.000
660	-12197.600	756.000	-8440.000
620	-12197.600	1140.000	-8440.000
680	-12659.600	1140.000	-8440.000
700	-12659.600	835.000	-8440.000
720	-12659.600	720.700	-8440.000
760	-12659.600	606.400	-8440.000
780	-12659.600	425.000	-8440.000
780	-12659.600	425.000	-8440.000
660	-12197.600	756.000	-8440.000
780	-12659.600	425.000	-8440.000
840	-12659.600	-2640.000	-8440.000
860	-12659.600	-3840.000	-8440.000
280	-2037.600	-2830.000	-1690.000
880	-2037.600	-2307.000	-1690.000
900	-2037.600	-2307.000	-2200.000
910	-2037.600	-2307.000	-2273.025
920	-2037.600	-2307.000	-2574.025
930	-2037.600	-2307.000	-2849.025
940	-2037.600	-2307.000	-2922.050
960	-2037.600	-2307.000	-2999.050
980	-2037.600	-2959.400	-2999.050
1000	-2037.600	-2959.400	-2922.050
1020	-2037.600	-2959.400	-2301.050
1040	-1737.600	-2959.400	-2301.050

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Job:: BNK-GCS-CN-035-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

1060	-1419.600	-2959.400	-2301.050
1080	-1318.000	-2959.400	-2301.050
1100	-1216.400	-2959.400	-2301.050
1120	-226.400	-2959.400	-2301.050
1140	-226.400	-2259.400	-2301.050
1160	-226.400	-2259.400	-1537.717
1120	-226.400	-2959.400	-2301.050
4700	-172.519	-3013.281	-2301.050
1160	-226.400	-2259.400	-1537.717
1180	-226.400	-2259.400	-774.384
1200	-226.400	-2259.400	-11.051
1220	2.600	-2259.400	-11.051
1230	104.200	-2259.400	-11.051
1240	205.800	-2259.400	-11.051
1020	-2037.600	-2959.400	-2301.050
1260	-3245.540	-2959.400	-2301.050
1280	-4520.150	-2959.400	-2301.050
1300	-4889.150	-2959.400	-2301.050
1320	-4990.750	-2959.400	-2301.050
1340	-5443.750	-2959.400	-2301.050
1360	-5545.350	-2959.400	-2301.050
1380	-7518.350	-2959.400	-2301.050
1400	-11344.350	-2959.400	-2301.050
1420	-11344.350	-2730.400	-2301.050
1440	-11344.350	-2959.400	-2301.050
1460	-11344.350	-3259.400	-2301.050
1420	-11344.350	-2730.400	-2301.050
1480	-11344.350	-1575.400	-2301.050
1500	-17104.350	-1575.400	-2301.050
1520	-23104.350	-1575.400	-2301.050
1540	-25585.350	-1575.400	-2301.050
1560	-25585.350	-1575.400	-3733.050
1580	-25585.350	-1575.400	-4362.050
4350	-25585.350	1154.600	-4362.050
4360	-25585.350	1154.600	-4844.550
4370	-25585.350	1154.600	-5277.050
4380	-25585.350	1154.600	-5522.050
4350	-25585.350	1154.600	-4362.050
4385	-25585.350	1154.600	-3879.550
4420	-25585.350	1154.600	-3447.050
4430	-25585.350	1154.600	-3202.050
4420	-25585.350	1154.600	-3447.050
4440	-25113.350	1154.600	-3447.050
4450	-25113.350	3317.600	-3447.050
4820	-25113.350	3317.600	-3772.050
4455	-25113.350	3317.600	-4097.050
4810	-26180.350	3317.600	-4097.050
4460	-27353.350	3317.600	-4097.050
4470	-27353.350	2807.600	-4097.050
4480	-27353.350	2681.600	-4097.050
4490	-27353.350	2580.000	-4097.050
4500	-27353.350	2453.000	-4097.050
4400	-27353.350	2213.000	-4097.050
4520	-27353.350	1973.000	-4097.050
4530	-27353.350	1846.000	-4097.050
4540	-27353.350	1744.400	-4097.050

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Job:: BNK-GCS-CN-035-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

4370	-25585.350	1154.600	-5277.050
1600	-25113.350	1154.600	-5277.050
4390	-25113.350	3317.600	-5277.050
4830	-25113.350	3317.600	-4952.050
1610	-25113.350	3317.600	-4627.050
4800	-26180.350	3317.600	-4627.050
1620	-27353.350	3317.600	-4627.050
1640	-27353.350	2807.600	-4627.050
1660	-27353.350	2681.600	-4627.050
1680	-27353.350	2580.000	-4627.050
1700	-27353.350	2453.000	-4627.050
4410	-27353.350	2213.000	-4627.050
1780	-27353.350	1973.000	-4627.050
1800	-27353.350	1846.000	-4627.050
1820	-27353.350	1744.400	-4627.050
1740	-27353.350	2213.000	-4362.050
4400	-27353.350	2213.000	-4097.050
1840	-27353.350	2213.000	-3662.050
1860	-32453.350	2213.000	-3662.050
1880	-32453.350	2213.000	-5062.050
1900	-27353.350	2213.000	-5062.050
4410	-27353.350	2213.000	-4627.050
1740	-27353.350	2213.000	-4362.050
1820	-27353.350	1744.400	-4627.050
1920	-27353.350	1617.980	-4627.050
1930	-27353.350	1388.980	-4627.050
1940	-27964.350	1388.980	-4627.050
1945	-27964.350	1388.980	-5277.050
1950	-27964.350	831.980	-5277.050
4550	-27964.350	831.980	-5522.050
1950	-27964.350	831.980	-5277.050
4670	-27964.350	831.980	-4819.550
4560	-27964.350	831.980	-4362.050
4630	-28336.350	831.980	-4362.050
4640	-28336.350	831.980	-5459.050
4690	-29164.850	827.835	-5459.050
4650	-29993.350	823.690	-5459.050
4660	-29993.350	-83.810	-5459.050
4560	-27964.350	831.980	-4362.050
4680	-27964.350	831.980	-3904.550
4570	-27964.350	831.980	-3447.050
4580	-27964.350	831.980	-3202.050
4570	-27964.350	831.980	-3447.050
4590	-27964.350	1388.980	-3447.050
4600	-27964.350	1388.980	-4097.050
4610	-27353.350	1388.980	-4097.050
4620	-27353.350	1617.980	-4097.050
4540	-27353.350	1744.400	-4097.050
4620	-27353.350	1617.980	-4097.050
4660	-29993.350	-83.810	-5459.050
1980	-29993.350	-991.310	-5459.050
1985	-29993.350	-994.380	-6058.050
1990	-29993.350	-997.450	-6657.050
2000	-28041.350	-997.450	-6657.050
1260	-3245.540	-2959.400	-2301.050
2140	-3245.540	-1415.400	-2301.050

INPUT LISTING

2160	-3245.540	-1415.400	-2730.050
2180	-7277.540	-1415.400	-2730.050
2190	-17096.539	-1415.400	-2730.050
2200	-17484.539	-1415.400	-2730.050
2220	-17484.539	-1415.400	-1802.550
2280	-17484.539	-1415.400	-875.050
2290	-17484.539	-1415.400	-375.050
2280	-17484.539	-1415.400	-875.050
2320	-17484.539	-1125.400	-875.050
2330	-17484.539	-252.400	-875.050
2340	-17484.539	-166.400	-875.050
2346	-17484.539	-83.850	-875.050
2352	-17484.539	128.150	-875.050
2360	-17484.539	210.700	-875.050
2380	-17484.539	460.700	-875.050
2400	-17484.539	550.700	-875.050
2410	-17484.539	623.725	-875.050
2420	-17484.539	696.750	-875.050
2430	-17567.090	696.750	-875.050
2440	-17649.641	696.750	-875.050
2460	-17722.666	696.750	-875.050
2480	-17862.666	657.050	-875.050
2500	-18217.166	657.050	-875.050
2520	-18790.666	657.050	-875.050
2540	-18790.666	428.050	-875.050
2546	-18790.666	335.975	-875.050
2552	-18790.666	59.975	-875.050
2560	-18790.666	-32.100	-875.050
2570	-18790.666	-253.100	-875.050
2580	-18790.666	-1373.100	-875.050
2600	-18790.666	-1373.100	-1549.050
2290	-17484.539	-1415.400	-375.050
2300	-17484.539	-1415.400	124.950
2620	-17484.539	-1125.400	124.950
2640	-17484.539	-167.400	124.950
2646	-17484.539	-94.375	124.950
2652	-17484.539	117.625	124.950
2660	-17484.539	190.650	124.950
2680	-17484.539	440.650	124.950
2700	-17484.539	530.650	124.950
2710	-17484.539	597.325	124.950
2720	-17484.539	664.000	124.950
2730	-17557.564	664.000	124.950
2740	-17630.590	664.000	124.950
2760	-17713.141	664.000	124.950
2780	-17853.141	624.300	124.950
2800	-18207.641	624.300	124.950
2820	-18790.641	624.300	124.950
2840	-18790.641	395.300	124.950
2846	-18790.641	293.700	124.950
2852	-18790.641	17.700	124.950
2860	-18790.641	-83.900	124.950
2880	-18790.641	-1373.900	124.950
2880	-18791.217	-1373.100	124.950
2580	-18790.666	-1373.100	-875.050
2600	-18790.666	-1373.100	-1549.050

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INPUT LISTING

2920	-18790.666	-1373.100	-1928.050
2940	-21975.666	-1379.470	-1928.050
2980	-21975.666	-2295.470	-1928.050
2030	-21975.666	-3005.470	-1217.050
2330	-17484.539	-252.400	-875.050
3000	-17484.539	-252.400	-952.050
3020	-17484.539	-252.400	-1025.075
3040	-17484.539	-252.400	-1212.075
3060	-17484.539	-252.400	-1285.100
3080	-17484.539	-252.400	-1362.100
3100	-17861.539	-252.400	-1362.100
3120	-17986.539	-252.400	-1362.100
3140	-18293.539	-252.400	-1362.100
3146	-18366.564	-252.400	-1362.100
3152	-18642.564	-252.400	-1362.100
3160	-18709.240	-252.400	-1362.100
3180	-18786.240	-252.400	-1362.100
3180	-18790.666	-253.100	-1362.050
2570	-18790.666	-253.100	-875.050
2000	-28041.350	-997.450	-6657.050
4100	-24046.350	-997.450	-6657.050
4120	-24046.350	-1008.490	-4450.050
4140	-23491.350	-1008.490	-4450.050
4160	-17491.350	-1008.490	-4450.050
4180	-13895.350	-1008.490	-4450.050
4200	-13793.750	-1008.490	-4450.050
4240	-13692.150	-1008.490	-4450.050
4260	-13542.150	-1008.490	-4450.050
4280	-13083.150	-1008.490	-4450.050
4300	-13083.150	-2308.490	-4450.050
4310	-13083.150	-3308.490	-4450.050
4320	-13083.150	-3608.490	-4450.050
8000	-21975.666	-3005.470	31348.949
8010	-21975.666	-3005.470	25348.949
8020	-21975.666	-3005.470	19348.949
8030	-21975.666	-3005.470	16398.949
8040	-27975.666	-3005.470	16398.949
8050	-27975.666	-3005.470	15398.950
8060	-27975.666	-3005.470	14398.950
8070	-21975.666	-3005.470	14398.950
8080	-21975.666	-3005.470	13548.950
8090	-21975.666	-3005.470	7548.950
8100	-21975.666	-3005.470	1548.950
2030	-21975.666	-3005.470	-1217.050
8120	-21975.666	-3005.470	-4451.050
8130	-21975.666	-3005.470	-10451.050
10	228.600	.000	.000
25	114.300	.000	.000
40	.000	.000	.000
4700	-172.519	-3013.281	-2301.050
4710	-172.519	-3313.281	-2301.050

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:58
Job:: BNK-GCS-CN-035-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP
CASE 4 (OPE) W+D1+T1+P1+H
CASE 6 (OPE) W+D1+T2+P1+H
CASE 8 (OPE) W+D1+T3+P1+H
CASE 10 (SUS) W+P1+H
CASE 11 (SUS) WNC+H
CASE 12 (OPE) W+D1+T2+P1+H+U1
CASE 13 (OPE) W+D1+T2+P1+H-U1
CASE 14 (OPE) W+D1+T2+P1+H+U2
CASE 15 (OPE) W+D1+T2+P1+H+U3
CASE 16 (OPE) W+D1+T2+P1+H-U3
CASE 18 (OPE) W+D1+T2+P1+H+F2
CASE 19 (OCC) L19=L12-L6
CASE 20 (OCC) L20=L13-L6
CASE 21 (OCC) L21=L14-L6
CASE 22 (OCC) L22=L15-L6
CASE 23 (OCC) L23=L16-L6
CASE 24 (OCC) L24=L17-L6
CASE 25 (OCC) L25=L18-L6

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
20		TYPE=Displ. Reaction;					
	3(HYD)	-72	-1525	92	0	0	0
	4(OPE)	-532	-1575	-173	0	0	0
	6(OPE)	-1067	-2502	-875	0	0	0
	8(OPE)	-1067	-2502	-874	0	0	0
	10(SUS)	-49	-1171	42	0	0	0
	11(SUS)	-49	-1167	42	0	0	0
	12(OPE)	-540	-2497	-870	0	0	0
	13(OPE)	-1585	-2505	-866	0	0	0
	14(OPE)	-1058	-2361	-879	0	0	0
	15(OPE)	-960	-2495	-207	0	0	0
	16(OPE)	-1175	-2508	-1536	0	0	0
	18(OPE)	-1067	-2502	-875	0	0	0
	19(OCC)	527	6	5	0	0	0
	20(OCC)	-518	-3	9	0	0	0
	21(OCC)	9	141	-4	0	0	0
	22(OCC)	107	7	668	0	0	0
	23(OCC)	-108	-6	-661	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	-0	-0	-0	0	0	0
	MAX	-1585/L13	-2508/L16	-1536/L16			
25		TYPE=Rigid ANC;					
	3(HYD)	-72	-1187	92	-0	-0	19
	4(OPE)	-532	-1263	-173	0	0	18

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Job:: BNK-GCS-CN-035-D03
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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	-1067	-2190	-875	0	-0	18
	8(OPE)	-1067	-2190	-874	0	-0	18
	10(SUS)	-49	-859	42	-0	-0	18
	11(SUS)	-49	-856	42	-0	-0	18
	12(OPE)	-621	-2185	-870	0	0	18
	13(OPE)	-1504	-2193	-866	0	-0	18
	14(OPE)	-1058	-2087	-879	0	-0	16
	15(OPE)	-960	-2183	-288	0	5	18
	16(OPE)	-1175	-2197	-1455	0	-5	18
	18(OPE)	-1067	-2191	-875	0	-0	18
	19(OCC)	446	6	5	0	0	0
	20(OCC)	-437	-3	9	0	-0	0
	21(OCC)	9	104	-4	0	0	-2
	22(OCC)	107	7	587	0	5	0
	23(OCC)	-108	-6	-580	0	-5	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	-0	-0	-0	0	0	0
	MAX	-1504/L13	-2197/L16	-1455/L16	0/L8	-5/L16	19/L3
121		TYPE=Rigid +Y;					
	3(HYD)	0	-4196	-283	0	0	0
	4(OPE)	0	-2750	-275	0	0	0
	6(OPE)	0	-2738	27	0	0	0
	8(OPE)	0	-2738	28	0	0	0
	10(SUS)	-171	-2739	-167	0	0	0
	11(SUS)	-154	-2739	-167	0	0	0
	12(OPE)	0	-2738	62	0	0	0
	13(OPE)	0	-2738	-17	0	0	0
	14(OPE)	0	-2738	37	0	0	0
	15(OPE)	0	-2738	274	0	0	0
	16(OPE)	0	-2738	-258	0	0	0
	18(OPE)	0	-2738	27	0	0	0
	19(OCC)	0	-0	35	0	0	0
	20(OCC)	-0	0	-44	0	0	0
	21(OCC)	-0	0	9	0	0	0
	22(OCC)	-0	0	247	0	0	0
	23(OCC)	-0	-0	-285	0	0	0
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	-0	0	0	0	0	0
	MAX	-171/L10	-4196/L3	-285/L23			
160		TYPE=Rigid X; Rigid Z; Rigid -X; Prog Design VSH;					
	3(HYD)	57	-4196	-300	0	0	0
	4(OPE)	4916	-4177	-672	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	4661	-3534	54	0	0	0
	8(OPE)	4677	-3536	56	0	0	0
	10(SUS)	-171	-2739	-167	0	0	0
	11(SUS)	-154	-2739	-167	0	0	0
	12(OPE)	7402	-3961	123	0	0	0
	13(OPE)	1412	-2871	-33	0	0	0
	14(OPE)	4375	-3055	73	0	0	0
	15(OPE)	4505	-3443	620	0	0	0
	16(OPE)	4445	-3585	-515	0	0	0
	18(OPE)	4660	-3534	54	0	0	0
	19(OCC)	2741	-427	69	0	0	0
	20(OCC)	-3249	663	-87	0	0	0
	21(OCC)	-285	479	19	0	0	0
	22(OCC)	-156	91	566	0	0	0
	23(OCC)	-216	-51	-570	0	0	0
	24(OCC)	-2	1	1	0	0	0
	25(OCC)	-1	-0	0	0	0	0
	MAX	7402/L12	-4196/L3	-672/L4			
300		TYPE=Rigid +Y;					
	3(HYD)	45	-2219	-1	0	0	0
	4(OPE)	-176	-587	-12	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	120	-2040	-106	0	0	0
	11(SUS)	112	-2025	-106	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	-98	-347	35	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	-98	-347	35	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-176/L4	-2219/L3	-106/L11			
400		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	51	-2530	14	0	0	0
	4(OPE)	-495	-1649	-1034	0	0	0
	6(OPE)	-557	-1857	-440	0	0	0
	8(OPE)	-556	-1854	-446	0	0	0
	10(SUS)	100	-1833	31	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	11(SUS)	95	-1833	31	0	0	0
	12(OPE)	-368	-1226	-747	0	0	0
	13(OPE)	-716	-2385	-131	0	0	0
	14(OPE)	-460	-1532	-453	0	0	0
	15(OPE)	-613	-2043	526	0	0	0
	16(OPE)	-519	-1729	-1391	0	0	0
	18(OPE)	-557	-1857	-440	0	0	0
	19(OCC)	189	631	-307	0	0	0
	20(OCC)	-159	-529	309	0	0	0
	21(OCC)	97	325	-13	0	0	0
	22(OCC)	-56	-186	966	0	0	0
	23(OCC)	38	128	-951	0	0	0
	24(OCC)	-0	-0	2	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	-716/L13	-2530/L3	-1391/L16			
480		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	87	-2931	-20	0	0	0
	4(OPE)	-730	-2432	814	0	0	0
	6(OPE)	-636	-2119	176	0	0	0
	8(OPE)	-636	-2119	177	0	0	0
	10(SUS)	100	-1952	-13	0	0	0
	11(SUS)	96	-1945	-13	0	0	0
	12(OPE)	-849	-2831	149	0	0	0
	13(OPE)	-391	-1305	210	0	0	0
	14(OPE)	-569	-1896	180	0	0	0
	15(OPE)	-597	-1992	605	0	0	0
	16(OPE)	-652	-2173	-256	0	0	0
	18(OPE)	-636	-2119	176	0	0	0
	19(OCC)	-214	-712	-27	0	0	0
	20(OCC)	244	814	34	0	0	0
	21(OCC)	67	223	4	0	0	0
	22(OCC)	38	127	428	0	0	0
	23(OCC)	-16	-55	-432	0	0	0
	24(OCC)	0	0	-0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-849/L12	-2931/L3	814/L4			
560		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	-225	-4860	58	0	0	0
	4(OPE)	-1196	-3988	306	0	0	0
	6(OPE)	-1078	-3593	106	0	0	0
	8(OPE)	-1078	-3593	106	0	0	0
	10(SUS)	-135	-3089	40	0	0	0
	11(SUS)	-135	-3077	40	0	0	0
	12(OPE)	-925	-3083	171	0	0	0
	13(OPE)	-1267	-4222	65	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	14(OPE)	-969	-3229	106	0	0	0
	15(OPE)	-1102	-3673	498	0	0	0
	16(OPE)	-1069	-3565	-276	0	0	0
	18(OPE)	-1078	-3593	106	0	0	0
	19(OCC)	153	510	65	0	0	0
	20(OCC)	-189	-630	-41	0	0	0
	21(OCC)	109	363	-0	0	0	0
	22(OCC)	-24	-80	392	0	0	0
	23(OCC)	8	28	-382	0	0	0
	24(OCC)	-0	-0	-0	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	-1267/L13	-4860/L3	498/L15			
660		TYPE=Rigid +Y;					
	3(HYD)	-1043	-4844	-104	0	0	0
	4(OPE)	-912	-3049	-73	0	0	0
	6(OPE)	-1158	-4237	-524	0	0	0
	8(OPE)	-1158	-4237	-524	0	0	0
	10(SUS)	-664	-3093	-66	0	0	0
	11(SUS)	-661	-3081	-66	0	0	0
	12(OPE)	-1326	-5089	-757	0	0	0
	13(OPE)	-928	-3119	117	0	0	0
	14(OPE)	-1068	-3829	-423	0	0	0
	15(OPE)	-925	-3901	717	0	0	0
	16(OPE)	-910	-4644	-1055	0	0	0
	18(OPE)	-1158	-4237	-524	0	0	0
	19(OCC)	-168	-852	-233	0	0	0
	20(OCC)	230	1118	642	0	0	0
	21(OCC)	90	408	101	0	0	0
	22(OCC)	233	336	1241	0	0	0
	23(OCC)	248	-407	-531	0	0	0
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	MAX	-1326/L12	-5089/L12	1241/L22			
720		TYPE=Rigid ANC;					
	3(HYD)	990	2270	44	59	16	-77
	4(OPE)	607	595	-672	147	52	-1177
	6(OPE)	1020	1990	15	256	234	-353
	8(OPE)	1020	1990	15	256	233	-353
	10(SUS)	630	1348	28	38	10	-49
	11(SUS)	627	1342	28	38	10	-49
	12(OPE)	1782	2880	402	296	337	-466
	13(OPE)	25	856	-430	254	-226	-196
	14(OPE)	944	1796	-1	260	179	-349
	15(OPE)	923	1755	259	460	-666	-344
	16(OPE)	479	2320	-556	42	1068	-194

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	18(OPE)	1020	1990	15	256	234	-353
	19(OCC)	762	890	387	40	104	-114
	20(OCC)	-995	-1134	-445	-2	-459	157
	21(OCC)	-76	-194	-16	4	-55	4
	22(OCC)	-96	-235	243	204	-899	9
	23(OCC)	-540	330	-571	-215	835	159
	24(OCC)	0	-0	0	0	-0	-0
	25(OCC)	-0	0	-0	-0	0	0
	MAX	1782/L12	2880/L12	-672/L4	460/L15	1068/L16	-1177/L4
780		TYPE=Rigid ANC;					
	3(HYD)	-54	-3046	-61	38	64	-2262
	4(OPE)	-291	-2851	-743	-75	85	-2468
	6(OPE)	-36	-2644	-462	103	454	-2262
	8(OPE)	-36	-2644	-462	103	454	-2262
	10(SUS)	-34	-2142	-38	24	41	-1444
	11(SUS)	-34	-2136	-38	24	41	-1439
	12(OPE)	717	-2606	-265	194	645	-2979
	13(OPE)	-892	-2660	-327	161	-274	-1354
	14(OPE)	-37	-2382	-389	131	358	-2072
	15(OPE)	65	-2543	1027	778	-973	-2135
	16(OPE)	-201	-2721	-1784	-517	1588	-2256
	18(OPE)	-36	-2644	-462	103	454	-2262
	19(OCC)	753	38	198	92	191	-717
	20(OCC)	-857	-16	135	58	-728	909
	21(OCC)	-1	262	73	28	-96	190
	22(OCC)	101	101	1489	675	-1427	128
	23(OCC)	-165	-77	-1322	-619	1134	7
	24(OCC)	0	0	0	0	-0	0
	25(OCC)	-0	-0	-0	-0	0	-0
	MAX	-892/L13	-3046/L3	-1784/L16	778/L15	1588/L16	-2979/L12
860		TYPE=Rigid ANC;					
	3(HYD)	-54	-3046	-61	-220	64	-2033
	4(OPE)	-291	-2851	-743	-3245	85	-1225
	6(OPE)	-36	-2644	-462	-1869	454	-2109
	8(OPE)	-36	-2644	-462	-1869	454	-2109
	10(SUS)	-34	-2142	-38	-140	41	-1300
	11(SUS)	-34	-2136	-38	-139	41	-1295
	12(OPE)	717	-2606	-265	-935	645	-6038
	13(OPE)	-892	-2660	-327	-1233	-274	2452
	14(OPE)	-37	-2382	-389	-1530	358	-1916
	15(OPE)	65	-2543	1027	5158	-973	-2413
	16(OPE)	-201	-2721	-1784	-8126	1588	-1398
	18(OPE)	-36	-2644	-462	-1869	454	-2109
	19(OCC)	753	38	198	934	191	-3928
	20(OCC)	-857	-16	135	636	-728	4562

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	-1	262	73	339	-96	193
	22(OCC)	101	101	1489	7027	-1427	-304
	23(OCC)	-165	-77	-1322	-6257	1134	711
	24(OCC)	0	0	0	0	-0	-0
	25(OCC)	-0	-0	-0	-0	0	0
	MAX	-892/L13	-3046/L3	-1784/L16	-8126/L16	1588/L16	-6038/L12
1040		TYPE=Rigid +Y;					
	3(HYD)	-89	-1994	260	0	0	0
	4(OPE)	891	-3024	-173	0	0	0
	6(OPE)	881	-2974	-143	0	0	0
	8(OPE)	907	-3062	-147	0	0	0
	10(SUS)	-72	-1544	266	0	0	0
	11(SUS)	-72	-1534	266	0	0	0
	12(OPE)	909	-3067	-142	0	0	0
	13(OPE)	921	-3116	-160	0	0	0
	14(OPE)	774	-2614	-127	0	0	0
	15(OPE)	856	-2891	-137	0	0	0
	16(OPE)	894	-3021	-150	0	0	0
	18(OPE)	886	-2992	-143	0	0	0
	19(OCC)	28	-93	1	0	0	0
	20(OCC)	40	-142	-17	0	0	0
	21(OCC)	-107	360	15	0	0	0
	22(OCC)	-24	83	6	0	0	0
	23(OCC)	13	-47	-7	0	0	0
	24(OCC)	3	-11	-0	0	0	0
	25(OCC)	5	-17	-1	0	0	0
	MAX	921/L13	-3116/L13	266/L10			
1230		TYPE=Rigid ANC;					
	3(HYD)	-41	-732	-29	0	0	11
	4(OPE)	2551	19	2595	-0	-0	10
	6(OPE)	1764	-145	1857	0	0	10
	8(OPE)	1799	-146	1897	0	0	10
	10(SUS)	-44	-558	-88	0	0	10
	11(SUS)	-44	-555	-88	0	0	10
	12(OPE)	2411	-40	2293	0	-0	10
	13(OPE)	1057	-260	1389	0	-0	10
	14(OPE)	1787	-79	1859	0	0	9
	15(OPE)	1911	-182	2442	0	3	10
	16(OPE)	1602	-140	1253	0	-3	10
	18(OPE)	1763	-143	1857	0	0	10
	19(OCC)	647	105	436	0	-0	0
	20(OCC)	-707	-115	-468	0	-0	-0
	21(OCC)	22	66	2	0	0	-1
	22(OCC)	146	-37	585	0	3	-0
	23(OCC)	-162	5	-604	0	-3	-0

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	24(OCC)	-2	0	0	0	-0	0
	25(OCC)	-2	2	-1	0	0	0
	MAX	2551/L4	-732/L3	2595/L4	-0/L4	-3/L16	11/L3
1231		TYPE=Displ. Reaction;					
	3(HYD)	-41	-942	-29	0	0	0
	4(OPE)	2551	-179	2595	0	0	0
	6(OPE)	1764	-343	1857	0	0	0
	8(OPE)	1799	-345	1897	0	0	0
	10(SUS)	-44	-756	-88	0	0	0
	11(SUS)	-44	-753	-88	0	0	0
	12(OPE)	2462	-238	2293	0	0	0
	13(OPE)	1006	-458	1389	0	0	0
	14(OPE)	1787	-254	1859	0	0	0
	15(OPE)	1911	-380	2494	0	0	0
	16(OPE)	1602	-339	1201	0	0	0
	18(OPE)	1763	-341	1857	0	0	0
	19(OCC)	698	105	436	0	0	0
	20(OCC)	-758	-115	-468	0	0	0
	21(OCC)	22	89	2	0	0	0
	22(OCC)	146	-37	637	0	0	0
	23(OCC)	-162	5	-656	0	0	0
	24(OCC)	-2	0	0	0	0	0
	25(OCC)	-2	2	-1	0	0	0
	MAX	2551/L4	-942/L3	2595/L4			
1280		TYPE=Rigid Y; Rigid Z;					
	3(HYD)	33	-3185	29	0	0	0
	4(OPE)	544	-1812	-1598	0	0	0
	6(OPE)	559	-1863	-871	0	0	0
	8(OPE)	544	-1813	-889	0	0	0
	10(SUS)	21	-2779	25	0	0	0
	11(SUS)	21	-2771	24	0	0	0
	12(OPE)	577	-1923	-1251	0	0	0
	13(OPE)	476	-1587	-429	0	0	0
	14(OPE)	491	-1635	-936	0	0	0
	15(OPE)	574	-1914	-105	0	0	0
	16(OPE)	550	-1834	-1572	0	0	0
	18(OPE)	556	-1852	-867	0	0	0
	19(OCC)	18	-59	-380	0	0	0
	20(OCC)	-83	277	442	0	0	0
	21(OCC)	-69	228	-65	0	0	0
	22(OCC)	15	-50	766	0	0	0
	23(OCC)	-9	29	-701	0	0	0
	24(OCC)	-2	6	18	0	0	0
	25(OCC)	-3	11	4	0	0	0
	MAX	577/L12	-3185/L3	-1598/L4			

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1380		TYPE=Rigid Y; Rigid Z;					
	3(HYD)	190	-2240	-5	0	0	0
	4(OPE)	1215	-4050	676	0	0	0
	6(OPE)	1031	-3435	330	0	0	0
	8(OPE)	1022	-3408	342	0	0	0
	10(SUS)	136	-1706	-9	0	0	0
	11(SUS)	135	-1695	-9	0	0	0
	12(OPE)	973	-3242	466	0	0	0
	13(OPE)	1113	-3710	166	0	0	0
	14(OPE)	956	-3188	363	0	0	0
	15(OPE)	1022	-3407	949	0	0	0
	16(OPE)	1034	-3447	-274	0	0	0
	18(OPE)	1031	-3437	327	0	0	0
	19(OCC)	-58	194	136	0	0	0
	20(OCC)	82	-275	-164	0	0	0
	21(OCC)	-74	247	33	0	0	0
	22(OCC)	-9	28	619	0	0	0
	23(OCC)	4	-12	-604	0	0	0
	24(OCC)	1	-2	-4	0	0	0
	25(OCC)	0	-2	-3	0	0	0
	MAX	1215/L4	-4050/L4	949/L15			
1460		TYPE=Rigid +Y; Rigid Z;					
	3(HYD)	-136	-2487	2	0	0	0
	4(OPE)	256	-854	109	0	0	0
	6(OPE)	-324	-1079	106	0	0	0
	8(OPE)	-159	-1088	99	0	0	0
	10(SUS)	-100	-1708	7	0	0	0
	11(SUS)	-99	-1693	7	0	0	0
	12(OPE)	343	-1143	109	0	0	0
	13(OPE)	-296	-987	100	0	0	0
	14(OPE)	-44	-890	95	0	0	0
	15(OPE)	-230	-1114	327	0	0	0
	16(OPE)	-316	-1054	-141	0	0	0
	18(OPE)	-324	-1079	107	0	0	0
	19(OCC)	667	-64	3	0	0	0
	20(OCC)	28	92	-6	0	0	0
	21(OCC)	280	189	-10	0	0	0
	22(OCC)	93	-35	221	0	0	0
	23(OCC)	7	25	-247	0	0	0
	24(OCC)	0	1	0	0	0	0
	25(OCC)	0	0	2	0	0	0
	MAX	667/L19	-2487/L3	327/L15			
1500		TYPE=Rigid +Y; Rigid Z;					

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	3(HYD)	0	-2951	-2	0	0	0
	4(OPE)	0	-1232	-125	0	0	0
	6(OPE)	0	-1524	10	0	0	0
	8(OPE)	0	-1534	16	0	0	0
	10(SUS)	0	-2042	-6	0	0	0
	11(SUS)	0	-2024	-6	0	0	0
	12(OPE)	0	-1620	39	0	0	0
	13(OPE)	0	-1392	-10	0	0	0
	14(OPE)	0	-1266	7	0	0	0
	15(OPE)	0	-1387	676	0	0	0
	16(OPE)	0	-1642	-613	0	0	0
	18(OPE)	0	-1524	8	0	0	0
	19(OCC)	0	-95	29	0	0	0
	20(OCC)	0	132	-20	0	0	0
	21(OCC)	0	258	-3	0	0	0
	22(OCC)	0	137	666	0	0	0
	23(OCC)	0	-117	-622	0	0	0
	24(OCC)	0	1	-0	0	0	0
	25(OCC)	0	0	-1	0	0	0
	MAX		-2951/L3	676/L15			
1520		TYPE=Rigid +Y; Rigid Z w/gap;					
	3(HYD)	-232	-2323	9	0	0	0
	4(OPE)	-285	-986	2863	0	0	0
	6(OPE)	-280	-983	1779	0	0	0
	8(OPE)	-279	-981	1737	0	0	0
	10(SUS)	-173	-1607	10	0	0	0
	11(SUS)	-172	-1593	10	0	0	0
	12(OPE)	-266	-1000	918	0	0	0
	13(OPE)	-287	-983	2696	0	0	0
	14(OPE)	-244	-859	1786	0	0	0
	15(OPE)	-397	-1398	2307	0	0	0
	16(OPE)	-182	-639	1189	0	0	0
	18(OPE)	-280	-983	1781	0	0	0
	19(OCC)	14	-16	-861	0	0	0
	20(OCC)	-7	1	917	0	0	0
	21(OCC)	36	124	7	0	0	0
	22(OCC)	-117	-415	528	0	0	0
	23(OCC)	97	344	-589	0	0	0
	24(OCC)	-0	-0	4	0	0	0
	25(OCC)	0	0	3	0	0	0
	MAX	-397/L15	-2323/L3	2863/L4			
1560		TYPE=Rigid +Y; Rigid X w/gap;					
	3(HYD)	-325	-1776	2	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	-6453	-7363	-2018	0	0	0
	6(OPE)	-4788	-6731	-1362	0	0	0
	8(OPE)	-4699	-6733	-1318	0	0	0
	10(SUS)	-225	-1224	-0	0	0	0
	11(SUS)	-223	-1214	-0	0	0	0
	12(OPE)	-2432	-6569	-446	0	0	0
	13(OPE)	-7278	-6887	-2385	0	0	0
	14(OPE)	-4643	-6168	-1239	0	0	0
	15(OPE)	-4665	-6774	-657	0	0	0
	16(OPE)	-5059	-6697	-2059	0	0	0
	18(OPE)	-4790	-6731	-1364	0	0	0
	19(OCC)	2356	162	917	0	0	0
	20(OCC)	-2490	-156	-1022	0	0	0
	21(OCC)	145	563	123	0	0	0
	22(OCC)	123	-43	706	0	0	0
	23(OCC)	-271	34	-696	0	0	0
	24(OCC)	-7	0	-3	0	0	0
	25(OCC)	-2	-0	-1	0	0	0
	MAX	-7278/L13	-7363/L4	-2385/L13			
1660		TYPE=Rigid ANC;					
	3(HYD)	246	-1067	-18	113	-47	-405
	4(OPE)	573	118	-276	415	-535	1065
	6(OPE)	458	-136	-279	337	-292	652
	8(OPE)	450	-134	-279	337	-280	652
	10(SUS)	171	-792	-12	78	-32	-283
	11(SUS)	169	-786	-12	77	-32	-280
	12(OPE)	881	-165	-307	323	-88	355
	13(OPE)	46	-107	-253	354	-515	955
	14(OPE)	431	-18	-255	331	-316	718
	15(OPE)	348	238	155	898	-798	1194
	16(OPE)	552	-435	-746	-137	259	221
	18(OPE)	458	-137	-279	337	-293	652
	19(OCC)	423	-29	-28	-14	204	-297
	20(OCC)	-412	29	26	17	-223	303
	21(OCC)	-27	119	24	-6	-24	66
	22(OCC)	-110	375	434	561	-506	542
	23(OCC)	95	-299	-467	-474	551	-431
	24(OCC)	1	-0	0	-0	-1	0
	25(OCC)	0	-0	-0	-0	-1	-0
	MAX	881/L12	-1067/L3	-746/L16	898/L15	-798/L15	1194/L15
1700		TYPE=Rigid ANC;					
	3(HYD)	246	-1384	-18	109	-47	-461
	4(OPE)	573	-183	-276	352	-535	934
	6(OPE)	458	-438	-279	273	-292	547
	8(OPE)	450	-436	-279	274	-280	549

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(SUS)	171	-1094	-12	75	-32	-322
	11(SUS)	169	-1088	-12	74	-32	-319
	12(OPE)	960	-467	-307	253	-88	143
	13(OPE)	-32	-409	-253	296	-515	956
	14(OPE)	431	-283	-255	272	-316	619
	15(OPE)	348	-63	233	945	-798	1114
	16(OPE)	552	-737	-825	-318	259	95
	18(OPE)	458	-438	-279	273	-293	547
	19(OCC)	502	-29	-28	-20	204	-405
	20(OCC)	-490	29	26	23	-223	408
	21(OCC)	-27	155	24	-1	-24	72
	22(OCC)	-110	375	513	672	-506	567
	23(OCC)	95	-299	-546	-592	551	-453
	24(OCC)	1	-0	0	-0	-1	-0
	25(OCC)	0	-0	-0	-0	-1	-0
	MAX	960/L12	-1384/L3	-825/L16	945/L15	-798/L15	1114/L15
1780		TYPE=Rigid ANC;					
	3(HYD)	-89	-740	-4	30	41	-4
	4(OPE)	-1006	438	467	111	623	-1262
	6(OPE)	-152	-31	370	-10	270	-367
	8(OPE)	-152	-31	370	-10	270	-367
	10(SUS)	-50	-615	-10	19	17	-4
	11(SUS)	-49	-612	-10	19	17	-4
	12(OPE)	409	188	568	-63	268	-112
	13(OPE)	-693	-240	182	39	270	-611
	14(OPE)	-167	32	361	-9	269	-378
	15(OPE)	-111	71	567	-34	280	-336
	16(OPE)	-164	-117	159	27	240	-377
	18(OPE)	-152	-31	370	-10	270	-367
	19(OCC)	562	220	197	-52	-2	255
	20(OCC)	-540	-209	-188	50	0	-244
	21(OCC)	-15	64	-9	1	-1	-11
	22(OCC)	42	102	196	-24	10	31
	23(OCC)	-11	-86	-212	37	-30	-10
	24(OCC)	-0	-0	-0	0	0	-0
	25(OCC)	0	-0	0	-0	0	0
	MAX	-1006/L4	-740/L3	568/L12	111/L4	623/L4	-1262/L4
1820		TYPE=Rigid ANC;					
	3(HYD)	89	423	4	-30	-41	-17
	4(OPE)	1006	-740	-467	-218	-623	1032
	6(OPE)	152	-271	-370	-74	-270	332
	8(OPE)	152	-271	-370	-74	-270	332
	10(SUS)	50	314	10	-17	-17	-8
	11(SUS)	49	311	10	-17	-17	-8
	12(OPE)	-331	-490	-568	-67	-268	199

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	614	-62	-182	-81	-270	459
	14(OPE)	167	-298	-361	-73	-269	340
	15(OPE)	111	-373	-488	-88	-280	311
	16(OPE)	164	-185	-237	-70	-240	339
	18(OPE)	152	-271	-370	-74	-270	332
	19(OCC)	-483	-220	-197	7	2	-134
	20(OCC)	462	209	188	-7	-0	127
	21(OCC)	15	-27	9	1	1	7
	22(OCC)	-42	-102	-118	-14	-10	-22
	23(OCC)	11	86	133	4	30	7
	24(OCC)	0	0	0	-0	-0	0
	25(OCC)	0	0	-0	0	-0	-0
	MAX	1006/L4	-740/L4	-568/L12	-218/L4	-623/L4	1032/L4
1840		TYPE=Rigid X; Rigid Z w/gap; Rigid Y;					
	3(HYD)	290	-10071	21	0	0	0
	4(OPE)	431	-6630	229	0	0	0
	6(OPE)	567	-7719	522	0	0	0
	8(OPE)	585	-7719	521	0	0	0
	10(SUS)	188	-9487	6	0	0	0
	11(SUS)	186	-9472	6	0	0	0
	12(OPE)	5955	-7673	532	0	0	0
	13(OPE)	-4847	-7756	413	0	0	0
	14(OPE)	410	-6559	354	0	0	0
	15(OPE)	425	-8424	4450	0	0	0
	16(OPE)	845	-7085	-962	0	0	0
	18(OPE)	566	-7719	521	0	0	0
	19(OCC)	5388	46	10	0	0	0
	20(OCC)	-5414	-37	-109	0	0	0
	21(OCC)	-157	1161	-168	0	0	0
	22(OCC)	-142	-705	3928	0	0	0
	23(OCC)	278	635	-1484	0	0	0
	24(OCC)	-2	0	1	0	0	0
	25(OCC)	-1	-0	-1	0	0	0
	MAX	5955/L12	-10071/L3	4450/L15			
1860		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	-0	-7794	3	0	0	0
	4(OPE)	-782	-7817	0	0	0	0
	6(OPE)	-783	-7832	0	0	0	0
	8(OPE)	-783	-7832	0	0	0	0
	10(SUS)	-0	-7658	1	0	0	0
	11(SUS)	-0	-7652	1	0	0	0
	12(OPE)	-776	-7760	0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	-791	-7907	0	0	0	0
	14(OPE)	-692	-6919	0	0	0	0
	15(OPE)	-1314	-7871	3429	0	0	0
	16(OPE)	-537	-7801	-565	0	0	0
	18(OPE)	-783	-7832	0	0	0	0
	19(OCC)	7	73	-0	0	0	0
	20(OCC)	-8	-75	-0	0	0	0
	21(OCC)	91	913	-0	0	0	0
	22(OCC)	-531	-38	3429	0	0	0
	23(OCC)	246	31	-566	0	0	0
	24(OCC)	-0	-0	0	0	0	0
	25(OCC)	0	0	-0	0	0	0
	MAX	-1314/L15	-7907/L13	3429/L15			
1880		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	0	-7790	3	0	0	0
	4(OPE)	-747	-7744	-205	0	0	0
	6(OPE)	-752	-7802	-206	0	0	0
	8(OPE)	-752	-7802	-206	0	0	0
	10(SUS)	0	-7656	1	0	0	0
	11(SUS)	0	-7650	1	0	0	0
	12(OPE)	-747	-7745	-205	0	0	0
	13(OPE)	-758	-7862	-208	0	0	0
	14(OPE)	-664	-6888	-182	0	0	0
	15(OPE)	-541	-7858	570	0	0	0
	16(OPE)	-467	-7759	-3379	0	0	0
	18(OPE)	-752	-7802	-206	0	0	0
	19(OCC)	5	57	1	0	0	0
	20(OCC)	-6	-60	-2	0	0	0
	21(OCC)	88	914	24	0	0	0
	22(OCC)	211	-56	776	0	0	0
	23(OCC)	285	43	-3173	0	0	0
	24(OCC)	-0	-0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-758/L13	-7862/L13	-3379/L16			
1900		TYPE=Rigid X; Rigid Z w/gap; Rigid Y;					
	3(HYD)	163	-10124	11	0	0	0
	4(OPE)	666	-7516	-752	0	0	0
	6(OPE)	1136	-8272	-827	0	0	0
	8(OPE)	1115	-8271	-827	0	0	0
	10(SUS)	123	-9507	3	0	0	0
	11(SUS)	122	-9491	3	0	0	0
	12(OPE)	5896	-8214	-821	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	-3575	-8318	-832	0	0	0
	14(OPE)	1049	-7104	-710	0	0	0
	15(OPE)	1373	-6982	698	0	0	0
	16(OPE)	467	-9376	-5031	0	0	0
	18(OPE)	1137	-8272	-827	0	0	0
	19(OCC)	4760	58	6	0	0	0
	20(OCC)	-4710	-45	-5	0	0	0
	21(OCC)	-86	1168	117	0	0	0
	22(OCC)	238	1290	1525	0	0	0
	23(OCC)	-668	-1104	-4203	0	0	0
	24(OCC)	2	-0	-0	0	0	0
	25(OCC)	1	-0	-0	0	0	0
	MAX	5896/L12	-10124/L3	-5031/L16			
1985		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	-170	-600	60	0	0	0
	6(OPE)	-195	-664	42	0	0	0
	8(OPE)	-195	-664	42	0	0	0
	10(SUS)	9	-37	6	0	0	0
	11(SUS)	10	-39	7	0	0	0
	12(OPE)	-283	-950	30	0	0	0
	13(OPE)	-120	-413	30	0	0	0
	14(OPE)	-183	-624	40	0	0	0
	15(OPE)	-89	-346	53	0	0	0
	16(OPE)	-290	-967	7	0	0	0
	18(OPE)	-195	-664	42	0	0	0
	19(OCC)	-89	-285	-12	0	0	0
	20(OCC)	74	251	-13	0	0	0
	21(OCC)	12	40	-2	0	0	0
	22(OCC)	106	318	11	0	0	0
	23(OCC)	-95	-303	-35	0	0	0
	24(OCC)	0	0	-0	0	0	0
	25(OCC)	-0	-0	-0	0	0	0
	MAX	-290/L16	-967/L16	60/L4			
2000		TYPE=Rigid +Y; Rigid Z;					
	3(HYD)	40	-2634	-37	0	0	0
	4(OPE)	-397	-1322	-349	0	0	0
	6(OPE)	-333	-1111	-324	0	0	0
	8(OPE)	-333	-1111	-324	0	0	0
	10(SUS)	23	-1165	-14	0	0	0
	11(SUS)	22	-1136	-14	0	0	0
	12(OPE)	-314	-1046	-514	0	0	0
	13(OPE)	-350	-1165	-121	0	0	0
	14(OPE)	-294	-981	-297	0	0	0
	15(OPE)	-310	-1033	417	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OPE)	-351	-1170	-1002	0	0	0
	18(OPE)	-333	-1111	-324	0	0	0
	19(OCC)	19	65	-190	0	0	0
	20(OCC)	-16	-55	203	0	0	0
	21(OCC)	39	130	27	0	0	0
	22(OCC)	23	78	741	0	0	0
	23(OCC)	-18	-59	-678	0	0	0
	24(OCC)	-0	-0	0	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	MAX	-397/L4	-2634/L3	-1002/L16			
2180		TYPE=Rigid +Y; Rigid Z w/gap;					
	3(HYD)	0	-1477	0	0	0	0
	4(OPE)	0	-967	-93	0	0	0
	6(OPE)	0	-985	-68	0	0	0
	8(OPE)	0	-947	-100	0	0	0
	10(SUS)	0	-1044	0	0	0	0
	11(SUS)	0	-1037	0	0	0	0
	12(OPE)	0	-959	-51	0	0	0
	13(OPE)	0	-952	-128	0	0	0
	14(OPE)	0	-861	-64	0	0	0
	15(OPE)	0	-967	130	0	0	0
	16(OPE)	0	-1002	-365	0	0	0
	18(OPE)	0	-976	-72	0	0	0
	19(OCC)	0	27	16	0	0	0
	20(OCC)	0	34	-60	0	0	0
	21(OCC)	0	124	4	0	0	0
	22(OCC)	0	19	198	0	0	0
	23(OCC)	0	-17	-297	0	0	0
	24(OCC)	0	11	-28	0	0	0
	25(OCC)	0	9	-4	0	0	0
	MAX		-1477/L3	-365/L16			
2190		TYPE=Rigid +Y;					
	3(HYD)	29	-1159	-61	0	0	0
	4(OPE)	-260	-956	-121	0	0	0
	6(OPE)	-257	-906	-87	0	0	0
	8(OPE)	-142	-854	-214	0	0	0
	10(SUS)	22	-825	-54	0	0	0
	11(SUS)	22	-820	-57	0	0	0
	12(OPE)	-152	-863	-209	0	0	0
	13(OPE)	-260	-900	-72	0	0	0
	14(OPE)	-240	-804	-26	0	0	0
	15(OPE)	-265	-1003	143	0	0	0
	16(OPE)	-155	-792	-180	0	0	0
	18(OPE)	-279	-929	-7	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OCC)	105	42	-122	0	0	0
	20(OCC)	-3	6	15	0	0	0
	21(OCC)	18	102	61	0	0	0
	22(OCC)	-8	-97	230	0	0	0
	23(OCC)	103	114	-93	0	0	0
	24(OCC)	62	24	-91	0	0	0
	25(OCC)	-21	-23	80	0	0	0
	MAX	-279/L18	-1159/L3	230/L22			
2220		TYPE=Rigid +Y; Rigid X w/gap;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	-1043	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	-1043	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-1043/L13					
2320		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	-2445	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		-2445/L8				
2500		TYPE=Rigid Z w/gap; Rigid X w/gap; Rigid +Y;					
	3(HYD)	-266	-2978	54	0	0	0
	4(OPE)	0	0	792	0	0	0
	6(OPE)	0	0	782	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	-243	-2599	58	0	0	0
	11(SUS)	-243	-2600	52	0	0	0
	12(OPE)	0	0	774	0	0	0
	13(OPE)	0	0	812	0	0	0
	14(OPE)	0	0	598	0	0	0
	15(OPE)	0	0	1871	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	464	0	0	0
	19(OCC)	0	0	-8	0	0	0
	20(OCC)	0	0	30	0	0	0
	21(OCC)	0	0	-184	0	0	0
	22(OCC)	0	0	1088	0	0	0
	23(OCC)	0	0	-782	0	0	0
	24(OCC)	0	0	-782	0	0	0
	25(OCC)	0	0	-318	0	0	0
	MAX	-266/L3	-2978/L3	1871/L15			
2600		TYPE=Rigid +Y;					
	3(HYD)	0	-2597	0	0	0	0
	4(OPE)	0	-5539	0	0	0	0
	6(OPE)	0	-5610	0	0	0	0
	8(OPE)	0	-1515	0	0	0	0
	10(SUS)	0	-1977	0	0	0	0
	11(SUS)	0	-1974	0	0	0	0
	12(OPE)	0	-5318	0	0	0	0
	13(OPE)	0	-5612	0	0	0	0
	14(OPE)	0	-4523	0	0	0	0
	15(OPE)	0	-5431	0	0	0	0
	16(OPE)	0	-5689	0	0	0	0
	18(OPE)	0	-4462	0	0	0	0
	19(OCC)	0	292	0	0	0	0
	20(OCC)	0	-1	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	21(OCC)	0	1088	0	0	0	0
	22(OCC)	0	180	0	0	0	0
	23(OCC)	0	-79	0	0	0	0
	24(OCC)	0	1264	0	0	0	0
	25(OCC)	0	1149	0	0	0	0
	MAX		-5689/L16				
2620		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	-2549	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		-2549/L8				
2800		TYPE=Rigid Z; Rigid X; Rigid +Y;					
	3(HYD)	-268	-4707	-58	0	0	0
	4(OPE)	3351	0	2814	0	0	0
	6(OPE)	3350	0	2798	0	0	0
	8(OPE)	-1492	-2303	-699	0	0	0
	10(SUS)	-225	-3860	-32	0	0	0
	11(SUS)	-225	-3856	-32	0	0	0
	12(OPE)	3866	0	2849	0	0	0
	13(OPE)	2602	0	2781	0	0	0
	14(OPE)	3124	0	2700	0	0	0
	15(OPE)	3080	0	3510	0	0	0
	16(OPE)	3753	0	1768	0	0	0
	18(OPE)	4735	0	2602	0	0	0
	19(OCC)	516	0	52	0	0	0
	20(OCC)	-748	0	-16	0	0	0
	21(OCC)	-225	0	-98	0	0	0
	22(OCC)	-270	0	712	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	23(OCC)	404	0	-1029	0	0	0
	24(OCC)	291	0	-1349	0	0	0
	25(OCC)	1385	0	-196	0	0	0
	MAX	4735/L18	-4707/L3	3510/L15			
3100		TYPE=Rigid +Y;					
	3(HYD)	-0	-327	-98	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	-0	-346	-104	0	0	0
	11(SUS)	-0	-343	-103	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-0/L3	-346/L10	-104/L10			
3120		TYPE=Rigid X;					
	3(HYD)	247	0	0	0	0	0
	4(OPE)	641	0	0	0	0	0
	6(OPE)	704	0	0	0	0	0
	8(OPE)	-226	0	0	0	0	0
	10(SUS)	290	0	0	0	0	0
	11(SUS)	289	0	0	0	0	0
	12(OPE)	3081	0	0	0	0	0
	13(OPE)	-557	0	0	0	0	0
	14(OPE)	891	0	0	0	0	0
	15(OPE)	1068	0	0	0	0	0
	16(OPE)	294	0	0	0	0	0
	18(OPE)	1172	0	0	0	0	0
	19(OCC)	2377	0	0	0	0	0
	20(OCC)	-1261	0	0	0	0	0
	21(OCC)	187	0	0	0	0	0
	22(OCC)	364	0	0	0	0	0
	23(OCC)	-409	0	0	0	0	0
	24(OCC)	-599	0	0	0	0	0
	25(OCC)	468	0	0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	3081/L12					
4140		TYPE=Rigid +Y;					
	3(HYD)	-3	-1860	0	0	0	0
	4(OPE)	-309	-1032	11	0	0	0
	6(OPE)	-252	-859	56	0	0	0
	8(OPE)	-252	-859	56	0	0	0
	10(SUS)	-2	-774	-2	0	0	0
	11(SUS)	-2	-754	-2	0	0	0
	12(OPE)	-239	-859	96	0	0	0
	13(OPE)	-256	-858	26	0	0	0
	14(OPE)	-225	-766	47	0	0	0
	15(OPE)	-248	-893	102	0	0	0
	16(OPE)	-249	-830	-2	0	0	0
	18(OPE)	-252	-859	56	0	0	0
	19(OCC)	12	-1	40	0	0	0
	20(OCC)	-5	0	-29	0	0	0
	21(OCC)	27	93	-9	0	0	0
	22(OCC)	4	-34	46	0	0	0
	23(OCC)	3	29	-57	0	0	0
	24(OCC)	-0	0	-0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-309/L4	-1860/L3	102/L15			
4160		TYPE=Rigid +Y; Rigid Z;					
	3(HYD)	-10	-2077	-1	0	0	0
	4(OPE)	-131	-34	402	0	0	0
	6(OPE)	-256	-641	213	0	0	0
	8(OPE)	-256	-641	213	0	0	0
	10(SUS)	-7	-874	-0	0	0	0
	11(SUS)	-6	-851	-0	0	0	0
	12(OPE)	-296	-643	344	0	0	0
	13(OPE)	-225	-640	112	0	0	0
	14(OPE)	-221	-536	201	0	0	0
	15(OPE)	-346	-632	521	0	0	0
	16(OPE)	-224	-649	-96	0	0	0
	18(OPE)	-256	-641	213	0	0	0
	19(OCC)	-40	-2	130	0	0	0
	20(OCC)	31	1	-102	0	0	0
	21(OCC)	35	105	-12	0	0	0
	22(OCC)	-90	9	308	0	0	0
	23(OCC)	33	-8	-309	0	0	0
	24(OCC)	0	0	-0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-346/L15	-2077/L3	521/L15			

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
4200		TYPE=Rigid ANC;					
	3(HYD)	12	-516	0	-439	0	30
	4(OPE)	1659	-987	-161	-167	-186	1635
	6(OPE)	1005	-502	-97	-182	-112	459
	8(OPE)	1005	-502	-97	-182	-112	459
	10(SUS)	8	-318	0	-180	0	12
	11(SUS)	8	-314	0	-175	0	12
	12(OPE)	1750	-502	-159	-187	-185	459
	13(OPE)	300	-503	-50	-178	-58	459
	14(OPE)	913	-464	-91	-160	-106	458
	15(OPE)	1107	-506	-59	-184	-161	463
	16(OPE)	992	-499	-131	-181	-59	456
	18(OPE)	1005	-502	-97	-182	-112	459
	19(OCC)	745	1	-62	-5	-72	-0
	20(OCC)	-706	-0	47	4	55	0
	21(OCC)	-92	38	5	22	6	-1
	22(OCC)	102	-3	38	-2	-49	4
	23(OCC)	-13	3	-34	1	53	-3
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	1750/L12	-987/L4	-161/L4	-439/L3	-186/L4	1635/L4
4260		TYPE=Rigid ANC;					
	3(HYD)	12	-779	0	-439	0	206
	4(OPE)	1659	-1200	-161	-167	-227	1923
	6(OPE)	1005	-715	-97	-182	-136	626
	8(OPE)	1005	-715	-97	-182	-136	626
	10(SUS)	8	-531	0	-180	0	132
	11(SUS)	8	-526	0	-175	0	131
	12(OPE)	1805	-715	-159	-187	-225	625
	13(OPE)	244	-716	-50	-178	-70	626
	14(OPE)	913	-652	-91	-160	-129	610
	15(OPE)	1107	-719	-4	-184	-165	630
	16(OPE)	992	-712	-186	-181	-103	621
	18(OPE)	1005	-715	-97	-182	-136	626
	19(OCC)	800	1	-62	-5	-88	-1
	20(OCC)	-761	-0	47	4	66	0
	21(OCC)	-92	64	5	22	8	-16
	22(OCC)	102	-3	93	-2	-29	5
	23(OCC)	-13	3	-90	1	34	-4
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	0	0	0	0	-0	0
	MAX	1805/L12	-1200/L4	-186/L16	-439/L3	-227/L4	1923/L4
4320		TYPE=Rigid ANC;					
	3(HYD)	12	-779	0	-439	0	532

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	1659	-1200	-161	-584	-300	-1839
	6(OPE)	1005	-715	-97	-433	-181	-1660
	8(OPE)	1005	-715	-97	-433	-181	-1660
	10(SUS)	8	-531	0	-180	0	355
	11(SUS)	8	-526	0	-175	0	352
	12(OPE)	1805	-715	-159	-601	-298	-3740
	13(OPE)	244	-716	-50	-307	-93	320
	14(OPE)	913	-652	-91	-397	-171	-1466
	15(OPE)	1107	-719	-4	-193	-167	-1918
	16(OPE)	992	-712	-186	-665	-188	-1630
	18(OPE)	1005	-715	-97	-433	-181	-1660
	19(OCC)	800	1	-62	-167	-117	-2081
	20(OCC)	-761	-0	47	126	88	1980
	21(OCC)	-92	64	5	36	10	194
	22(OCC)	102	-3	93	240	14	-258
	23(OCC)	-13	3	-90	-232	-7	29
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	0	0	0	0	-0	0
	MAX	1805/L12	-1200/L4	-186/L16	-665/L16	-300/L4	-3740/L12
4340		TYPE=Rigid +Y;					
	3(HYD)	110	-3084	18	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	-69	-854	247	0	0	0
	8(OPE)	-69	-854	247	0	0	0
	10(SUS)	69	-1961	8	0	0	0
	11(SUS)	69	-1953	8	0	0	0
	12(OPE)	271	-932	70	0	0	0
	13(OPE)	-210	-769	96	0	0	0
	14(OPE)	-61	-619	176	0	0	0
	15(OPE)	-127	-947	254	0	0	0
	16(OPE)	100	-781	104	0	0	0
	18(OPE)	-69	-854	247	0	0	0
	19(OCC)	340	-78	-176	0	0	0
	20(OCC)	-141	85	-151	0	0	0
	21(OCC)	9	235	-71	0	0	0
	22(OCC)	-58	-93	8	0	0	0
	23(OCC)	169	73	-143	0	0	0
	24(OCC)	-0	-0	0	0	0	0
	25(OCC)	0	0	-0	0	0	0
	MAX	340/L19	-3084/L3	254/L15			
4360		TYPE=Rigid +Y;					
	3(HYD)	-154	-2490	-3	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(SUS)	-108	-1725	-2	0	0	0
	11(SUS)	-107	-1710	-2	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-154/L3	-2490/L3	-3/L3			
4385		TYPE=Rigid +Y;					
	3(HYD)	-108	-2507	-6	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	-76	-1736	-4	0	0	0
	11(SUS)	-75	-1721	-4	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-108/L3	-2507/L3	-6/L3			
4480		TYPE=Rigid ANC;					
	3(HYD)	246	-1067	18	-113	47	-405
	4(OPE)	-436	393	-298	-446	-376	1425
	6(OPE)	-300	55	-243	-321	-241	906
	8(OPE)	-295	55	-243	-322	-229	903
	10(SUS)	171	-792	12	-78	32	-283
	11(SUS)	169	-786	12	-77	32	-280
	12(OPE)	373	-34	-222	-290	50	540

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	-982	145	-266	-349	-549	1279
	14(OPE)	-317	178	-228	-331	-261	977
	15(OPE)	-273	29	174	116	-729	864
	16(OPE)	-324	67	-696	-693	297	933
	18(OPE)	-300	55	-243	-321	-241	906
	19(OCC)	673	-89	21	31	290	-366
	20(OCC)	-682	90	-23	-28	-308	372
	21(OCC)	-17	123	15	-10	-20	71
	22(OCC)	26	-26	417	438	-488	-42
	23(OCC)	-24	12	-453	-372	537	27
	24(OCC)	-1	0	-0	0	-1	0
	25(OCC)	-0	-0	-0	0	-1	0
	MAX	-982/L13	-1067/L3	-696/L16	-693/L16	-729/L15	1425/L4
4500		TYPE=Rigid ANC;					
	3(HYD)	246	-1384	18	-109	47	-461
	4(OPE)	-436	91	-298	-514	-376	1525
	6(OPE)	-300	-247	-243	-377	-241	975
	8(OPE)	-295	-247	-243	-377	-229	971
	10(SUS)	171	-1094	12	-75	32	-322
	11(SUS)	169	-1088	12	-74	32	-319
	12(OPE)	452	-336	-222	-341	50	444
	13(OPE)	-1060	-157	-266	-410	-549	1514
	14(OPE)	-317	-87	-228	-383	-261	1050
	15(OPE)	-273	-273	253	167	-729	927
	16(OPE)	-324	-234	-775	-863	297	1007
	18(OPE)	-300	-247	-243	-377	-241	975
	19(OCC)	751	-89	21	36	290	-531
	20(OCC)	-760	90	-23	-33	-308	539
	21(OCC)	-17	159	15	-7	-20	75
	22(OCC)	26	-26	496	544	-488	-48
	23(OCC)	-24	12	-532	-486	537	32
	24(OCC)	-1	0	-0	0	-1	1
	25(OCC)	-0	-0	-0	0	-1	0
	MAX	-1060/L13	-1384/L3	-775/L16	-863/L16	-729/L15	1525/L4
4520		TYPE=Rigid ANC;					
	3(HYD)	50	-723	41	-52	38	83
	4(OPE)	396	848	-437	-191	-59	-452
	6(OPE)	137	-8	-258	-43	-89	-177
	8(OPE)	137	-8	-258	-43	-89	-177
	10(SUS)	19	-604	20	-26	17	38
	11(SUS)	19	-601	19	-25	17	37
	12(OPE)	443	123	-363	-25	-140	-63
	13(OPE)	-168	-136	-155	-60	-41	-291
	14(OPE)	135	62	-259	-39	-89	-181
	15(OPE)	5	32	-65	-122	-117	-243

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OPE)	243	-31	-476	44	-88	-128
	18(OPE)	137	-8	-258	-43	-89	-177
	19(OCC)	306	131	-106	18	-51	114
	20(OCC)	-306	-127	103	-18	47	-114
	21(OCC)	-3	70	-1	3	0	-5
	22(OCC)	-133	40	193	-79	-28	-66
	23(OCC)	106	-23	-219	87	1	48
	24(OCC)	-0	-0	0	0	0	-0
	25(OCC)	0	-0	0	-0	0	0
	MAX	443/L12	848/L4	-476/L16	-191/L4	-140/L12	-452/L4
4540		TYPE=Rigid ANC;					
	3(HYD)	-50	406	-41	42	-38	-71
	4(OPE)	-396	-1150	437	291	59	543
	6(OPE)	-137	-294	258	102	89	208
	8(OPE)	-137	-294	258	102	89	208
	10(SUS)	-19	302	-20	21	-17	-34
	11(SUS)	-19	300	-19	21	-17	-33
	12(OPE)	-364	-425	363	108	140	157
	13(OPE)	90	-166	155	96	41	260
	14(OPE)	-135	-328	259	98	89	212
	15(OPE)	-5	-334	144	144	117	244
	16(OPE)	-243	-271	398	58	88	184
	18(OPE)	-137	-294	258	102	89	208
	19(OCC)	-227	-131	106	6	51	-51
	20(OCC)	227	127	-103	-6	-47	52
	21(OCC)	3	-34	1	-3	-0	4
	22(OCC)	133	-40	-114	42	28	36
	23(OCC)	-106	23	140	-44	-1	-24
	24(OCC)	0	0	-0	-0	-0	0
	25(OCC)	-0	0	-0	-0	-0	-0
	MAX	-396/L4	-1150/L4	437/L4	291/L4	140/L12	543/L4
4670		TYPE=Rigid +Y;					
	3(HYD)	0	-845	0	0	0	0
	4(OPE)	0	-3145	0	0	0	0
	6(OPE)	0	-1711	0	0	0	0
	8(OPE)	0	-1711	0	0	0	0
	10(SUS)	0	-405	0	0	0	0
	11(SUS)	0	-397	0	0	0	0
	12(OPE)	0	-1968	0	0	0	0
	13(OPE)	0	-1466	0	0	0	0
	14(OPE)	0	-1646	0	0	0	0
	15(OPE)	0	-1526	0	0	0	0
	16(OPE)	0	-1839	0	0	0	0
	18(OPE)	0	-1711	0	0	0	0
	19(OCC)	0	-257	0	0	0	0

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	20(OCC)	0	245	0	0	0	0
	21(OCC)	0	65	0	0	0	0
	22(OCC)	0	185	0	0	0	0
	23(OCC)	0	-128	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	-0	0	0	0	0
	MAX		-3145/L4				
4680		TYPE=Rigid +Y;					
	3(HYD)	0	-979	0	0	0	0
	4(OPE)	0	-1526	0	0	0	0
	6(OPE)	0	-845	0	0	0	0
	8(OPE)	0	-845	0	0	0	0
	10(SUS)	0	-536	0	0	0	0
	11(SUS)	0	-525	0	0	0	0
	12(OPE)	0	-881	0	0	0	0
	13(OPE)	0	-807	0	0	0	0
	14(OPE)	0	-789	0	0	0	0
	15(OPE)	0	-1179	0	0	0	0
	16(OPE)	0	-601	0	0	0	0
	18(OPE)	0	-845	0	0	0	0
	19(OCC)	0	-36	0	0	0	0
	20(OCC)	0	38	0	0	0	0
	21(OCC)	0	56	0	0	0	0
	22(OCC)	0	-334	0	0	0	0
	23(OCC)	0	244	0	0	0	0
	24(OCC)	0	-0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		-1526/L4				
4690		TYPE=Rigid Y;					
	3(HYD)	0	-949	0	0	0	0
	4(OPE)	0	1433	0	0	0	0
	6(OPE)	0	445	0	0	0	0
	8(OPE)	0	445	0	0	0	0
	10(SUS)	0	-600	0	0	0	0
	11(SUS)	0	-587	0	0	0	0
	12(OPE)	0	610	0	0	0	0
	13(OPE)	0	300	0	0	0	0
	14(OPE)	0	495	0	0	0	0
	15(OPE)	0	85	0	0	0	0
	16(OPE)	0	775	0	0	0	0
	18(OPE)	0	445	0	0	0	0
	19(OCC)	0	165	0	0	0	0
	20(OCC)	0	-145	0	0	0	0
	21(OCC)	0	50	0	0	0	0
	22(OCC)	0	-360	0	0	0	0

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	23(OCC)	0	330	0	0	0	0
	24(OCC)	0	-0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		1433/L4				
4710		TYPE=Rigid +Y;					
	3(HYD)	292	-992	-59	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	217	-728	21	0	0	0
	11(SUS)	215	-723	25	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	292/L3	-992/L3	-59/L3			
8000		TYPE=Rigid Z w/gap; Rigid +Y; Rigid X w/gap;					
	3(HYD)	-0	-2920	0	0	0	0
	4(OPE)	893	-1593	8930	0	0	0
	6(OPE)	894	-1593	8930	0	0	0
	8(OPE)	55	-1582	-3486	0	0	0
	10(SUS)	-0	-1584	0	0	0	0
	11(SUS)	-0	-1582	0	0	0	0
	12(OPE)	1522	-1593	9185	0	0	0
	13(OPE)	510	-1594	8415	0	0	0
	14(OPE)	933	-1402	8606	0	0	0
	15(OPE)	978	-1593	11946	0	0	0
	16(OPE)	867	-1593	5788	0	0	0
	18(OPE)	897	-1592	8929	0	0	0
	19(OCC)	628	0	255	0	0	0
	20(OCC)	-384	-1	-515	0	0	0
	21(OCC)	39	190	-324	0	0	0
	22(OCC)	84	-0	3016	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	23(OCC)	-27	-0	-3142	0	0	0
	24(OCC)	3	1	0	0	0	0
	25(OCC)	3	1	-1	0	0	0
	MAX	1522/L12	-2920/L3	11946/L15			
8010		TYPE=Rigid +Y;					
	3(HYD)	2	-5340	0	0	0	0
	4(OPE)	351	-2845	-778	0	0	0
	6(OPE)	352	-2847	-778	0	0	0
	8(OPE)	-247	-2915	839	0	0	0
	10(SUS)	1	-2899	0	0	0	0
	11(SUS)	1	-2895	0	0	0	0
	12(OPE)	480	-2847	-706	0	0	0
	13(OPE)	396	-2841	-755	0	0	0
	14(OPE)	318	-2501	-680	0	0	0
	15(OPE)	375	-2845	-767	0	0	0
	16(OPE)	343	-2846	-782	0	0	0
	18(OPE)	353	-2851	-779	0	0	0
	19(OCC)	129	-0	72	0	0	0
	20(OCC)	44	6	23	0	0	0
	21(OCC)	-34	346	99	0	0	0
	22(OCC)	23	1	11	0	0	0
	23(OCC)	-9	1	-3	0	0	0
	24(OCC)	2	-7	-1	0	0	0
	25(OCC)	1	-4	-1	0	0	0
	MAX	480/L12	-5340/L3	839/L8			
8020		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-4	-10822	1	0	0	0
	4(OPE)	-966	-5922	-1771	0	0	0
	6(OPE)	-970	-5921	-1770	0	0	0
	8(OPE)	-373	-5856	1717	0	0	0
	10(SUS)	-3	-5872	0	0	0	0
	11(SUS)	-3	-5865	0	0	0	0
	12(OPE)	1954	-5921	-1770	0	0	0
	13(OPE)	-5216	-5926	-1772	0	0	0
	14(OPE)	-1078	-5214	-1559	0	0	0
	15(OPE)	-572	-5922	-1771	0	0	0
	16(OPE)	-1529	-5922	-1771	0	0	0
	18(OPE)	-984	-5917	-1769	0	0	0
	19(OCC)	2924	0	0	0	0	0
	20(OCC)	-4246	-5	-2	0	0	0
	21(OCC)	-108	707	211	0	0	0
	22(OCC)	398	-1	-0	0	0	0
	23(OCC)	-559	-1	-0	0	0	0
	24(OCC)	-19	7	2	0	0	0

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	25(OCC)	-14	4	1	0	0	0
	MAX	-5216/L13	-10822/L3	-1772/L13			
8050		TYPE=Rigid +Y;					
	3(HYD)	24	-8261	-1	0	0	0
	4(OPE)	-1331	-4726	489	0	0	0
	6(OPE)	-1329	-4721	489	0	0	0
	8(OPE)	1303	-4401	-215	0	0	0
	10(SUS)	16	-4480	-1	0	0	0
	11(SUS)	16	-4474	-1	0	0	0
	12(OPE)	-1298	-4720	566	0	0	0
	13(OPE)	-1272	-4748	641	0	0	0
	14(OPE)	-1170	-4173	446	0	0	0
	15(OPE)	-1254	-4727	661	0	0	0
	16(OPE)	-1383	-4726	311	0	0	0
	18(OPE)	-1322	-4700	489	0	0	0
	19(OCC)	32	2	78	0	0	0
	20(OCC)	58	-26	152	0	0	0
	21(OCC)	160	548	-42	0	0	0
	22(OCC)	75	-6	173	0	0	0
	23(OCC)	-54	-5	-177	0	0	0
	24(OCC)	11	33	-0	0	0	0
	25(OCC)	7	21	1	0	0	0
	MAX	-1383/L16	-8261/L3	661/L15			
8080		TYPE=Rigid +Y;					
	3(HYD)	-54	-7490	23	0	0	0
	4(OPE)	-203	-3816	1127	0	0	0
	6(OPE)	-204	-3822	1128	0	0	0
	8(OPE)	-210	-4179	-1236	0	0	0
	10(SUS)	-34	-4077	18	0	0	0
	11(SUS)	-34	-4072	18	0	0	0
	12(OPE)	-86	-3832	1146	0	0	0
	13(OPE)	-323	-3789	1090	0	0	0
	14(OPE)	-187	-3347	987	0	0	0
	15(OPE)	-260	-3818	1115	0	0	0
	16(OPE)	-167	-3815	1132	0	0	0
	18(OPE)	-207	-3853	1137	0	0	0
	19(OCC)	117	-9	18	0	0	0
	20(OCC)	-119	33	-39	0	0	0
	21(OCC)	17	475	-142	0	0	0
	22(OCC)	-56	5	-13	0	0	0
	23(OCC)	36	7	4	0	0	0
	24(OCC)	-4	-48	14	0	0	0
	25(OCC)	-3	-30	9	0	0	0
	MAX	-323/L13	-7490/L3	-1236/L8			

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
8090		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	87	-6616	38	0	0	0
	4(OPE)	46	-3320	995	0	0	0
	6(OPE)	45	-3321	995	0	0	0
	8(OPE)	-194	-3512	-1036	0	0	0
	10(SUS)	55	-3548	30	0	0	0
	11(SUS)	55	-3544	30	0	0	0
	12(OPE)	2829	-3279	982	0	0	0
	13(OPE)	-146	-3329	997	0	0	0
	14(OPE)	34	-2888	866	0	0	0
	15(OPE)	-0	-3308	992	0	0	0
	16(OPE)	978	-3326	996	0	0	0
	18(OPE)	42	-3297	988	0	0	0
	19(OCC)	2784	42	-13	0	0	0
	20(OCC)	-192	-8	2	0	0	0
	21(OCC)	-12	433	-130	0	0	0
	22(OCC)	-46	13	-3	0	0	0
	23(OCC)	933	-5	1	0	0	0
	24(OCC)	-4	43	-13	0	0	0
	25(OCC)	-4	24	-7	0	0	0
	MAX	2829/L12	-6616/L3	-1036/L8			
8100		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-7323	0	0	0	0
	4(OPE)	-979	-5014	0	0	0	0
	6(OPE)	-934	-4998	0	0	0	0
	8(OPE)	0	-4394	0	0	0	0
	10(SUS)	0	-4176	0	0	0	0
	11(SUS)	0	-4171	0	0	0	0
	12(OPE)	-227	-5198	0	0	0	0
	13(OPE)	-4056	-4990	0	0	0	0
	14(OPE)	-1032	-4515	0	0	0	0
	15(OPE)	-1659	-5110	0	0	0	0
	16(OPE)	-1110	-4918	0	0	0	0
	18(OPE)	-865	-5100	0	0	0	0
	19(OCC)	706	-200	0	0	0	0
	20(OCC)	-3122	7	0	0	0	0
	21(OCC)	-98	483	0	0	0	0
	22(OCC)	-726	-113	0	0	0	0
	23(OCC)	-176	80	0	0	0	0
	24(OCC)	214	-140	0	0	0	0
	25(OCC)	68	-102	0	0	0	0
	MAX	-4056/L13	-7323/L3				

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
8120		TYPE=Rigid +Y;					
	3(HYD)	373	-8569	62	0	0	0
	4(OPE)	-1076	-7687	2040	0	0	0
	6(OPE)	-1070	-7676	2039	0	0	0
	8(OPE)	1302	-4580	-439	0	0	0
	10(SUS)	238	-4851	48	0	0	0
	11(SUS)	239	-4845	48	0	0	0
	12(OPE)	-920	-7878	2177	0	0	0
	13(OPE)	-1129	-7691	2012	0	0	0
	14(OPE)	-981	-7120	1897	0	0	0
	15(OPE)	-1022	-7661	2058	0	0	0
	16(OPE)	-1108	-7796	2059	0	0	0
	18(OPE)	-1042	-7726	2071	0	0	0
	19(OCC)	150	-202	138	0	0	0
	20(OCC)	-59	-15	-27	0	0	0
	21(OCC)	88	555	-142	0	0	0
	22(OCC)	48	15	19	0	0	0
	23(OCC)	-39	-120	20	0	0	0
	24(OCC)	-3	-207	68	0	0	0
	25(OCC)	28	-51	31	0	0	0
	MAX	1302/L8	-8569/L3	2177/L12			
8130		TYPE=Rigid Z w/gap; Rigid +Y; Rigid X;					
	3(HYD)	-63	-2429	37	0	0	0
	4(OPE)	-947	-975	-14535	0	0	0
	6(OPE)	-942	-976	-14531	0	0	0
	8(OPE)	-96	-1316	4763	0	0	0
	10(SUS)	-40	-1293	29	0	0	0
	11(SUS)	-40	-1291	29	0	0	0
	12(OPE)	-231	-950	-14968	0	0	0
	13(OPE)	-1569	-975	-14085	0	0	0
	14(OPE)	-934	-818	-13832	0	0	0
	15(OPE)	-908	-975	-8671	0	0	0
	16(OPE)	-979	-966	-20372	0	0	0
	18(OPE)	-889	-969	-14101	0	0	0
	19(OCC)	711	26	-437	0	0	0
	20(OCC)	-627	2	445	0	0	0
	21(OCC)	8	158	698	0	0	0
	22(OCC)	34	1	5859	0	0	0
	23(OCC)	-37	11	-5841	0	0	0
	24(OCC)	35	25	181	0	0	0
	25(OCC)	53	8	429	0	0	0
	MAX	-1569/L13	-2429/L3	-20372/L16			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

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Job:: BNK-GCS-CN-035-D03
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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP
CASE 10 (SUS) W+P1+H
CASE 11 (SUS) WNC+H
CASE 26 (OCC) L26=L19+L10
CASE 27 (OCC) L27=L20+L10
CASE 28 (OCC) L28=L21+L10
CASE 29 (OCC) L29=L22+L10
CASE 30 (OCC) L30=L23+L10
CASE 31 (OCC) L31=L24+L10
CASE 32 (OCC) L32=L25+L10
CASE 33 (EXP) L33=L4-L10
CASE 34 (EXP) L34=L6-L10
CASE 35 (EXP) L35=L4-L6
CASE 36 (EXP) L36=L8-L10
CASE 37 (EXP) L37=L4-L8
CASE 38 (EXP) L38=L6-L8

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 3 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 3 (HYD) WW+HP			
Ratio (%):	38.9	@Node	2000
Code Stress:	66978.3	Allowable Stress:	172368.9
Axial Stress:	38450.5	@Node	1920
Bending Stress:	43023.1	@Node	2180
Torsion Stress:	9120.9	@Node	2200
Hoop Stress:	78278.3	@Node	1929
Max Stress Intensity:	84189.9	@Node	2000

CODE STRESS CHECK PASSED : LOADCASE 10 (SUS) W+P1+H

Highest Stresses: (KPa) LOADCASE 10 (SUS) W+P1+H			
Ratio (%):	57.1	@Node	2180
Code Stress:	78702.5	Allowable Stress:	137819.5
Axial Stress:	25638.7	@Node	4649
Bending Stress:	60550.3	@Node	2180
Torsion Stress:	12873.1	@Node	2200
Hoop Stress:	52185.5	@Node	1929
Max Stress Intensity:	78701.8	@Node	2180

CODE STRESS CHECK PASSED : LOADCASE 11 (SUS) WNC+H

Highest Stresses: (KPa) LOADCASE 11 (SUS) WNC+H			
Ratio (%):	43.7	@Node	2180
Code Stress:	60275.2	Allowable Stress:	137819.5
Axial Stress:	2918.5	@Node	660
Bending Stress:	60152.6	@Node	2180
Torsion Stress:	12790.0	@Node	2200

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Hoop Stress:                  0.0       @Node     58
Max Stress Intensity:       60275.2     @Node   2180

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L19+L10

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L19+L10
Ratio (%):                   45.0       @Node   2280
Code Stress:                82570.0     Allowable Stress:     183299.9
Axial Stress:               25660.5     @Node   4670
Bending Stress:             90142.7     @Node   2330
Torsion Stress:             15422.2     @Node   2200
Hoop Stress:                52185.5     @Node   1929
Max Stress Intensity:      106170.8     @Node   2330

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L20+L10

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L20+L10
Ratio (%):                   47.0       @Node   8020
Code Stress:                80812.0     Allowable Stress:     172055.9
Axial Stress:               25981.4     @Node   4260
Bending Stress:             69042.4     @Node   2570
Torsion Stress:             14141.5     @Node    959
Hoop Stress:                52185.5     @Node   1929
Max Stress Intensity:       91692.4     @Node   2280

 CODE STRESS CHECK PASSED      : LOADCASE 28 (OCC) L28=L21+L10

Highest Stresses: (   KPa    ) LOADCASE 28 (OCC) L28=L21+L10
Ratio (%):                   47.0       @Node   2180
Code Stress:                86075.4     Allowable Stress:     183299.9
Axial Stress:               25647.6     @Node   4649
Bending Stress:             67883.1     @Node   2180
Torsion Stress:             11574.9     @Node   2200
Hoop Stress:                52185.5     @Node   1929
Max Stress Intensity:       86074.8     @Node   2180

 CODE STRESS CHECK PASSED      : LOADCASE 29 (OCC) L29=L22+L10

Highest Stresses: (   KPa    ) LOADCASE 29 (OCC) L29=L22+L10
Ratio (%):                   47.5       @Node   2180
Code Stress:                87002.6     Allowable Stress:     183299.9
Axial Stress:               25846.3     @Node   4650
Bending Stress:             68581.1     @Node   2180
Torsion Stress:             11882.8     @Node   2200
Hoop Stress:                52185.5     @Node   1929
Max Stress Intensity:       87002.0     @Node   2180

 CODE STRESS CHECK PASSED      : LOADCASE 30 (OCC) L30=L23+L10

Highest Stresses: (   KPa    ) LOADCASE 30 (OCC) L30=L23+L10
Ratio (%):                   54.1       @Node   2180
Code Stress:                99096.1     Allowable Stress:     183299.9
Axial Stress:               25667.2     @Node   1920
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Bending Stress:             80771.4       @Node   2180
Torsion Stress:             13954.7       @Node   2200
Hoop Stress:                52185.5       @Node   1929
Max Stress Intensity:       99095.5       @Node   2180

 CODE STRESS CHECK PASSED      : LOADCASE 31 (OCC) L31=L24+L10

Highest Stresses: (   KPa    ) LOADCASE 31 (OCC) L31=L24+L10
Ratio (%):                     45.0       @Node   2180
Code Stress:                82544.5       Allowable Stress:     183299.9
Axial Stress:               25638.7       @Node   4649
Bending Stress:             75577.0       @Node   2280
Torsion Stress:             19033.8       @Node   2460
Hoop Stress:                52185.5       @Node   1929
Max Stress Intensity:       95271.5       @Node   2280

 CODE STRESS CHECK PASSED      : LOADCASE 32 (OCC) L32=L25+L10

Highest Stresses: (   KPa    ) LOADCASE 32 (OCC) L32=L25+L10
Ratio (%):                     43.5       @Node   2180
Code Stress:                79774.3       Allowable Stress:     183299.9
Axial Stress:               25638.7       @Node   4649
Bending Stress:             61348.7       @Node   2180
Torsion Stress:             13680.5       @Node   2200
Hoop Stress:                52185.5       @Node   1929
Max Stress Intensity:       79773.7       @Node   2180

 CODE STRESS CHECK PASSED      : LOADCASE 33 (EXP) L33=L4-L10

Highest Stresses: (   KPa    ) LOADCASE 33 (EXP) L33=L4-L10
Ratio (%):                     53.7       @Node   2030
Code Stress:               139645.1       Allowable Stress:     259972.0
Axial Stress:                1896.4       @Node   8130
Bending Stress:            137107.4       @Node   2030
Torsion Stress:             35782.6       @Node    959
Hoop Stress:                    0.0       @Node     58
Max Stress Intensity:      342202.3       @Node   8058

 CODE STRESS CHECK PASSED      : LOADCASE 34 (EXP) L34=L6-L10

Highest Stresses: (   KPa    ) LOADCASE 34 (EXP) L34=L6-L10
Ratio (%):                     53.5       @Node   2030
Code Stress:               139119.0       Allowable Stress:     259972.0
Axial Stress:                1895.7       @Node   8130
Bending Stress:            136558.7       @Node   2030
Torsion Stress:             25611.1       @Node    959
Hoop Stress:                    0.0       @Node     58
Max Stress Intensity:      342228.0       @Node   8058

 CODE STRESS CHECK PASSED      : LOADCASE 35 (EXP) L35=L4-L6

Highest Stresses: (   KPa    ) LOADCASE 35 (EXP) L35=L4-L6
Ratio (%):                     15.4       @Node   4098
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Code Stress:	39824.1	Allowable Stress:	258027.2
Axial Stress:	580.0	@Node	660
Bending Stress:	39388.1	@Node	4098
Torsion Stress:	10171.5	@Node	959
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	46402.3	@Node	1539

CODE STRESS CHECK PASSED : LOADCASE 36 (EXP) L36=L8-L10

Highest Stresses: (KPa) LOADCASE 36 (EXP) L36=L8-L10			
Ratio (%):	23.4	@Node	2330
Code Stress:	70330.4	Allowable Stress:	300563.9
Axial Stress:	2748.0	@Node	2700
Bending Stress:	69596.4	@Node	2330
Torsion Stress:	26061.7	@Node	959
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	154905.3	@Node	2330

CODE STRESS CHECK PASSED : LOADCASE 37 (EXP) L37=L4-L8

Highest Stresses: (KPa) LOADCASE 37 (EXP) L37=L4-L8			
Ratio (%):	63.1	@Node	2030
Code Stress:	164122.9	Allowable Stress:	259972.0
Axial Stress:	3242.3	@Node	2700
Bending Stress:	161204.2	@Node	2030
Torsion Stress:	15943.5	@Node	2979
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	387134.0	@Node	8058

CODE STRESS CHECK PASSED : LOADCASE 38 (EXP) L38=L6-L8

Highest Stresses: (KPa) LOADCASE 38 (EXP) L38=L6-L8			
Ratio (%):	62.9	@Node	2030
Code Stress:	163602.5	Allowable Stress:	259972.0
Axial Stress:	3223.0	@Node	2700
Bending Stress:	160662.3	@Node	2030
Torsion Stress:	16146.2	@Node	3000
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	387159.7	@Node	8058

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
HANGER REPORT ((TABLE DATA FROM DESIGN RUNS)) 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

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HANGER REPORT
(TABLE DATA FROM DESIGN RUNS)

NODE	NUM RQD	FIG. NO.	SIZE	VERTICAL MOVEMENT (mm.)	HOT LOAD (N.)	THEORETICAL INSTALLED LOAD (N.)	ACTUAL INSTALLED LOAD (N.)	SPRING RATE (N./cm.)	HORIZONTAL MOVEMENT (mm.)
160	1		2931	-0.093	2744.	2738.	0.	667.	0.000
	LISEGA					LOAD VARIATION =	0%		

** VARIABLE SUPPORT SPRING DESIGNED ..... SHORT RANGE
MINIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 1668.083
MAXIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 5004.250
RECOMMENDED INSTALLATION CLEARANCE ..... (mm.) 203.200

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

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NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 4 (OPE) W+D1+T1+P1+H
CASE 6 (OPE) W+D1+T2+P1+H
CASE 8 (OPE) W+D1+T3+P1+H
CASE 10 (SUS) W+P1+H
CASE 11 (SUS) WNC+H

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
780		Absolute Method								
	Limits	11201	11201	8400		6720	4480	5820		
	4(OPE)	2851	-743	291	0.255	-85	-2468	75	0.551	
	6(OPE)	2644	-462	36	0.236	-454	-2262	-103	0.505	
	8(OPE)	2644	-462	36	0.236	-454	-2262	-103	0.505	
	10(SUS)	2142	-38	34	0.191	-41	-1444	-24	0.322	
	11(SUS)	2136	-38	34	0.191	-41	-1439	-24	0.321	
1230		Absolute Method								
	Limits	8500	8500	6500		6000	2000	5000		
	4(OPE)	2551	19	2595	0.399	-0	-0	10	0.002	
	6(OPE)	1764	-145	1857	0.286	0	0	10	0.002	
	8(OPE)	1799	-146	1897	0.292	0	0	10	0.002	
	10(SUS)	-44	-558	-88	0.066	0	0	10	0.002	
	11(SUS)	-44	-555	-88	0.065	0	0	10	0.002	
4500		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	-91	-298	436	0.109	376	1525	514	0.935	
	6(OPE)	247	-243	300	0.075	241	975	377	0.598	
	8(OPE)	247	-243	295	0.074	229	971	377	0.595	

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NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
	10(SUS)	1094	12	-171	0.217	-32	-322	75	0.197	
	11(SUS)	1088	12	-169	0.216	-32	-319	74	0.196	
4520		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	-848	-437	-396	0.169	59	-452	191	0.278	
	6(OPE)	8	-258	-137	0.051	89	-177	43	0.108	
	8(OPE)	8	-258	-137	0.051	89	-177	43	0.108	
	10(SUS)	604	20	-19	0.120	-17	38	26	0.024	
	11(SUS)	601	19	-19	0.119	-17	37	25	0.023	
1700		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	183	-276	-573	0.143	535	934	-352	0.573	
	6(OPE)	438	-279	-458	0.114	292	547	-273	0.336	
	8(OPE)	436	-279	-450	0.113	280	549	-274	0.337	
	10(SUS)	1094	-12	-171	0.217	32	-322	-75	0.197	
	11(SUS)	1088	-12	-169	0.216	32	-319	-74	0.196	
1780		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	-438	467	1006	0.251	-623	-1262	-111	0.774	
	6(OPE)	31	370	152	0.074	-270	-367	10	0.225	
	8(OPE)	31	370	152	0.074	-270	-367	10	0.225	
	10(SUS)	615	-10	50	0.122	-17	-4	-19	0.009	
	11(SUS)	612	-10	49	0.122	-17	-4	-19	0.009	

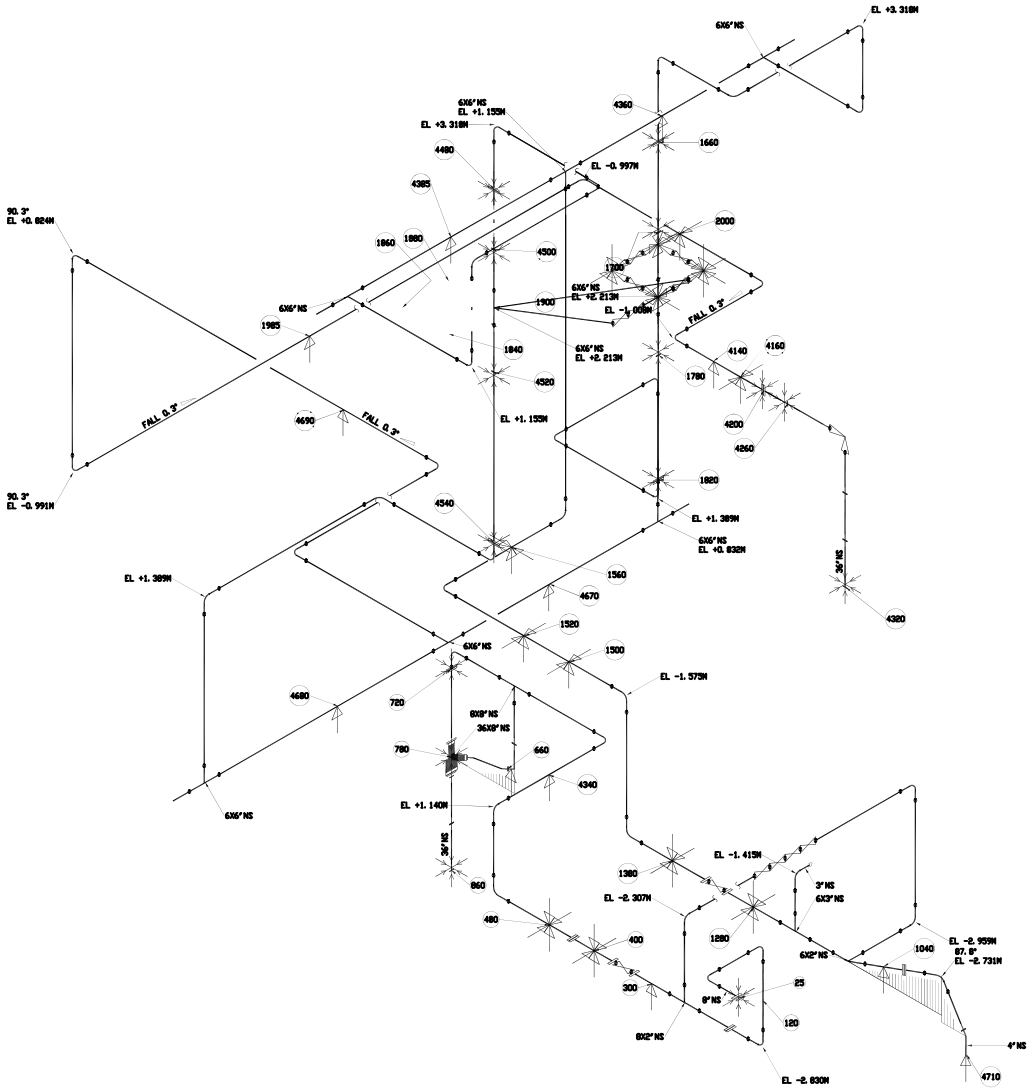
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 14:58
Job:: BNK-GCS-CN-035-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
4260		Absolute Method								
	Limits	8400	8400	6300		3780	2520	3280		
	4(OPE)	1659	-1200	-161	0.197	-167	-227	1923	0.586	
	6(OPE)	1005	-715	-97	0.120	-182	-136	626	0.191	
	8(OPE)	1005	-715	-97	0.120	-182	-136	626	0.191	
	10(SUS)	8	-531	0	0.063	-180	0	132	0.048	
	11(SUS)	8	-526	0	0.063	-175	0	131	0.046	
25		Absolute Method								
	Limits	8500	8500	6500		6000	2000	5000		
	4(OPE)	532	-1263	173	0.149	-0	0	-18	0.004	
	6(OPE)	1067	-2190	875	0.258	0	-0	-18	0.004	
	8(OPE)	1067	-2190	874	0.258	-0	-0	-18	0.004	
	10(SUS)	49	-859	-42	0.101	0	-0	-18	0.004	
	11(SUS)	49	-856	-42	0.101	0	-0	-18	0.004	

BNK-GCS-CN-036

1. GAS-111-0031B-CN05-8"-ET
2. GAS-111-0034B-CN05-2"-PT
3. GAS-111-0035B-CN05-2"-PT
4. GAS-111-0036B-CN05-6"-IS
5. GAS-111-0037B-CS00-6"-IS
6. GAS-111-0032B-CN05-3"-PT
7. GAS-111-0033B-CN05-2"-PT
8. FL-112-0014B-AN07-6"-PT
9. FL-112-0016B-AN07-6"-PT
10. FL-112-0015B-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

3 OF 3

REV.	CHANGE	DATE
		15 MAY 2024

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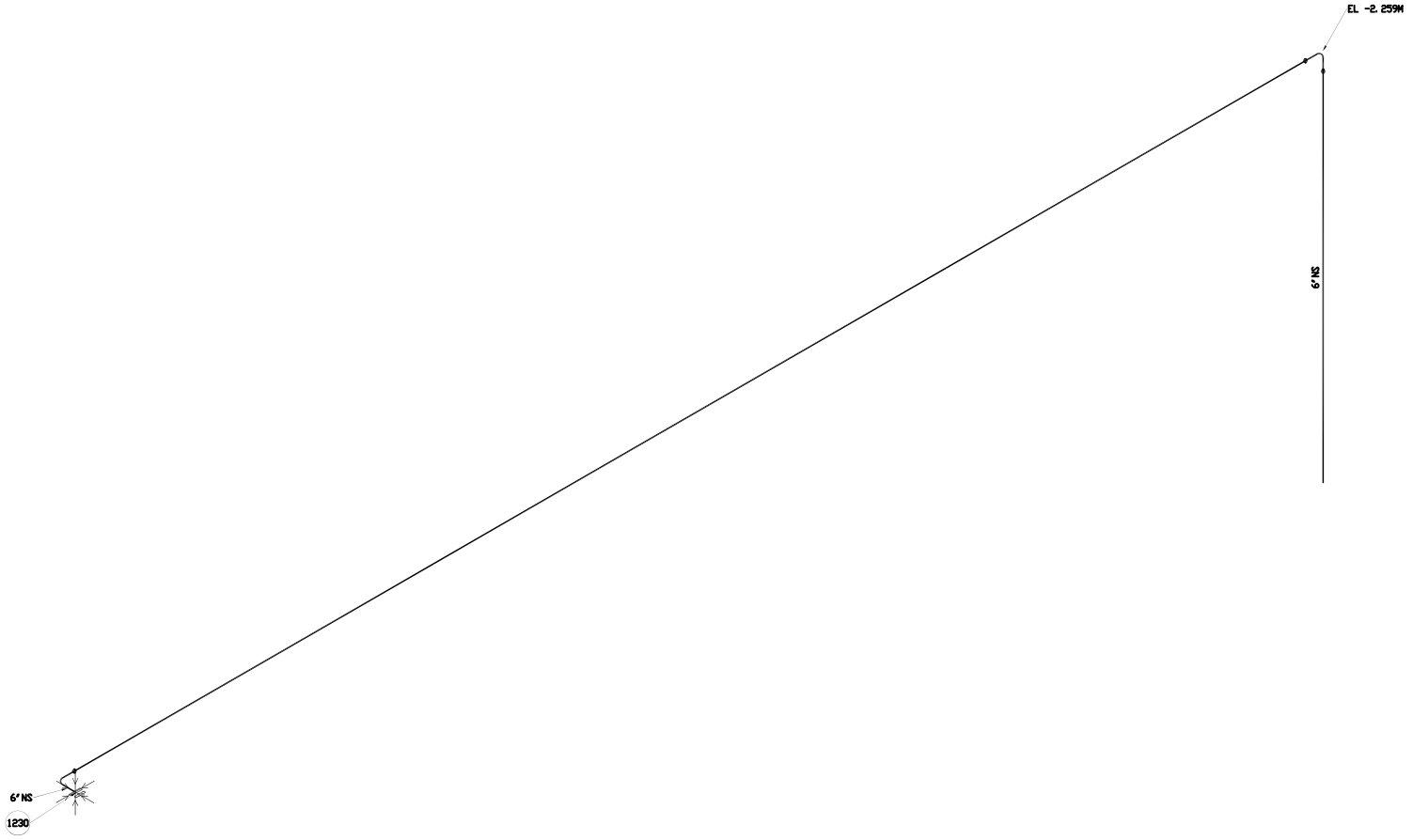

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

3 OF 3

REV.	CHANGE	DATE
		15 MAY 2024

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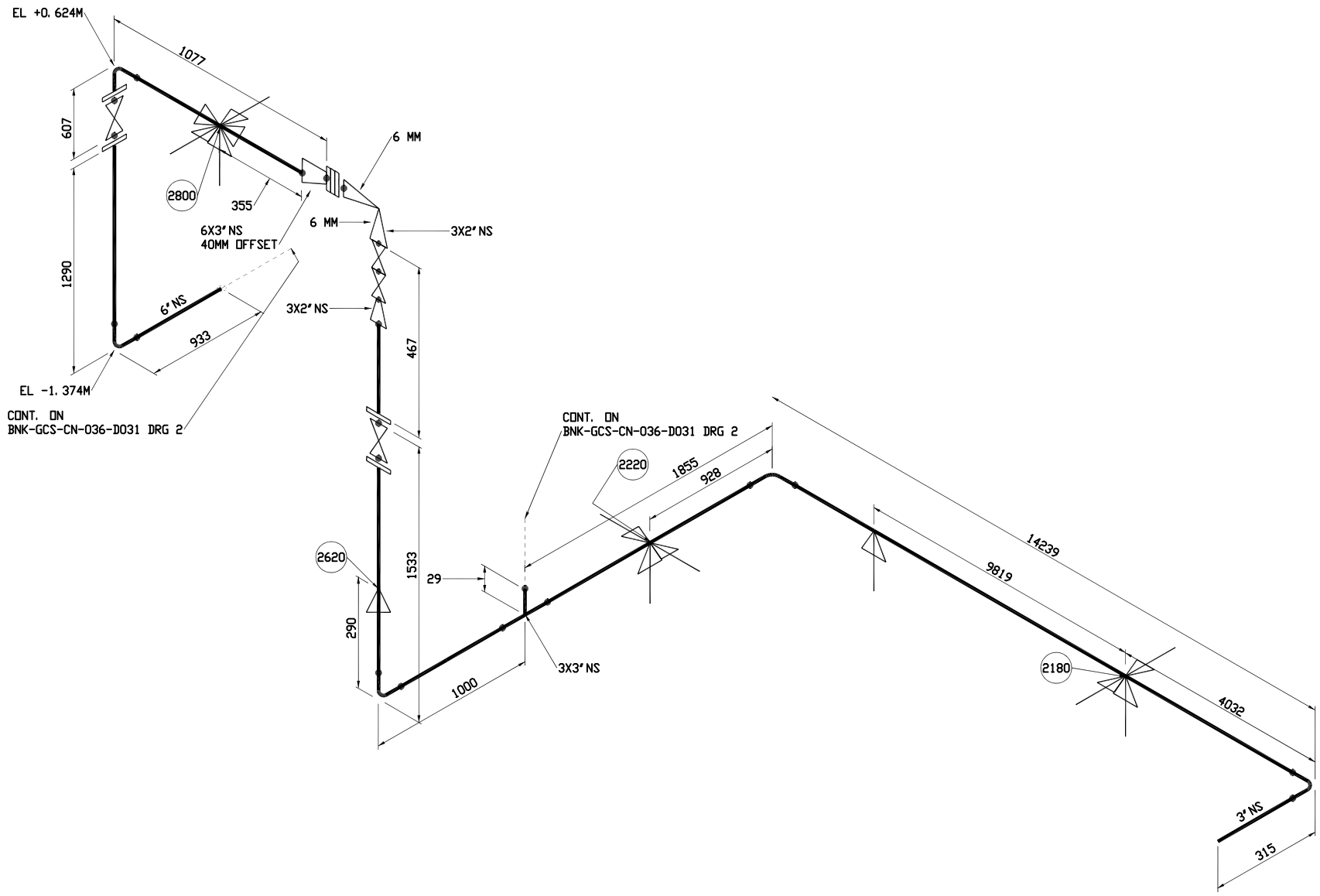

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 3

REV.	CHANGE	DATE
		15 MAY 2024

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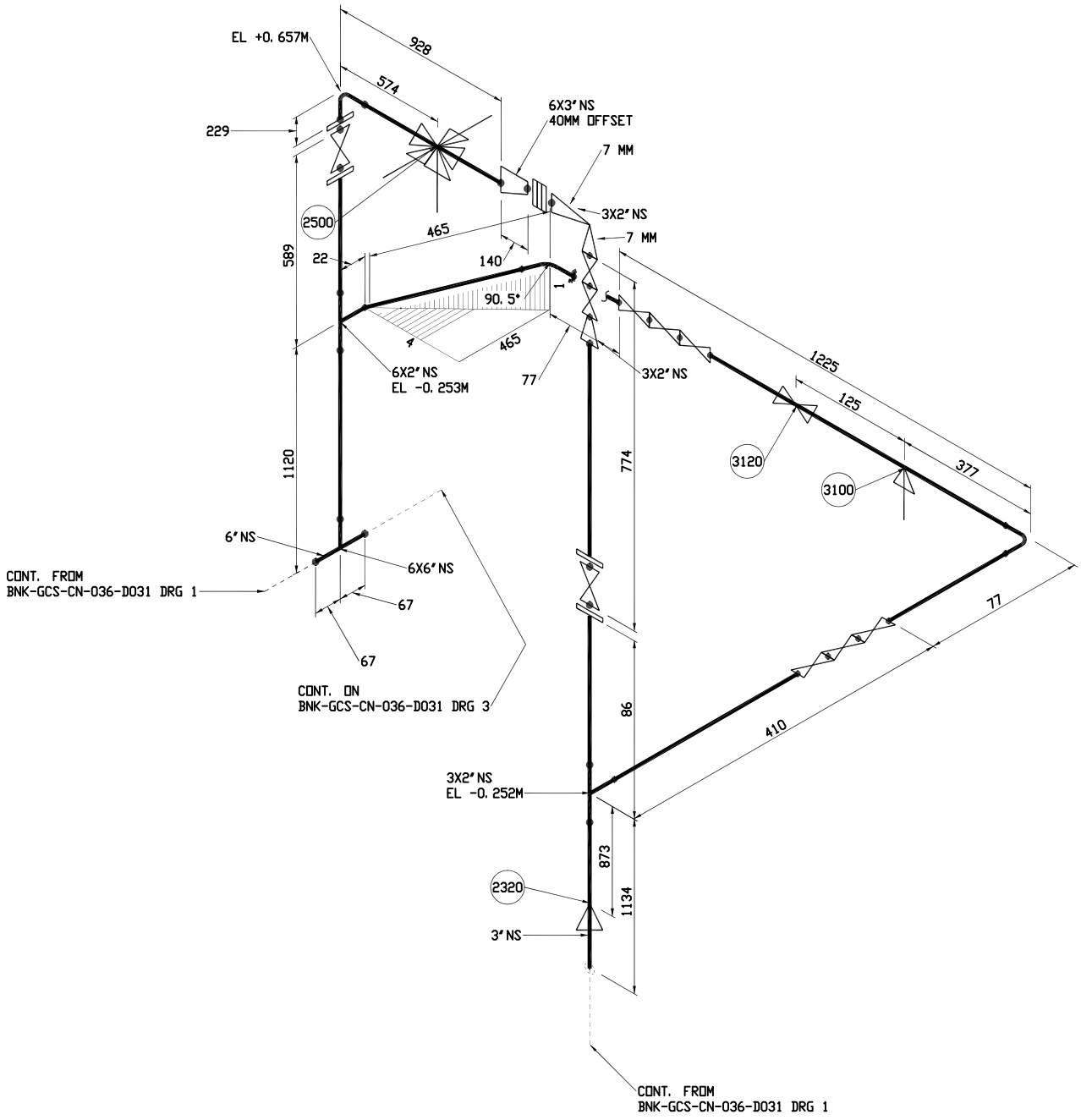

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

2 OF 3

REV.	CHANGE	DATE
		15 MAY 2024

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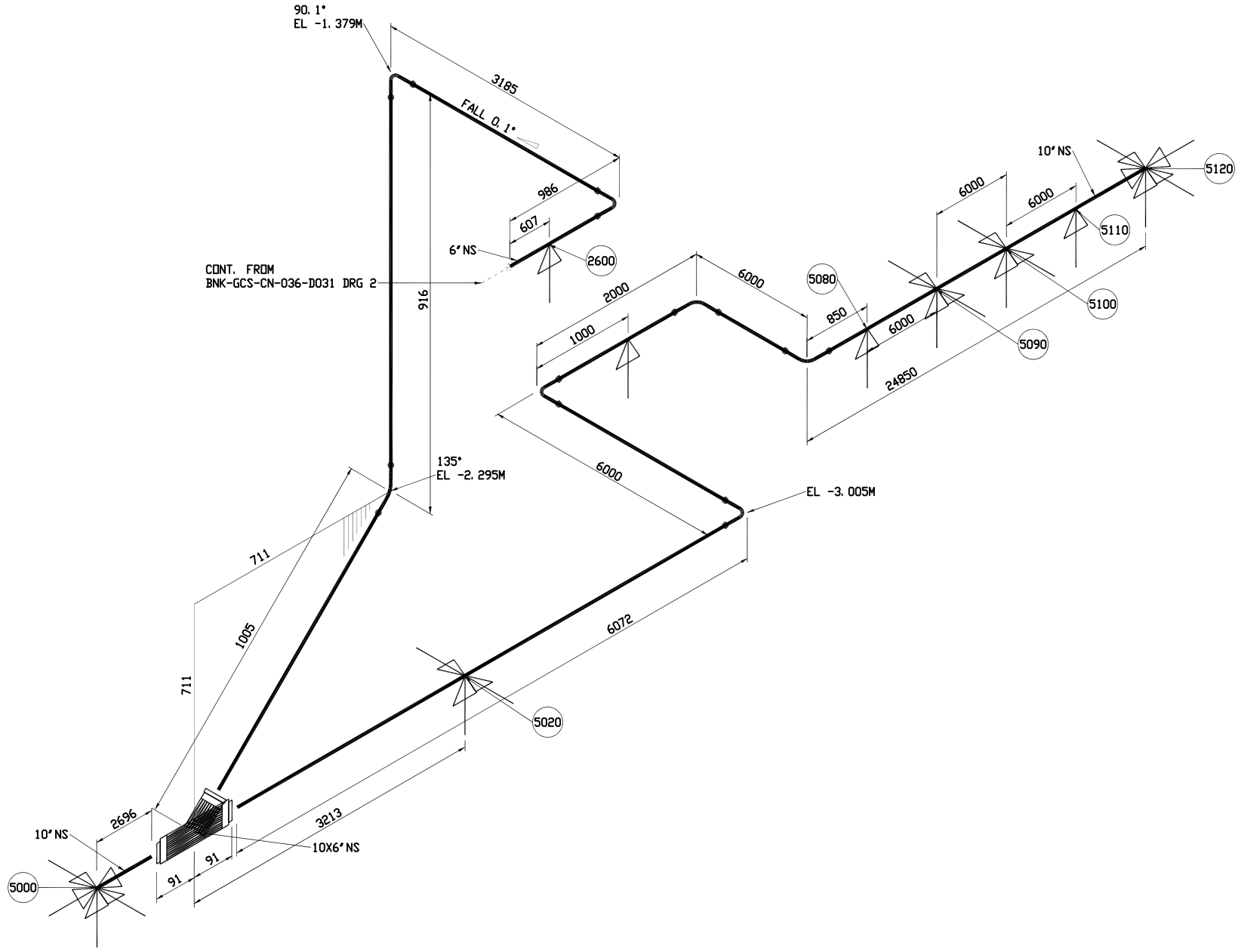

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 3 OF 3

REV.	CHANGE	DATE
		15 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 13:37
Job:: BNK-GCS-CN-036-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 13:37
Job:: BNK-GCS-CN-036-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 20,2024 13:37:22

PIPE DATA

From 40 To 60 DX= -805.000 mm.
PIPE
Dia= 219.075 mm. Wall= 8.179 mm. Cor= 3.0000 mm.
GENERAL
T1= 85 C T2= 36 C T3= 36 C P1= 2,200.0500 KPa PHyd= 3,300.0752 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 199,086,608 KPa
EH2= 202,163,808 KPa EH3= 202,163,808 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000058 kg./cu.cm.
Insul Thk= 40.000 mm. Insul Den= .0001500 kg./cu.cm.
BEND at "TO" end
Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 59
Angle/Node @2= .00 58
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 60 To 80 DY= .000 mm. DZ= -1,690.000 mm.
BEND at "TO" end
Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 79

From 80 To 100 DX= .000 mm. DY= -1,410.000 mm.

From 100 To 120 DY= -1,114.000 mm.

From 180 To 140 DX= 71.842 mm. DY= -71.842 mm.
RIGID Weight= .00 N.

From 140 To 160 DY= -200.000 mm.
PIPE
Dia= 168.275 mm. Wall= 7.112 mm.
GENERAL
T1= 21 C T2= 21 C T3= 21 C P1= .0000 KPa PHyd= .0000 KPa
Fluid Den= .0000000 kg./cu.cm. Insul Thk= 40.000 mm.
RESTRAINTS
Node 160 -X Mu = .30
Node 160 Z Cnode 121

INPUT LISTING
```
    Node  121  +Y   Mu = .10
    Node  160  X   Cnode  121
 HANGERS
    Hanger Node = 160   Hanger Connecting Node = 121
    Available Space = -1,000.0000 mm.   Allowed Load Variation = 25.0000
    No. Hangers = 0.0   Short Range Flag = -1   User Operating Load = .00 N.
    Free Node = 0   Free Node = 0   Free Code = 0.0   Spring Rate = .00 N./cm.
    Theoretical Cold Load = .00 N.
 SIF's & TEE's
    Node  140   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  120  To  180 DY= -306.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 6.350 mm.
 GENERAL
    T1= 85 C   T2= 36 C   T3= 36 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Fluid Den= .0000058 kg./cu.cm.   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 179
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  180  To  200  DX= -306.000 mm.
 ------------------------------------------------------------------------------
 From  200  To  220  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  220  To  240  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  240  To  260  DX= -398.000 mm.
 ------------------------------------------------------------------------------
 From  260  To  280  DX= -300.000 mm.
 SIF's & TEE's
    Node  280   Weldolet
 ------------------------------------------------------------------------------
 From  280  To  300  DX= -500.000 mm.
 RESTRAINTS
    Node  300  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  300  To  320  DX= -176.000 mm.
 ------------------------------------------------------------------------------
 From  320  To  340  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
```

INPUT LISTING

```
 From  340  To  360  DX= -587.000 mm.
    Element Name= GATE_NOFLG_300
 RIGID  Weight= 1,023.41 N.
 ------------------------------------------------------------------------------
 From  360  To  380  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  380  To  400  DX= -1,000.000 mm.
 RESTRAINTS
    Node  400  Y   Mu = .30
    Node  400  Z
 ------------------------------------------------------------------------------
 From  400  To  420  DX= -1,287.800 mm.
 ------------------------------------------------------------------------------
 From  420  To  440  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  440  To  460  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  460  To  480  DX= -1,500.000 mm.
 RESTRAINTS
    Node  480  Y   Mu = .30
    Node  480  Z
 ------------------------------------------------------------------------------
 From  480  To  500  DX= -3,460.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 499
    Angle/Node @2= .00 498
 ------------------------------------------------------------------------------
 From  500  To  520 DY= 305.000 mm.
 ------------------------------------------------------------------------------
 From  520  To  540 DY= -305.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  540  To  560 DY= -300.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Fluid Den= .0000000 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  560  +Y   Mu = .30
    Node  560  Z
 SIF's & TEE's
    Node  540   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  520  To  4330 DY= 3,665.000 mm.
```

INPUT LISTING
```
 PIPE
    Dia= 219.075 mm.   Wall= 6.350 mm.
 GENERAL
    T1= 85 C   T2= 36 C   T3= 36 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Fluid Den= .0000058 kg./cu.cm.   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4329
    Angle/Node @2= .00 4328
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4330  To  4340 DZ= -3,375.000 mm.
 RESTRAINTS
    Node  4340  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  4340  To  580 DZ= -3,375.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 579
    Angle/Node @2= .00 578
 ------------------------------------------------------------------------------
 From  580  To  600  DX= -730.000 mm.  DZ= .000 mm.
 ------------------------------------------------------------------------------
 From  600  To  620  DX= -462.000 mm.  DZ= .000 mm.
 ------------------------------------------------------------------------------
 From  620  To  640 DY= -84.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  640  To  660 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Fluid Den= .0000000 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  660  +Y   Cnode  800   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  620  To  680  DX= -462.000 mm.  DZ= .000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 6.350 mm.
 GENERAL
    T1= 85 C   T2= 36 C   T3= 36 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Fluid Den= .0000058 kg./cu.cm.   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 679
    Angle/Node @2= .00 678
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
```

INPUT LISTING
```
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  680  To  700 DY= -305.000 mm.
 ---------------------------------------------------------------------------
 From  700  To  720 DY= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 RESTRAINTS
    Node  720  ANC   Cnode  740
 ---------------------------------------------------------------------------
 From  740  To  760 DY= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ---------------------------------------------------------------------------
 From  760  To  780 DY= -181.400 mm.
 RESTRAINTS
    Node  780  ANC   Cnode  820
 EQUIPMENT LIMITS
    Nozzle Node = 780
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,480.19 N.m.   MC= 5,820.25 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  780  To  800  DX= 462.000 mm.  DY= 331.000 mm.  DZ= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  820  To  840 DY= -3,065.000 mm.
 PIPE
    Dia= 914.400 mm.   Wall= 15.000 mm.
 GENERAL
    Mat= (383)A516 70   E= 203,401,232 KPa   EH1= 199,086,608 KPa
    EH2= 202,163,808 KPa   EH3= 202,163,808 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Insul Thk= 40.000 mm.
 RIGID  Weight= .00 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 160,648 KPa
    Sh1= 160,062 KPa   Sh2= 160,648 KPa   Sh3= 160,648 KPa   Sh4= 160,648 KPa
    Sh5= 160,648 KPa   Sh6= 160,648 KPa   Sh7= 160,648 KPa   Sh8= 160,648 KPa
    Sh9= 160,648 KPa   Sy= 262,001 KPa
 ---------------------------------------------------------------------------
 From  840  To  860 DY= -1,200.000 mm.
 PIPE
    Dia= 914.400 mm.   Wall= 12.000 mm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  860  ANC
 ---------------------------------------------------------------------------
 From  280  To  880 DY= 523.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
 GENERAL
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 13:37
Job:: BNK-GCS-CN-036-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
    P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 199,086,608 KPa   EH2= 202,163,808 KPa
    EH3= 202,163,808 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 879
    Angle/Node @2= .00 878
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  880  To  900 DZ= -510.000 mm.
 ------------------------------------------------------------------------------
 From  900  To  910 DZ= -73.025 mm.
    Element Name= BALL_FLG_600
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 1,900.0433 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000430 kg./cu.cm.
 RIGID  Weight= 44.48 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  910  To  920 DZ= -301.000 mm.
 RIGID  Weight= 66.72 N.
 ------------------------------------------------------------------------------
 From  920  To  930 DZ= -275.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Element Name= CHECK_FLG_150
 GENERAL
    P1= 2,200.0500 KPa   Fluid Den= .0000154 kg./cu.cm.   Insul Thk= 40.000 mm.
 RIGID  Weight= 355.86 N.
 ------------------------------------------------------------------------------
 From  930  To  940 DZ= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  940  To  960 DZ= -77.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 959
    Angle/Node @2= .00 958
 ------------------------------------------------------------------------------
 From  960  To  980 DY= -652.400 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 979
    Angle/Node @2= .00 978
 ------------------------------------------------------------------------------
 From  980  To  1000 DZ= 77.000 mm.
 ------------------------------------------------------------------------------
 From  1000  To  1020 DZ= 621.000 mm.
    Element Name= CHECK_FLG_600
```

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INPUT LISTING

```
 SIF's & TEE's
    Node  1020   Weldolet
 ---------------------------------------------------------------------------
 From  1020  To  1040  DX= 300.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    Fluid Den= .0000154 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  1040  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1040  To  1060  DX= 318.000 mm.
 ---------------------------------------------------------------------------
 From  1060  To  1080  DX= 101.600 mm.
    Element Name= FLG.PR_FLG_150
 RIGID  Weight= 191.27 N.
 ---------------------------------------------------------------------------
 From  1080  To  1100  DX= 101.600 mm.
    Element Name= FLG.PR_FLG_150
 RIGID  Weight= 191.27 N.
 ---------------------------------------------------------------------------
 From  1100  To  1120  DX= 990.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1119
    Angle/Node @2= .00 1118
 ---------------------------------------------------------------------------
 From  1120  To  1140 DY= 700.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1139
    Angle/Node @2= .00 1138
 ---------------------------------------------------------------------------
 From  1140  To  1160  DX= .000 mm.  DZ= 763.333 mm.
 ---------------------------------------------------------------------------
 From  1120  To  4700  DX= 53.882 mm.  DY= -53.882 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1160  To  1180  DX= .000 mm.  DZ= 763.333 mm.
 ---------------------------------------------------------------------------
 From  1180  To  1200 DZ= 763.333 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1199
    Angle/Node @2= .00 1198
 ---------------------------------------------------------------------------
 From  1200  To  1220  DX= 229.000 mm.
 ---------------------------------------------------------------------------
 From  1220  To  1230  DX= 101.600 mm.
    Element Name= FLANGE_FLG_600
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1230  ANC   Cnode  1231
 ALLOWABLE STRESSES
```

INPUT LISTING
```
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 EQUIPMENT LIMITS
    Nozzle Node = 1230
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,500.42 N.   FB= 8,500.42 N.
    FC= 6,500.32 N.   MA= 6,000.25 N.m.   MB= 2,000.08 N.m.   MC= 5,000.21 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------------
 From  1231  To  1240  DX= 101.600 mm.
 RIGID  Weight= 191.27 N.
 DISPLACEMENTS
    Node  1231   DX1= 4.000 mm.   DY1= 2.100 mm.   DZ1= .900 mm.
 ------------------------------------------------------------------------------
 From  1020  To  1260  DX= -1,207.940 mm.
 SIF's & TEE's
    Node  1260   Welding Tee
 ------------------------------------------------------------------------------
 From  1260  To  1280  DX= -1,274.610 mm.
 RESTRAINTS
    Node  1280  Y   Mu = .30
    Node  1280  Z
 ------------------------------------------------------------------------------
 From  1280  To  1300  DX= -369.000 mm.
 ------------------------------------------------------------------------------
 From  1300  To  1320  DX= -101.600 mm.
    Element Name= FLANGE_FLG_600
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  1320  To  1340  DX= -453.000 mm.
    Element Name= CHECK_NOFLG_600
 RIGID  Weight= 1,850.46 N.
 ------------------------------------------------------------------------------
 From  1340  To  1360  DX= -101.600 mm.
    Element Name= FLANGE_NOFLG_600
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  1360  To  1380  DX= -1,973.000 mm.
 RESTRAINTS
    Node  1380  Y   Mu = .30
    Node  1380  Z
 ------------------------------------------------------------------------------
 From  1380  To  1400  DX= -3,826.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1399
    Angle/Node @2= .00 1398
 ------------------------------------------------------------------------------
 From  1400  To  1420 DY= 229.000 mm.
 ------------------------------------------------------------------------------
 From  1420  To  1440 DY= -229.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  1440  To  1460 DY= -300.000 mm.
 PIPE
```

INPUT LISTING
```
    Dia= 114.300 mm.   Wall= 6.020 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Fluid Den= .0000000 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  1460  +Y   Mu = .30
    Node  1460  Z
 SIF's & TEE's
    Node  1440   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1420  To  1480 DY= 1,155.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 1,900.0433 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000154 kg./cu.cm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1479
    Angle/Node @2= .00 1478
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1480  To  1500  DX= -5,760.000 mm.
 RESTRAINTS
    Node  1500  +Y
    Node  1500  Z
 ------------------------------------------------------------------------------
 From  1500  To  1520  DX= -6,000.000 mm.
 RESTRAINTS
    Node  1520  +Y   Mu = .30
    Node  1520  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  1520  To  1540  DX= -2,481.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1539
    Angle/Node @2= .00 1538
 ------------------------------------------------------------------------------
 From  1540  To  1560 DZ= -1,432.000 mm.
 RESTRAINTS
    Node  1560  +Y   Mu = .30
    Node  1560  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1560  To  1580 DZ= -629.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1579
    Angle/Node @2= .00 1578
 ------------------------------------------------------------------------------
```

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INPUT LISTING

```
 From  1580  To  4350 DY= 2,730.000 mm.
 SIF's & TEE's
    Node  4350   Welding Tee
 ------------------------------------------------------------------------------
 From  4350  To  4360 DZ= -482.500 mm.
 RESTRAINTS
    Node  4360  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  4360  To  4370 DZ= -432.500 mm.
 SIF's & TEE's
    Node  4370   Welding Tee
 ------------------------------------------------------------------------------
 From  4370  To  4380 DZ= -245.000 mm.
 ------------------------------------------------------------------------------
 From  4350  To  4385 DZ= 482.500 mm.
 RESTRAINTS
    Node  4385  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  4385  To  4420 DZ= 432.500 mm.
 ------------------------------------------------------------------------------
 From  4420  To  4430 DZ= 245.000 mm.
 ------------------------------------------------------------------------------
 From  4420  To  4440  DX= 472.000 mm.  DY= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4439
    Angle/Node @2= .00 4438
 ------------------------------------------------------------------------------
 From  4440  To  4450 DY= 2,163.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4449
    Angle/Node @2= .00 4448
 ------------------------------------------------------------------------------
 From  4450  To  4820 DZ= -325.000 mm.
 ------------------------------------------------------------------------------
 From  4820  To  4455 DZ= -325.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4454
    Angle/Node @2= .00 4453
 ------------------------------------------------------------------------------
 From  4455  To  4810  DX= -1,067.000 mm.
 ------------------------------------------------------------------------------
 From  4810  To  4460  DX= -1,173.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4459
    Angle/Node @2= .00 4458
 ------------------------------------------------------------------------------
 From  4460  To  4470 DY= -510.000 mm.
 ------------------------------------------------------------------------------
 From  4470  To  4480 DY= -126.000 mm.
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  4480  ANC   Cnode  4481
 ------------------------------------------------------------------------------
 From  4481  To  4490 DY= -101.600 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 21.946 mm.
```

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INPUT LISTING

```
 GENERAL
    T1= 155 C   T2= 129 C   T3= 129 C   P1= 2,200.0500 KPa
    PHyd= 2,860.0652 KPa   Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 -------------------------------------------------------------------------------
 From  4490  To  4500 DY= -127.000 mm.
 RESTRAINTS
    Node  4500  ANC   Cnode  4501
 EQUIPMENT LIMITS
    Nozzle Node = 4500
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 -------------------------------------------------------------------------------
 From  4501  To  4400 DY= -240.000 mm.
 RIGID  Weight= .00 N.
 -------------------------------------------------------------------------------
 From  4400  To  4510 DY= -240.000 mm.
 GENERAL
    T1= 155 C   T2= 60 C   T3= 60 C
 RIGID  Weight= .00 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 -------------------------------------------------------------------------------
 From  4520  To  4530 DY= -127.000 mm.
 RESTRAINTS
    Node  4520  ANC   Cnode  4510
 EQUIPMENT LIMITS
    Nozzle Node = 4520
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 -------------------------------------------------------------------------------
 From  4530  To  4540 DY= -101.600 mm.
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  4540  ANC   Cnode  4541
 -------------------------------------------------------------------------------
 From  4370  To  1600  DX= 472.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 1,900.0433 KPa
    PHyd= 3,300.0752 KPa   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1599
```

INPUT LISTING
```
    Angle/Node @2= .00 1598
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1600  To  4390 DY= 2,163.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4389
    Angle/Node @2= .00 4388
 ---------------------------------------------------------------------------
 From  4390  To  4830 DZ= 325.000 mm.
 GENERAL
    T1= 155 C
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  4830  To  1610 DZ= 325.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1609
    Angle/Node @2= .00 1608
 ---------------------------------------------------------------------------
 From  1610  To  4800  DX= -1,067.000 mm.
 ---------------------------------------------------------------------------
 From  4800  To  1620  DX= -1,173.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1619
    Angle/Node @2= .00 1618
 ---------------------------------------------------------------------------
 From  1620  To  1640 DY= -510.000 mm.
 ---------------------------------------------------------------------------
 From  1640  To  1660 DY= -126.000 mm.
    Element Name= FLANGE_NOFLG_600
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1660  ANC   Cnode  1661
 ---------------------------------------------------------------------------
 From  1661  To  1680 DY= -101.600 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 21.946 mm.   Element Name= FLANGE_NOFLG_600
 GENERAL
    T1= 155 C   T2= 129 C   T3= 129 C   P1= 2,200.0500 KPa
    PHyd= 2,860.0652 KPa   Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1680  To  1700 DY= -127.000 mm.
 RESTRAINTS
```

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INPUT LISTING

```
    Node  1700  ANC   Cnode  1720
 EQUIPMENT LIMITS
    Nozzle Node = 1700
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1720  To  4410 DY= -240.000 mm.
 GENERAL
    P1= 2,200.0500 KPa
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  4410  To  1760 DY= -240.000 mm.
 GENERAL
    T1= 155 C   T2= 60 C   T3= 60 C
 RIGID  Weight= .00 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1780  To  1800 DY= -127.000 mm.
 GENERAL
    T1= 155 C   T2= 60 C
 RESTRAINTS
    Node  1780  ANC   Cnode  1760
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 EQUIPMENT LIMITS
    Nozzle Node = 1780
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1800  To  1820 DY= -101.600 mm.
    Element Name= FLANGE_NOFLG_150
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1820  ANC   Cnode  1821
 ---------------------------------------------------------------------------
 From  1740  To  4400 DZ= 265.000 mm.
 GENERAL
    T1= 155 C   T2= 94 C   T3= 94 C
 RIGID  Weight= 658.96 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
```

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```
 From  4400  To  1840 DZ= 435.000 mm.
 RIGID  Weight= 1,591.15 N.
 RESTRAINTS
    Node  1840  Y   Mu = .10
    Node  1840  X   Mu = .30
    Node  1840  Z   Gap= 6.000 mm.
 ------------------------------------------------------------------------------
 From  1840  To  1860  DX= -5,100.000 mm.
 RIGID  Weight=10,500.52 N.
 RESTRAINTS
    Node  1860  Y   Mu = .10
    Node  1860  Z   Gap= 6.000 mm.
 ------------------------------------------------------------------------------
 From  1860  To  1880 DZ= -1,400.000 mm.
 RIGID  Weight= 4,500.22 N.
 RESTRAINTS
    Node  1880  Y   Mu = .10
    Node  1880  Z   Gap= 6.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1880  To  1900  DX= 5,100.000 mm.
 RIGID  Weight=10,500.52 N.
 RESTRAINTS
    Node  1900  Y   Mu = .10
    Node  1900  X
    Node  1900  Z   Gap= 6.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1900  To  4410 DZ= 435.000 mm.
 RIGID  Weight= 1,591.15 N.
 ------------------------------------------------------------------------------
 From  4410  To  1740 DZ= 265.000 mm.
 RIGID  Weight= 658.96 N.
 ------------------------------------------------------------------------------
 From  1821  To  1920 DY= -126.420 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 3.404 mm.   Cor= .0000 mm.
    Element Name= FLANGE_NOFLG_150
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 188,652,912 KPa
    EH2= 192,364,096 KPa   EH3= 192,364,096 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000183 kg./cu.cm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  1920  To  1930 DY= -229.000 mm.
 GENERAL
    P1= 2,200.0500 KPa   Fluid Den= .0000183 kg./cu.cm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1929
```

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```
 ----------------------------------------------------------------------------
 From  1930  To  1940  DX= -611.000 mm.  DY= .000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1939
 ----------------------------------------------------------------------------
 From  1940  To  1945 DY= .000 mm.  DZ= -650.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1944
    Angle/Node @2= .00 1943
 ----------------------------------------------------------------------------
 From  1945  To  1950 DY= -557.000 mm.  DZ= .000 mm.
 SIF's & TEE's
    Node  1950   Welding Tee
 ----------------------------------------------------------------------------
 From  1950  To  4550 DZ= -245.000 mm.
 ----------------------------------------------------------------------------
 From  1950  To  4670 DZ= 457.500 mm.
 RESTRAINTS
    Node  4670  +Y
 ----------------------------------------------------------------------------
 From  4670  To  4560 DZ= 457.500 mm.
 SIF's & TEE's
    Node  4560   Welding Tee
 ----------------------------------------------------------------------------
 From  4560  To  4630  DX= -372.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4629
    Angle/Node @2= .00 4628
 ----------------------------------------------------------------------------
 From  4630  To  4640 DZ= -1,097.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4639
    Angle/Node @2= .00 4638
 ----------------------------------------------------------------------------
 From  4640  To  4690  DX= -828.500 mm.  DY= -4.145 mm.
 RESTRAINTS
    Node  4690  +Y
 ----------------------------------------------------------------------------
 From  4690  To  4650  DX= -828.500 mm.  DY= -4.145 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 89.713   Angle/Node @1= 44.86 4649
    Angle/Node @2= .00 4648
 ----------------------------------------------------------------------------
 From  4650  To  4660 DY= -907.500 mm.
 ----------------------------------------------------------------------------
 From  4560  To  4680 DZ= 457.500 mm.
 RESTRAINTS
    Node  4680  +Y
 ----------------------------------------------------------------------------
 From  4680  To  4570 DZ= 457.500 mm.
 SIF's & TEE's
    Node  4570   Welding Tee
 ----------------------------------------------------------------------------
 From  4570  To  4580 DZ= 245.000 mm.
 ----------------------------------------------------------------------------
 From  4570  To  4590 DY= 557.000 mm.
```

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```
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4589
    Angle/Node @2= .00 4588
 ------------------------------------------------------------------------------
 From  4590  To  4600 DZ= -650.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4599
    Angle/Node @2= .00 4598
 ------------------------------------------------------------------------------
 From  4600  To  4610  DX= 611.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4609
    Angle/Node @2= .00 4608
 ------------------------------------------------------------------------------
 From  4610  To  4620 DY= 229.000 mm.
 ------------------------------------------------------------------------------
 From  4541  To  4620 DY= -126.420 mm.
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  4660  To  1980 DY= -907.500 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 89.706   Angle/Node @1= 44.85 1979
    Angle/Node @2= .00 1978
 ------------------------------------------------------------------------------
 From  1980  To  1985 DY= -3.070 mm.  DZ= -599.000 mm.
 RESTRAINTS
    Node  1985  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  1985  To  1990 DY= -3.070 mm.  DZ= -599.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1989
    Angle/Node @2= .00 1988
 ------------------------------------------------------------------------------
 From  1990  To  2000  DX= 1,952.000 mm.
 RESTRAINTS
    Node  2000  +Y   Mu = .30
    Node  2000  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  1260  To  2140 DY= 1,544.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 2,200.0500 KPa
    PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 194,667,600 KPa   EH2= 196,617,104 KPa   EH3= 196,617,104 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000154 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2139
    Angle/Node @2= .00 2138
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
```

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```
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  2140  To  2160  DX= .000 mm.  DZ= -429.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2159
    Angle/Node @2= .00 2158
 ---------------------------------------------------------------------------
 From  2160  To  2180  DX= -4,032.000 mm.
 RESTRAINTS
    Node  2180  +Y
    Node  2180  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  2180  To  2190  DX= -9,819.000 mm.
 RESTRAINTS
    Node  2190  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  2190  To  2200  DX= -388.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2199
    Angle/Node @2= .00 2198
 ---------------------------------------------------------------------------
 From  2200  To  2220 DZ= 927.500 mm.
 RESTRAINTS
    Node  2220  +Y   Mu = .30
    Node  2220  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  2220  To  2280 DZ= 927.500 mm.
 SIF's & TEE's
    Node  2280   Welding Tee
 ---------------------------------------------------------------------------
 From  2280  To  2290  DX= .000 mm.  DZ= 500.000 mm.
 ---------------------------------------------------------------------------
 From  2280  To  2320 DY= 290.000 mm.
 RESTRAINTS
    Node  2320  +Y
 ---------------------------------------------------------------------------
 From  2320  To  2330 DY= 873.000 mm.
 SIF's & TEE's
    Node  2330   Welding Tee
 ---------------------------------------------------------------------------
 From  2330  To  2340 DY= 86.000 mm.
 ---------------------------------------------------------------------------
 From  2340  To  2346 DY= 82.550 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Element Name= GATE_FLG_600
    Insul Thk= .000 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  2346  To  2352 DY= 212.000 mm.
 RIGID  Weight= 258.00 N.
 ---------------------------------------------------------------------------
 From  2352  To  2360 DY= 82.550 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  2360  To  2380 DY= 250.000 mm.
 PIPE
```

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```
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 ---------------------------------------------------------------------------
 From  2380  To  2400 DY= 90.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 5.537 mm.
 ---------------------------------------------------------------------------
 From  2400  To  2410 DY= 73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  2410  To  2420 DY= 73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 FORCES & MOMENTS
    Node  2420   FY1= 1,000.05 N.   FZ1= -2,000.10 N.
 ---------------------------------------------------------------------------
 From  2420  To  2430  DX= -82.550 mm.  DZ= .000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  2430  To  2440  DX= -82.550 mm.  DZ= .000 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  2440  To  2460  DX= -73.025 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.   Cor= 6.0000 mm.
    Element Name= FLANGE_FLG_150
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 54.49 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  2460  To  2480  DX= -140.000 mm.  DY= -39.700 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ---------------------------------------------------------------------------
 From  2480  To  2500  DX= -354.500 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2500  +Y   Mu = .30
    Node  2500  Z   Gap= 3.000 mm.
    Node  2500  X   Gap= 3.000 mm.
```

INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  2500  To  2520  DX= -573.500 mm.  DZ= .000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2519
    Angle/Node @2= .00 2518
 ----------------------------------------------------------------------------
 From  2520  To  2540 DY= -229.000 mm.
 ----------------------------------------------------------------------------
 From  2540  To  2546 DY= -92.075 mm.
    Element Name= BALL_FLG_150
 RIGID  Weight= 111.21 N.
 ----------------------------------------------------------------------------
 From  2546  To  2552 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ----------------------------------------------------------------------------
 From  2552  To  2560 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ----------------------------------------------------------------------------
 From  2560  To  2570 DY= -221.000 mm.
 ----------------------------------------------------------------------------
 From  2570  To  2580 DY= -1,120.000 mm.
 SIF's & TEE's
    Node  2580   Welding Tee
 ----------------------------------------------------------------------------
 From  2580  To  2600  DX= .000 mm.  DZ= -674.000 mm.
 RESTRAINTS
    Node  2600  +Y
 ----------------------------------------------------------------------------
 From  2290  To  2300 DZ= 500.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 2,200.0500 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000154 kg./cu.cm.   Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2301
    Angle/Node @2= .00 2302
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  2300  To  2620 DY= 290.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 155 C   T2= 125 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Fluid Den= .0000154 kg./cu.cm.   Insul Thk= .000 mm.
 RESTRAINTS
    Node  2620  +Y
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
```

INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  2620  To  2640 DY= 958.000 mm.
 ----------------------------------------------------------------------------
 From  2640  To  2646 DY= 73.025 mm.
    Element Name= GATE_FLG_600
 RIGID  Weight= 44.48 N.
 ----------------------------------------------------------------------------
 From  2646  To  2652 DY= 212.000 mm.
 RIGID  Weight= 258.00 N.
 ----------------------------------------------------------------------------
 From  2652  To  2660 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ----------------------------------------------------------------------------
 From  2660  To  2680 DY= 250.000 mm.
 ----------------------------------------------------------------------------
 From  2680  To  2700 DY= 90.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 5.537 mm.
 ----------------------------------------------------------------------------
 From  2700  To  2710 DY= 66.675 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ----------------------------------------------------------------------------
 From  2710  To  2720 DY= 66.675 mm.
 RIGID  Weight= 31.14 N.
 FORCES & MOMENTS
    Node  2720   FX2= 2,000.10 N.   FY2= 1,000.05 N.   FZ2= .00 N.
 ----------------------------------------------------------------------------
 From  2720  To  2730  DX= -73.025 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 54.49 N.
 ----------------------------------------------------------------------------
 From  2730  To  2740  DX= -73.025 mm.
 RIGID  Weight= 54.49 N.
 ----------------------------------------------------------------------------
 From  2740  To  2760  DX= -82.550 mm.  DZ= .000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.   Cor= 6.0000 mm.
    Element Name= FLANGE_FLG_150
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 71.17 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  2760  To  2780  DX= -140.000 mm.  DY= -39.700 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
```

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 ----------------------------------------------------------------------------
 From  2780  To  2800  DX= -354.500 mm.  DZ= .000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2800  +Y
    Node  2800  Z
    Node  2800  X
 ----------------------------------------------------------------------------
 From  2800  To  2820  DX= -583.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2819
    Angle/Node @2= .00 2818
 ----------------------------------------------------------------------------
 From  2820  To  2840 DY= -229.000 mm.
 ----------------------------------------------------------------------------
 From  2840  To  2846 DY= -101.600 mm.
    Element Name= BALL_FLG_150
 RIGID  Weight= 191.27 N.
 ----------------------------------------------------------------------------
 From  2846  To  2852 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ----------------------------------------------------------------------------
 From  2852  To  2860 DY= -101.600 mm.
 RIGID  Weight= 191.27 N.
 ----------------------------------------------------------------------------
 From  2860  To  2880 DY= -1,290.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2879
    Angle/Node @2= .00 2878
 ----------------------------------------------------------------------------
 From  2880  To  2580  DX= .551 mm.  DY= .000 mm.  DZ= -1,000.000 mm.
 ----------------------------------------------------------------------------
 From  2600  To  2920 DZ= -379.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2919
    Angle/Node @2= .00 2918
 ----------------------------------------------------------------------------
 From  2920  To  2940  DX= -3,185.000 mm.  DY= -6.370 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 89.885   Angle/Node @1= 44.94 2939
    Angle/Node @2= .00 2938
 ----------------------------------------------------------------------------
 From  2940  To  2980 DY= -916.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 45.040   Angle/Node @1= 22.52 2979
    Angle/Node @2= .00 2978
 ----------------------------------------------------------------------------
 From  2980  To  2030 DY= -710.000 mm.  DZ= 711.000 mm.
 SIF's & TEE's
    Node  2030   <No Type Specified>   SIF(in)= 2.660   SIF(out)= 3.160
 ----------------------------------------------------------------------------
 From  2330  To  3000  DX= .000 mm.  DZ= -77.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Cor= 3.0000 mm.
```

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```
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 2,200.0500 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000154 kg./cu.cm.   Insul Thk= .000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  3000  To  3020 DZ= -73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  3020  To  3040 DY= .000 mm.  DZ= -187.000 mm.
 RIGID  Weight= 209.07 N.
 ------------------------------------------------------------------------------
 From  3040  To  3060 DY= .000 mm.  DZ= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  3060  To  3080 DY= .000 mm.  DZ= -77.000 mm.
    Element Name= BALL_FLG_600
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3079
    Angle/Node @2= .00 3078
 ------------------------------------------------------------------------------
 From  3080  To  3100  DX= -377.000 mm.  DY= .000 mm.
 RESTRAINTS
    Node  3100  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  3100  To  3120  DX= -125.000 mm.  DZ= .000 mm.
 RESTRAINTS
    Node  3120  X
 ------------------------------------------------------------------------------
 From  3120  To  3140  DX= -307.000 mm.
 ------------------------------------------------------------------------------
 From  3140  To  3146  DX= -73.025 mm.  DZ= .000 mm.
    Element Name= GLOBE_FLG_600
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  3146  To  3152  DX= -276.000 mm.  DZ= .000 mm.
 RIGID  Weight= 458.17 N.
 ------------------------------------------------------------------------------
 From  3152  To  3160  DX= -66.675 mm.  DZ= .000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
```

INPUT LISTING

```
 ------------------------------------------------------------------------------
 From  3160  To  3180  DX= -77.000 mm.  DZ= .000 mm.
 PIPE
    Cor= 6.0000 mm.
 GENERAL
    T1= 272 C   P1= 750.0171 KPa   PHyd= 825.0188 KPa
    Fluid Den= .0000015 kg./cu.cm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3179
    Angle/Node @2= .00 3178
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  3180  To  2570 DZ= 487.000 mm.
 SIF's & TEE's
    Node  2570   Welding Tee
 ------------------------------------------------------------------------------
 From  2000  To  4100  DX= 3,995.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 3.404 mm.   Cor= .0000 mm.
 GENERAL
    T1= 155 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 185,780,080 KPa
    EH2= 192,364,096 KPa   EH3= 192,364,096 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000183 kg./cu.cm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4099
    Angle/Node @2= .00 4098
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 114,386 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  4100  To  4120 DY= -11.040 mm.  DZ= 2,207.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4119
    Angle/Node @2= .00 4118
 ------------------------------------------------------------------------------
 From  4120  To  4140  DX= 555.000 mm.  DY= .000 mm.
 RESTRAINTS
    Node  4140  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  4140  To  4160  DX= 6,000.000 mm.
 RESTRAINTS
    Node  4160  +Y   Mu = .30
    Node  4160  Z   Mu = .30
 ------------------------------------------------------------------------------
 From  4160  To  4180  DX= 3,596.000 mm.
 ------------------------------------------------------------------------------
```

INPUT LISTING
```
 From  4180  To  4200  DX= 101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  4200  ANC   Cnode  4220
 ------------------------------------------------------------------------------
 From  4220  To  4240  DX= 101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  4240  To  4260  DX= 150.000 mm.
 RESTRAINTS
    Node  4260  ANC   Cnode  4261
 EQUIPMENT LIMITS
    Nozzle Node = 4260
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,400.42 N.   FB= 8,400.42 N.
    FC= 6,300.31 N.   MA= 3,780.16 N.m.   MB= 2,520.11 N.m.   MC= 3,280.14 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------------
 From  4261  To  4280  DX= 459.000 mm.
 PIPE
    Dia= 919.480 mm.   Wall= 12.000 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  4280  To  4300 DY= -1,300.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  4300  To  4310 DY= -1,000.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  4310  To  4320 DY= -300.000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  4320  ANC
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  10  To  20  DX= -114.300 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 8.179 mm.   Cor= 3.0000 mm.
    Element Name= FLANGE_FLG_150
 GENERAL
    T1= 85 C   T2= 36 C   T3= 36 C   P1= 2,200.0500 KPa   P2= .0000 KPa
    PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 199,086,608 KPa   EH2= 202,163,808 KPa   EH3= 202,163,808 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000181 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001362 kg./cu.cm.
```

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INPUT LISTING

```
 RIGID  Weight= 302.48 N.
 DISPLACEMENTS
    Node  20   DX1= 4.000 mm.   DY1= 2.100 mm.   DZ1= .900 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  25  To  40  DX= -114.300 mm.
 RIGID  Weight= 302.48 N.
 RESTRAINTS
    Node  25  ANC   Cnode  20
 EQUIPMENT LIMITS
    Nozzle Node = 25   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,500.42 N.
    FB= 8,500.42 N.   FC= 6,500.32 N.   MA= 6,000.25 N.m.   MB= 2,000.08 N.m.
    MC= 5,000.21 N.m.   Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------------
 From  4700  To  4710 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  4710  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  5000  To  2030 DZ= -2,787.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  5000  +Y   Mu = .30
    Node  5000  X   Gap= 3.000 mm.
    Node  5000  Z   Gap= 3.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
```

INPUT LISTING
```
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2030  To  5020 DZ= -3,213.000 mm.
 RESTRAINTS
    Node  5020  +Y   Mu = .30
    Node  5020  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  5020  To  5030 DZ= -2,950.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5029
    Angle/Node @2= .00 5028
 ------------------------------------------------------------------------------
 From  5030  To  5040  DX= -6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5039
    Angle/Node @2= .00 5038
 ------------------------------------------------------------------------------
 From  5040  To  5050 DZ= -1,000.000 mm.
 RESTRAINTS
    Node  5050  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  5050  To  5060 DZ= -1,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5059
    Angle/Node @2= .00 5058
 ------------------------------------------------------------------------------
 From  5060  To  5070  DX= 6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5069
    Angle/Node @2= .00 5068
 ------------------------------------------------------------------------------
 From  5070  To  5080 DZ= -850.000 mm.
 RESTRAINTS
    Node  5080  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  5080  To  5090  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  5090  +Y   Mu = .30
    Node  5090  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  5090  To  5100  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  5100  +Y
    Node  5100  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  5100  To  5110 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 600.0137 KPa   PHyd= 900.0205 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 187,483,936 KPa   EH2= 187,335,024 KPa
    EH3= 205,934,864 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
```

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INPUT LISTING
```
    Insul Den= .0001362 kg./cu.cm.
 RESTRAINTS
    Node  5110  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  5110  To  5120 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  5120  +Y   Mu = .30
    Node  5120  X
    Node  5120  Z   Gap= 3.000 mm.
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 MATERIAL Changes:
    40              60             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   820             840             Mat= (383)A516 70   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   280             880             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  1821            1920             Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                   v = .292   Density= .0080 kg./cu.cm.
  1260            2140             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  2000            4100             Mat= (165)A312 TP316L   E= 195,127,520 KPa
                                   v = .292   Density= .0080 kg./cu.cm.
    10              20             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  4700            4710             Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  5000            2030             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  5100            5110             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
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 JOBNAME: D:\BINAK PRO\STRESS REPORT -D03\BNK-GCS-CN-036-D03\BNK-GCS-CN-036-D03

 ALLOWABLE STRESS Changes
    40              60             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 137,895 KPa
                                   Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
   140             160             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 137,895 KPa
                                   Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
```

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INPUT LISTING

```
                                 Sy= 241,316 KPa
   120             180           B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   540             560           B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   520            4330           B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   640             660           B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   620             680           B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   820             840           B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 160,648 KPa   Sh1= 160,062 KPa
                                 Sh2= 160,648 KPa   Sh3= 160,648 KPa
                                 Sh4= 160,648 KPa   Sh5= 160,648 KPa
                                 Sh6= 160,648 KPa   Sh7= 160,648 KPa
                                 Sh8= 160,648 KPa   Sh9= 160,648 KPa
                                 Sy= 262,001 KPa
   280             880           B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,895 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                 Sy= 241,316 KPa
   900             910           B31.3 (2016)        Cycle Max Switch = ---
                                 Sc= 137,895 KPa   Sh1= 137,819 KPa
                                 Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                 Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                 Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                 Sh8= 137,895 KPa   Sh9= 137,895 KPa
```

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INPUT LISTING

```
                                Sy= 241,316 KPa
  1020            1040          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1220            1230          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1440            1460          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1420            1480          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4481            4490          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4400            4510          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4370            1600          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4390            4830          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
```

INPUT LISTING

```
                                Sy= 241,316 KPa
  1661            1680          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4410            1760          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1780            1800          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1740            4400          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1821            1920          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  1260            2140          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2440            2460          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2290            2300          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
```

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INPUT LISTING

```
                                Sy= 241,316 KPa
  2300            2620          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2740            2760          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2330            3000          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  3152            3160          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  3160            3180          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2000            4100          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 114,386 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  4310            4320          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
    10              20          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
```

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INPUT LISTING

```
                                  Sy= 241,316 KPa
  4700            4710            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  5000            2030            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  5100            5110            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
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BEND ELEMENTS
    40              60            Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 59
                                  Angle/Node @2= .00 58
    60              80            Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 79
   120             180            Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 179
   480             500            Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 499   Angle/Node @2= .00 498
   520            4330            Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 4329   Angle/Node @2= .00 4328
  4340             580            Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 579   Angle/Node @2= .00 578
   620             680            Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 679   Angle/Node @2= .00 678
   280             880            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 879   Angle/Node @2= .00 878
   940             960            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 959   Angle/Node @2= .00 958
   960             980            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 979   Angle/Node @2= .00 978
```

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INPUT LISTING

```
  1100            1120              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1119   Angle/Node @2= .00 1118
  1120            1140              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1139   Angle/Node @2= .00 1138
  1180            1200              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1199   Angle/Node @2= .00 1198
  1380            1400              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1399   Angle/Node @2= .00 1398
  1420            1480              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1479   Angle/Node @2= .00 1478
  1520            1540              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1539   Angle/Node @2= .00 1538
  1560            1580              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1579   Angle/Node @2= .00 1578
  4420            4440              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4439   Angle/Node @2= .00 4438
  4440            4450              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4449   Angle/Node @2= .00 4448
  4820            4455              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4454   Angle/Node @2= .00 4453
  4810            4460              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4459   Angle/Node @2= .00 4458
  4370            1600              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1599   Angle/Node @2= .00 1598
  1600            4390              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4389   Angle/Node @2= .00 4388
  4830            1610              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1609   Angle/Node @2= .00 1608
  4800            1620              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1619   Angle/Node @2= .00 1618
  1920            1930              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1929
  1930            1940              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1939
  1940            1945              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1944   Angle/Node @2= .00 1943
  4560            4630              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
```

INPUT LISTING

```
                                4629   Angle/Node @2= .00 4628
  4630            4640            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4639   Angle/Node @2= .00 4638
  4690            4650            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 89.713   Angle/Node @1= 44.86
                                4649   Angle/Node @2= .00 4648
  4570            4590            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4589   Angle/Node @2= .00 4588
  4590            4600            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4599   Angle/Node @2= .00 4598
  4600            4610            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4609   Angle/Node @2= .00 4608
  4660            1980            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 89.706   Angle/Node @1= 44.85
                                1979   Angle/Node @2= .00 1978
  1985            1990            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1989   Angle/Node @2= .00 1988
  1260            2140            Radius= 114.300 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2139   Angle/Node @2= .00 2138
  2140            2160            Radius= 114.300 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2159   Angle/Node @2= .00 2158
  2190            2200            Radius= 114.300 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2199   Angle/Node @2= .00 2198
  2500            2520            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2519   Angle/Node @2= .00 2518
  2290            2300            Radius= 114.300 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2301   Angle/Node @2= .00 2302
  2800            2820            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2819   Angle/Node @2= .00 2818
  2860            2880            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2879   Angle/Node @2= .00 2878
  2600            2920            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                2919   Angle/Node @2= .00 2918
  2920            2940            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 89.885   Angle/Node @1= 44.94
                                2939   Angle/Node @2= .00 2938
  2940            2980            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 45.040   Angle/Node @1= 22.52
                                2979   Angle/Node @2= .00 2978
  3060            3080            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                3079   Angle/Node @2= .00 3078
  3160            3180            Radius= 76.200 mm. (LONG)
```

INPUT LISTING

```
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  3179   Angle/Node @2= .00 3178
  2000            4100              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4099   Angle/Node @2= .00 4098
  4100            4120              Radius= 228.600 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  4119   Angle/Node @2= .00 4118
  5020            5030              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  5029   Angle/Node @2= .00 5028
  5030            5040              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  5039   Angle/Node @2= .00 5038
  5050            5060              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  5059   Angle/Node @2= .00 5058
  5060            5070              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  5069   Angle/Node @2= .00 5068
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RIGIDS
   180             140          RIGID  Weight= .00 N.
   200             220          RIGID  Weight= 302.48 N.
   220             240          RIGID  Weight= 302.48 N.
   320             340          RIGID  Weight= 302.48 N.
   340             360          RIGID  Weight= 1,023.41 N.
   360             380          RIGID  Weight= 302.48 N.
   420             440          RIGID  Weight= 302.48 N.
   440             460          RIGID  Weight= 302.48 N.
   520             540          RIGID  Weight= .00 N.
   620             640          RIGID  Weight= .00 N.
   700             720          RIGID  Weight= 302.48 N.
   740             760          RIGID  Weight= 302.48 N.
   780             800          RIGID  Weight= .00 N.
   820             840          RIGID  Weight= .00 N.
   840             860          RIGID  Weight= .00 N.
   900             910          RIGID  Weight= 44.48 N.
   910             920          RIGID  Weight= 66.72 N.
   920             930          RIGID  Weight= 355.86 N.
   930             940          RIGID  Weight= 44.48 N.
  1060            1080          RIGID  Weight= 191.27 N.
  1080            1100          RIGID  Weight= 191.27 N.
  1120            4700          RIGID  Weight= .00 N.
  1220            1230          RIGID  Weight= 191.27 N.
  1231            1240          RIGID  Weight= 191.27 N.
  1300            1320          RIGID  Weight= 191.27 N.
  1320            1340          RIGID  Weight= 1,850.46 N.
  1340            1360          RIGID  Weight= 191.27 N.
  1420            1440          RIGID  Weight= .00 N.
  4470            4480          RIGID  Weight= 191.27 N.
  4481            4490          RIGID  Weight= 191.27 N.
  4501            4400          RIGID  Weight= .00 N.
```

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INPUT LISTING

4400	4510	RIGID	Weight= .00 N.
4530	4540	RIGID	Weight= 191.27 N.
1640	1660	RIGID	Weight= 191.27 N.
1661	1680	RIGID	Weight= 191.27 N.
1720	4410	RIGID	Weight= .00 N.
4410	1760	RIGID	Weight= .00 N.
1800	1820	RIGID	Weight= 191.27 N.
1740	4400	RIGID	Weight= 658.96 N.
4400	1840	RIGID	Weight= 1,591.15 N.
1840	1860	RIGID	Weight=10,500.52 N.
1860	1880	RIGID	Weight= 4,500.22 N.
1880	1900	RIGID	Weight=10,500.52 N.
1900	4410	RIGID	Weight= 1,591.15 N.
4410	1740	RIGID	Weight= 658.96 N.
1821	1920	RIGID	Weight= 191.27 N.
4541	4620	RIGID	Weight= 191.27 N.
2340	2346	RIGID	Weight= 71.17 N.
2346	2352	RIGID	Weight= 258.00 N.
2352	2360	RIGID	Weight= 71.17 N.
2400	2410	RIGID	Weight= 44.48 N.
2410	2420	RIGID	Weight= 44.48 N.
2420	2430	RIGID	Weight= 71.17 N.
2430	2440	RIGID	Weight= 71.17 N.
2440	2460	RIGID	Weight= 54.49 N.
2540	2546	RIGID	Weight= 111.21 N.
2546	2552	RIGID	Weight= 1,005.30 N.
2552	2560	RIGID	Weight= 111.21 N.
2640	2646	RIGID	Weight= 44.48 N.
2646	2652	RIGID	Weight= 258.00 N.
2652	2660	RIGID	Weight= 44.48 N.
2700	2710	RIGID	Weight= 31.14 N.
2710	2720	RIGID	Weight= 31.14 N.
2720	2730	RIGID	Weight= 54.49 N.
2730	2740	RIGID	Weight= 54.49 N.
2740	2760	RIGID	Weight= 71.17 N.
2840	2846	RIGID	Weight= 191.27 N.
2846	2852	RIGID	Weight= 1,005.30 N.
2852	2860	RIGID	Weight= 191.27 N.
3000	3020	RIGID	Weight= 44.48 N.
3020	3040	RIGID	Weight= 209.07 N.
3040	3060	RIGID	Weight= 44.48 N.
3140	3146	RIGID	Weight= 44.48 N.
3146	3152	RIGID	Weight= 458.17 N.
3152	3160	RIGID	Weight= 31.14 N.
4180	4200	RIGID	Weight= 191.27 N.
4220	4240	RIGID	Weight= 191.27 N.
4261	4280	RIGID	Weight= .00 N.
4280	4300	RIGID	Weight= .00 N.
4300	4310	RIGID	Weight= .00 N.
4310	4320	RIGID	Weight= .00 N.
10	20	RIGID	Weight= 302.48 N.
25	40	RIGID	Weight= 302.48 N.

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INPUT LISTING
SIF's & TEE's

140	160	Node 140	Unreinforced Tee
260	280	Node 280	Weldolet
540	560	Node 540	Unreinforced Tee
1000	1020	Node 1020	Weldolet
1020	1260	Node 1260	Welding Tee
1440	1460	Node 1440	Unreinforced Tee
1580	4350	Node 4350	Welding Tee
4360	4370	Node 4370	Welding Tee
1945	1950	Node 1950	Welding Tee
4670	4560	Node 4560	Welding Tee
4680	4570	Node 4570	Welding Tee
2220	2280	Node 2280	Welding Tee
2320	2330	Node 2330	Welding Tee
2570	2580	Node 2580	Welding Tee
2980	2030	Node 2030	<No Type Specified>
		SIF(in)= 2.660	SIF(out)= 3.160
3180	2570	Node 2570	Welding Tee

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REDUCERS

2380	2400	Diam2= 60.325 mm. Wall2= 5.537 mm.
2460	2480	Diam2= 168.275 mm. Wall2= 10.973 mm.
2680	2700	Diam2= 60.325 mm. Wall2= 5.537 mm.
2760	2780	Diam2= 168.275 mm. Wall2= 10.973 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
160	-X				.30	1.000	.000	.000
160	Z	121				.000	.000	1.000
121	+Y				.10	.000	1.000	.000
160	X	121				1.000	.000	.000
300	+Y				.30	.000	1.000	.000
400	Y				.30	.000	1.000	.000
400	Z					.000	.000	1.000
480	Y				.30	.000	1.000	.000
480	Z					.000	.000	1.000
560	+Y				.30	.000	1.000	.000
560	Z					.000	.000	1.000
4340	+Y				.30	.000	1.000	.000
660	+Y	800			.30	.000	1.000	.000
720	ANC	740				.000	.000	.000
780	ANC	820				.000	.000	.000
860	ANC					.000	.000	.000
1040	+Y				.30	.000	1.000	.000
1230	ANC	1231				.000	.000	.000
1280	Y				.30	.000	1.000	.000
1280	Z					.000	.000	1.000
1380	Y				.30	.000	1.000	.000
1380	Z					.000	.000	1.000
1460	+Y				.30	.000	1.000	.000

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1460	Z				.000	.000	1.000
1500	+Y				.000	1.000	.000
1500	Z				.000	.000	1.000
1520	+Y			.30	.000	1.000	.000
1520	Z		3.00		.000	.000	1.000
1560	+Y			.30	.000	1.000	.000
1560	X		3.00	.30	1.000	.000	.000
4360	+Y			.30	.000	1.000	.000
4385	+Y			.30	.000	1.000	.000
4480	ANC	4481			.000	.000	.000
4500	ANC	4501			.000	.000	.000
4520	ANC	4510			.000	.000	.000
4540	ANC	4541			.000	.000	.000
1660	ANC	1661			.000	.000	.000
1700	ANC	1720			.000	.000	.000
1780	ANC	1760			.000	.000	.000
1820	ANC	1821			.000	.000	.000
1840	Y			.10	.000	1.000	.000
1840	X			.30	1.000	.000	.000
1840	Z		6.00		.000	.000	1.000
1860	Y			.10	.000	1.000	.000
1860	Z		6.00		.000	.000	1.000
1880	Y			.10	.000	1.000	.000
1880	Z		6.00	.30	.000	.000	1.000
1900	Y			.10	.000	1.000	.000
1900	X				1.000	.000	.000
1900	Z		6.00	.30	.000	.000	1.000
4670	+Y				.000	1.000	.000
4690	+Y				.000	1.000	.000
4680	+Y				.000	1.000	.000
1985	+Y			.30	.000	1.000	.000
2000	+Y			.30	.000	1.000	.000
2000	Z		3.00		.000	.000	1.000
2180	+Y				.000	1.000	.000
2180	Z		3.00		.000	.000	1.000
2190	+Y			.30	.000	1.000	.000
2220	+Y			.30	.000	1.000	.000
2220	X		3.00		1.000	.000	.000
2320	+Y				.000	1.000	.000
2500	+Y			.30	.000	1.000	.000
2500	Z		3.00		.000	.000	1.000
2500	X		3.00		1.000	.000	.000
2600	+Y				.000	1.000	.000
2620	+Y				.000	1.000	.000
2800	+Y				.000	1.000	.000
2800	Z				.000	.000	1.000
2800	X				1.000	.000	.000
3100	+Y			.30	.000	1.000	.000
3120	X				1.000	.000	.000
4140	+Y			.30	.000	1.000	.000
4160	+Y			.30	.000	1.000	.000
4160	Z			.30	.000	.000	1.000
4200	ANC	4220			.000	.000	.000
4260	ANC	4261			.000	.000	.000
4320	ANC				.000	.000	.000
25	ANC	20			.000	.000	.000

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4710	+Y		.30	.000	1.000	.000
5000	+Y		.30	.000	1.000	.000
5000	X	3.00		1.000	.000	.000
5000	Z	3.00		.000	.000	1.000
5020	+Y		.30	.000	1.000	.000
5020	X	3.00		1.000	.000	.000
5050	+Y		.30	.000	1.000	.000
5080	+Y		.30	.000	1.000	.000
5090	+Y		.30	.000	1.000	.000
5090	X	3.00		1.000	.000	.000
5100	+Y			.000	1.000	.000
5100	X	3.00		1.000	.000	.000
5110	+Y		.30	.000	1.000	.000
5120	+Y		.30	.000	1.000	.000
5120	X			1.000	.000	.000
5120	Z	3.00		.000	.000	1.000

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DISPLACEMENTS

1231	1240	Node 1231 DX1= 4.000 mm. DY1= 2.100 mm. DZ1= .900 mm.
10	20	Node 20 DX1= 4.000 mm. DY1= 2.100 mm. DZ1= .900 mm.

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HANGER CONTROL AND LOCATION DATA

No. of Hanger Design Load Cases = 1
Actual Cold Load Flag = 0.0
Short Range Spring Flag = 1
Allowed Load Variation (%) = 25.0000
Default Hanger Table = 5

140 160 Hanger Node = 160
Hanger Connecting Node = 121
Available Space = -1,000.0000 mm.
Allowed Load Variation = 25.0000
No. Hangers = 0.0 Short Range Flag = -1
User Operating Load = .00 N. Free Node = 0
Free Node = 0 Free Code = 0.0
Spring Rate = .00 N./cm.
Theoretical Cold Load = .00 N.

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EQUIPMENT LIMITS

760 780 Nozzle Node = 780

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 11,200.56 N. FB= 11,200.56 N.
FC= 8,400.42 N. MA= 6,720.29 N.m. MB= 4,480.19 N.m. MC= 5,820.25 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000

INPUT LISTING
```
    Interact. Mtd= Absolute
  1220            1230              Nozzle Node = 1230


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,500.42 N.   FB= 8,500.42 N.
    FC= 6,500.32 N.   MA= 6,000.25 N.m.   MB= 2,000.08 N.m.   MC= 5,000.21 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
  4490            4500              Nozzle Node = 4500


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  4520            4530              Nozzle Node = 4520


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  1680            1700              Nozzle Node = 1700


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  1780            1800              Nozzle Node = 1780


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  4240            4260              Nozzle Node = 4260


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,400.42 N.   FB= 8,400.42 N.
    FC= 6,300.31 N.   MA= 3,780.16 N.m.   MB= 2,520.11 N.m.   MC= 3,280.14 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
    25               40              Nozzle Node = 25


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,500.42 N.   FB= 8,500.42 N.
    FC= 6,500.32 N.   MA= 6,000.25 N.m.   MB= 2,000.08 N.m.   MC= 5,000.21 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
```


```
FORCES AND MOMENTS
 2410            2420              Node  2420   FY1= 1,000.05 N.
```

INPUT LISTING

```
                                  FZ1= -2,000.10 N.
 2710            2720             Node  2720   FX2= 2,000.10 N.
                                  FY2= 1,000.05 N.   FZ2= .00 N.
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UNIFORM LOAD Changes
   40              60             Vector1 in G-s
                                  X1 Dir = .26 g's  Y1 Dir = .00 g's
                                  Z1 Dir = .00 g's
                                  Vector2 in G-s
                                  X2 Dir = .00 g's  Y2 Dir = .12 g's
                                  Z2 Dir = .00 g's
                                  Vector3 in G-s
                                  X3 Dir = .00 g's  Y3 Dir = .00 g's
                                  Z3 Dir = .26 g's
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INPUT UNITS USED...

UNITS=    SI (m NOM/SCH INPUT= ON
      LENGTH             inches        x     25.400   =   mm.
      FORCE              pounds        x      4.448   =    N.
      MASS(dynamics)     pounds        x      0.454   =   Kg.
      MOMENTS(INPUT)     inch-pounds   x      0.113   =    N.m.
      MOMENTS(OUTPUT)    inch-pounds   x      0.113   =    N.m.
      STRESS             lbs./sq.in.   x      6.895   =      KPa
      TEMP. SCALE        degrees F.    x      0.556   =   C
      PRESSURE           psig          x      6.895   =      KPa
      ELASTIC MODULUS    lbs./sq.in.   x      6.895   =      KPa
      PIPE DENSITY       lbs./cu.in.   x      0.028   =   kg./cu.cm.
      INSULATION DENS.   lbs./cu.in.   x      0.028   =   kg./cu.cm.
      FLUID DENSITY      lbs./cu.in.   x      0.028   =   kg./cu.cm.
      TRANSL. STIF       lbs./in.      x      1.751   =   N./cm.
      ROTATIONAL STIF    in.lb./deg.   x      0.113   =    N.m./deg
      UNIFORM LOAD       lb./in.       x      1.751   =   N./cm.
      G LOAD             g's           x      1.000   =   g's
      WIND LOAD          lbs./sq.in.   x      6.895   =      KPa
      ELEVATION          inches        x      0.025   =    m.
      COMPOUND LENGTH    inches        x     25.400   =   mm.
      DIAMETER           inches        x     25.400   =   mm.
      WALL THICKNESS     inches        x     25.400   =   mm.
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SETUP FILE PARAMETERS
------------------------------------------------------------------------------
 CONNECT GEOMETRY THRU CNODES =    YES
 MIN ALLOWED BEND ANGLE =            5.00000
 MAX ALLOWED BEND ANGLE =            95.0000
 BEND LENGTH ATTACHMENT PERCENT =    1.00000
 MIN ANGLE TO ADJACENT BEND PT =     5.00000
 LOOP CLOSURE TOLERANCE =            25.4000     mm.
 THERMAL BOWING HORZ TOLERANCE =    0.100000E-03
 AUTO NODE NUMBER INCREMENT=         10.0000
 Z AXIS UP=                         NO
```

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INPUT LISTING

```
  USE PRESSURE STIFFENING =         DEFAULT
  ALPHA TOLERANCE =                  0.500000E-01
  RESLD-FORCE =                      NO
  HGR DEF RESWGT STIF =              0.175127E+13 N./cm.
  DECOMP SNG TOL =                   0.100000E+11
  BEND AXIAL SHAPE =                YES
  FRICT STIF =                       0.175127E+07 N./cm.
  FRICT NORM FORCE VAR =             0.150000
  FRICT ANGLE VAR =                   15.0000
  FRICT SLIDE MULT =                  1.00000
  ROD TOLERANCE =                     1.00000
  ROD INC =                           2.00000
  INCORE NUMERICAL CHECK =           NO
  OUTCORE NUMERICAL CHECK =          NO
  DEFAULT TRANS RESTRAINT STIFF=     0.175127E+13    N./cm.
  DEFAULT ROT RESTRAINT STIFF=       0.112985E+12  N.m./deg
  IGNORE SPRING HANGER STIFFNESS =   NO
  MISSING MASS ZPA =                EXTRACTED
  MIN WALL MILL TOLERANCE =           12.5000
  WRC-107 VERSION =                 MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =           LAST VALUE
  DEFAULT AMBIENT TEMPERATURE=        21.1111       C
  BOURDON PRESSURE=                 NONE
  COEFFICIENT OF FRICTION (MU) =         0.000000
  INCLUDE SPRG STIF IN HGR OPE =    NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =            B31.1(POST1980)
  USE WRC329                        NO
  NO REDUCED SIF FOR RFT AND WLT    NO
  B31.1 REDUCED Z FIX =             YES
  CLASS 1 BRANCH FLEX               NO
  ALL STRESS CASES CORRODED =       NO
  ADD TORSION IN SL STRESS =        DEFAULT
  ADD F/A IN STRESS =               DEFAULT
  OCCASIONAL LOAD FACTOR =               0.000000
  DEFAULT CODE =                    B31.3
  B31.3 SUS CASE SIF FACTOR =            0.000000
  ALLOW USERS BEND SIF =            NO
  USE SCHNEIDER                     NO
  YIELD CRITERION STRESS =          MAX 3D SHEAR
  USE PD/4T                          NO
  BASE HOOP STRESS ON ? =            ID
  EN13480 USE IN OUTPLANE SIFS=      NO
  LIBERAL EXPANSION ALLOWABLE=      YES
  B31.3 SEC 319.2.3C SAXIAL=        Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178      YES
  IGNORE B31.1/B31.3 Wc FACTOR=     YES
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
```

INPUT LISTING

```
  FRP Ea/Eh*Vh/a =                    0.152730
  FRP Laminate Type =                THREE
  FRP Alpha =                          21.6000              C
  FRP Density =                       0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =    NO
```


EXECUTION CONTROL PARAMETERS

```
   Rigid/ExpJt Print Flag .....    1.000
   Bourdon Option .............     .000
   Loop Closure Flag ..........    2.000
   Thermal Bowing Delta Temp ..     .000 C
   Liberal Allowable Flag .....    1.000
   Uniform Load Option ........    1.000

   Ambient Temperature ........   20.997 C
   Plastic (FRP) Alpha ........   21.600
   Plastic (FRP) GMOD/EMODa ...     .250
   Plastic (FRP) Laminate Type.    3.000
   Eqn Optimizer ..............     .000
   Node Selection .............     .000
   Eqn Ordering ...............     .000
   Collins ....................     .000
   Degree Determination .......     .000
   User Eqn Control ...........     .000
   North Direction ............      -X
```


COORDINATE REPORT

NODE	X (mm.)	Y (mm.)	Z (mm.)
40	.000	.000	.000
60	-805.000	.000	.000
80	-805.000	.000	-1690.000
100	-805.000	-1410.000	-1690.000
120	-805.000	-2524.000	-1690.000
180	-805.000	-2830.000	-1690.000
140	-733.158	-2901.842	-1690.000
160	-733.158	-3101.842	-1690.000
120	-805.000	-2524.000	-1690.000
180	-805.000	-2830.000	-1690.000
200	-1111.000	-2830.000	-1690.000
220	-1225.300	-2830.000	-1690.000
240	-1339.600	-2830.000	-1690.000
260	-1737.600	-2830.000	-1690.000
280	-2037.600	-2830.000	-1690.000
300	-2537.600	-2830.000	-1690.000
320	-2713.600	-2830.000	-1690.000
340	-2827.900	-2830.000	-1690.000
360	-3414.900	-2830.000	-1690.000
380	-3529.200	-2830.000	-1690.000
400	-4529.200	-2830.000	-1690.000
420	-5817.000	-2830.000	-1690.000

INPUT LISTING

440	-5931.300	-2830.000	-1690.000
460	-6045.600	-2830.000	-1690.000
480	-7545.600	-2830.000	-1690.000
500	-11005.600	-2830.000	-1690.000
520	-11005.600	-2525.000	-1690.000
540	-11005.600	-2830.000	-1690.000
560	-11005.600	-3130.000	-1690.000
520	-11005.600	-2525.000	-1690.000
4330	-11005.600	1140.000	-1690.000
4340	-11005.600	1140.000	-5065.000
580	-11005.600	1140.000	-8440.000
600	-11735.600	1140.000	-8440.000
620	-12197.600	1140.000	-8440.000
640	-12197.600	1056.000	-8440.000
660	-12197.600	756.000	-8440.000
620	-12197.600	1140.000	-8440.000
680	-12659.600	1140.000	-8440.000
700	-12659.600	835.000	-8440.000
720	-12659.600	720.700	-8440.000
760	-12659.600	606.400	-8440.000
780	-12659.600	425.000	-8440.000
780	-12659.600	425.000	-8440.000
660	-12197.600	756.000	-8440.000
780	-12659.600	425.000	-8440.000
840	-12659.600	-2640.000	-8440.000
860	-12659.600	-3840.000	-8440.000
280	-2037.600	-2830.000	-1690.000
880	-2037.600	-2307.000	-1690.000
900	-2037.600	-2307.000	-2200.000
910	-2037.600	-2307.000	-2273.025
920	-2037.600	-2307.000	-2574.025
930	-2037.600	-2307.000	-2849.025
940	-2037.600	-2307.000	-2922.050
960	-2037.600	-2307.000	-2999.050
980	-2037.600	-2959.400	-2999.050
1000	-2037.600	-2959.400	-2922.050
1020	-2037.600	-2959.400	-2301.050
1040	-1737.600	-2959.400	-2301.050
1060	-1419.600	-2959.400	-2301.050
1080	-1318.000	-2959.400	-2301.050
1100	-1216.400	-2959.400	-2301.050
1120	-226.400	-2959.400	-2301.050
1140	-226.400	-2259.400	-2301.050
1160	-226.400	-2259.400	-1537.717
1120	-226.400	-2959.400	-2301.050
4700	-172.519	-3013.281	-2301.050
1160	-226.400	-2259.400	-1537.717
1180	-226.400	-2259.400	-774.384
1200	-226.400	-2259.400	-11.051
1220	2.600	-2259.400	-11.051
1230	104.200	-2259.400	-11.051
1240	205.800	-2259.400	-11.051
1020	-2037.600	-2959.400	-2301.050
1260	-3245.540	-2959.400	-2301.050
1280	-4520.150	-2959.400	-2301.050
1300	-4889.150	-2959.400	-2301.050

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1320	-4990.750	-2959.400	-2301.050
1340	-5443.750	-2959.400	-2301.050
1360	-5545.350	-2959.400	-2301.050
1380	-7518.350	-2959.400	-2301.050
1400	-11344.350	-2959.400	-2301.050
1420	-11344.350	-2730.400	-2301.050
1440	-11344.350	-2959.400	-2301.050
1460	-11344.350	-3259.400	-2301.050
1420	-11344.350	-2730.400	-2301.050
1480	-11344.350	-1575.400	-2301.050
1500	-17104.350	-1575.400	-2301.050
1520	-23104.350	-1575.400	-2301.050
1540	-25585.350	-1575.400	-2301.050
1560	-25585.350	-1575.400	-3733.050
1580	-25585.350	-1575.400	-4362.050
4350	-25585.350	1154.600	-4362.050
4360	-25585.350	1154.600	-4844.550
4370	-25585.350	1154.600	-5277.050
4380	-25585.350	1154.600	-5522.050
4350	-25585.350	1154.600	-4362.050
4385	-25585.350	1154.600	-3879.550
4420	-25585.350	1154.600	-3447.050
4430	-25585.350	1154.600	-3202.050
4420	-25585.350	1154.600	-3447.050
4440	-25113.350	1154.600	-3447.050
4450	-25113.350	3317.600	-3447.050
4820	-25113.350	3317.600	-3772.050
4455	-25113.350	3317.600	-4097.050
4810	-26180.350	3317.600	-4097.050
4460	-27353.350	3317.600	-4097.050
4470	-27353.350	2807.600	-4097.050
4480	-27353.350	2681.600	-4097.050
4490	-27353.350	2580.000	-4097.050
4500	-27353.350	2453.000	-4097.050
4400	-27353.350	2213.000	-4097.050
4520	-27353.350	1973.000	-4097.050
4530	-27353.350	1846.000	-4097.050
4540	-27353.350	1744.400	-4097.050
4370	-25585.350	1154.600	-5277.050
1600	-25113.350	1154.600	-5277.050
4390	-25113.350	3317.600	-5277.050
4830	-25113.350	3317.600	-4952.050
1610	-25113.350	3317.600	-4627.050
4800	-26180.350	3317.600	-4627.050
1620	-27353.350	3317.600	-4627.050
1640	-27353.350	2807.600	-4627.050
1660	-27353.350	2681.600	-4627.050
1680	-27353.350	2580.000	-4627.050
1700	-27353.350	2453.000	-4627.050
4410	-27353.350	2213.000	-4627.050
1780	-27353.350	1973.000	-4627.050
1800	-27353.350	1846.000	-4627.050
1820	-27353.350	1744.400	-4627.050
1740	-27353.350	2213.000	-4362.050
4400	-27353.350	2213.000	-4097.050
1840	-27353.350	2213.000	-3662.050

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INPUT LISTING

1860	-32453.350	2213.000	-3662.050
1880	-32453.350	2213.000	-5062.050
1900	-27353.350	2213.000	-5062.050
4410	-27353.350	2213.000	-4627.050
1740	-27353.350	2213.000	-4362.050
1820	-27353.350	1744.400	-4627.050
1920	-27353.350	1617.980	-4627.050
1930	-27353.350	1388.980	-4627.050
1940	-27964.350	1388.980	-4627.050
1945	-27964.350	1388.980	-5277.050
1950	-27964.350	831.980	-5277.050
4550	-27964.350	831.980	-5522.050
1950	-27964.350	831.980	-5277.050
4670	-27964.350	831.980	-4819.550
4560	-27964.350	831.980	-4362.050
4630	-28336.350	831.980	-4362.050
4640	-28336.350	831.980	-5459.050
4690	-29164.850	827.835	-5459.050
4650	-29993.350	823.690	-5459.050
4660	-29993.350	-83.810	-5459.050
4560	-27964.350	831.980	-4362.050
4680	-27964.350	831.980	-3904.550
4570	-27964.350	831.980	-3447.050
4580	-27964.350	831.980	-3202.050
4570	-27964.350	831.980	-3447.050
4590	-27964.350	1388.980	-3447.050
4600	-27964.350	1388.980	-4097.050
4610	-27353.350	1388.980	-4097.050
4620	-27353.350	1617.980	-4097.050
4540	-27353.350	1744.400	-4097.050
4620	-27353.350	1617.980	-4097.050
4660	-29993.350	-83.810	-5459.050
1980	-29993.350	-991.310	-5459.050
1985	-29993.350	-994.380	-6058.050
1990	-29993.350	-997.450	-6657.050
2000	-28041.350	-997.450	-6657.050
1260	-3245.540	-2959.400	-2301.050
2140	-3245.540	-1415.400	-2301.050
2160	-3245.540	-1415.400	-2730.050
2180	-7277.540	-1415.400	-2730.050
2190	-17096.539	-1415.400	-2730.050
2200	-17484.539	-1415.400	-2730.050
2220	-17484.539	-1415.400	-1802.550
2280	-17484.539	-1415.400	-875.050
2290	-17484.539	-1415.400	-375.050
2280	-17484.539	-1415.400	-875.050
2320	-17484.539	-1125.400	-875.050
2330	-17484.539	-252.400	-875.050
2340	-17484.539	-166.400	-875.050
2346	-17484.539	-83.850	-875.050
2352	-17484.539	128.150	-875.050
2360	-17484.539	210.700	-875.050
2380	-17484.539	460.700	-875.050
2400	-17484.539	550.700	-875.050
2410	-17484.539	623.725	-875.050
2420	-17484.539	696.750	-875.050

INPUT LISTING

2430	-17567.090	696.750	-875.050
2440	-17649.641	696.750	-875.050
2460	-17722.666	696.750	-875.050
2480	-17862.666	657.050	-875.050
2500	-18217.166	657.050	-875.050
2520	-18790.666	657.050	-875.050
2540	-18790.666	428.050	-875.050
2546	-18790.666	335.975	-875.050
2552	-18790.666	59.975	-875.050
2560	-18790.666	-32.100	-875.050
2570	-18790.666	-253.100	-875.050
2580	-18790.666	-1373.100	-875.050
2600	-18790.666	-1373.100	-1549.050
2290	-17484.539	-1415.400	-375.050
2300	-17484.539	-1415.400	124.950
2620	-17484.539	-1125.400	124.950
2640	-17484.539	-167.400	124.950
2646	-17484.539	-94.375	124.950
2652	-17484.539	117.625	124.950
2660	-17484.539	190.650	124.950
2680	-17484.539	440.650	124.950
2700	-17484.539	530.650	124.950
2710	-17484.539	597.325	124.950
2720	-17484.539	664.000	124.950
2730	-17557.564	664.000	124.950
2740	-17630.590	664.000	124.950
2760	-17713.141	664.000	124.950
2780	-17853.141	624.300	124.950
2800	-18207.641	624.300	124.950
2820	-18790.641	624.300	124.950
2840	-18790.641	395.300	124.950
2846	-18790.641	293.700	124.950
2852	-18790.641	17.700	124.950
2860	-18790.641	-83.900	124.950
2880	-18790.641	-1373.900	124.950
2880	-18791.217	-1373.100	124.950
2580	-18790.666	-1373.100	-875.050
2600	-18790.666	-1373.100	-1549.050
2920	-18790.666	-1373.100	-1928.050
2940	-21975.666	-1379.470	-1928.050
2980	-21975.666	-2295.470	-1928.050
2030	-21975.666	-3005.470	-1217.050
2330	-17484.539	-252.400	-875.050
3000	-17484.539	-252.400	-952.050
3020	-17484.539	-252.400	-1025.075
3040	-17484.539	-252.400	-1212.075
3060	-17484.539	-252.400	-1285.100
3080	-17484.539	-252.400	-1362.100
3100	-17861.539	-252.400	-1362.100
3120	-17986.539	-252.400	-1362.100
3140	-18293.539	-252.400	-1362.100
3146	-18366.564	-252.400	-1362.100
3152	-18642.564	-252.400	-1362.100
3160	-18709.240	-252.400	-1362.100
3180	-18786.240	-252.400	-1362.100
3180	-18790.666	-253.100	-1362.050

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INPUT LISTING

2570	-18790.666	-253.100	-875.050
2000	-28041.350	-997.450	-6657.050
4100	-24046.350	-997.450	-6657.050
4120	-24046.350	-1008.490	-4450.050
4140	-23491.350	-1008.490	-4450.050
4160	-17491.350	-1008.490	-4450.050
4180	-13895.350	-1008.490	-4450.050
4200	-13793.750	-1008.490	-4450.050
4240	-13692.150	-1008.490	-4450.050
4260	-13542.150	-1008.490	-4450.050
4280	-13083.150	-1008.490	-4450.050
4300	-13083.150	-2308.490	-4450.050
4310	-13083.150	-3308.490	-4450.050
4320	-13083.150	-3608.490	-4450.050
10	228.600	.000	.000
25	114.300	.000	.000
40	.000	.000	.000
4700	-172.519	-3013.281	-2301.050
4710	-172.519	-3313.281	-2301.050
5000	-21975.666	-3005.470	1569.950
2030	-21975.666	-3005.470	-1217.050
5020	-21975.666	-3005.470	-4430.050
5030	-21975.666	-3005.470	-7380.050
5040	-27975.666	-3005.470	-7380.050
5050	-27975.666	-3005.470	-8380.050
5060	-27975.666	-3005.470	-9380.050
5070	-21975.666	-3005.470	-9380.050
5080	-21975.666	-3005.470	-10230.050
5090	-21975.666	-3005.470	-16230.050
5100	-21975.666	-3005.470	-22230.051
5110	-21975.666	-3005.470	-28230.051
5120	-21975.666	-3005.470	-34230.051

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Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 4 (OPE) W+D1+T1+P1+H
CASE 6 (OPE) W+D1+T2+P1+H
CASE 8 (OPE) W+D1+T3+P1+H
CASE 10 (SUS) W+P1+H
CASE 11 (SUS) WNC+H
CASE 12 (OPE) W+D1+T2+P1+H+U1
CASE 13 (OPE) W+D1+T2+P1+H-U1
CASE 14 (OPE) W+D1+T2+P1+H+U2
CASE 15 (OPE) W+D1+T2+P1+H+U3
CASE 16 (OPE) W+D1+T2+P1+H-U3
CASE 18 (OPE) W+D1+T2+P1+H+F2
CASE 19 (OCC) L19=L12-L6
CASE 20 (OCC) L20=L13-L6
CASE 21 (OCC) L21=L14-L6
CASE 22 (OCC) L22=L15-L6
CASE 23 (OCC) L23=L16-L6
CASE 24 (OCC) L24=L17-L6
CASE 25 (OCC) L25=L18-L6

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
20		TYPE=Displ. Reaction;					
	4(OPE)	-452	-1565	-195	0	0	0
	6(OPE)	-934	-2488	-848	0	0	0
	8(OPE)	-934	-2488	-849	0	0	0
	10(SUS)	-50	-1175	40	0	0	0
	11(SUS)	-50	-1171	40	0	0	0
	12(OPE)	-396	-2484	-840	0	0	0
	13(OPE)	-1456	-2488	-844	0	0	0
	14(OPE)	-925	-2347	-853	0	0	0
	15(OPE)	-843	-2478	-189	0	0	0
	16(OPE)	-1024	-2496	-1498	0	0	0
	18(OPE)	-934	-2488	-848	0	0	0
	19(OCC)	538	4	9	0	0	0
	20(OCC)	-522	0	5	0	0	0
	21(OCC)	9	141	-5	0	0	0
	22(OCC)	91	10	659	0	0	0
	23(OCC)	-90	-8	-650	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-1456/L13	-2496/L16	-1498/L16			
25		TYPE=Rigid ANC;					
	4(OPE)	-452	-1253	-195	0	-0	18
	6(OPE)	-934	-2176	-848	0	-0	18
	8(OPE)	-934	-2176	-849	0	-0	18
	10(SUS)	-50	-863	40	-0	0	18

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	11(SUS)	-50	-859	40	-0	0	18
	12(OPE)	-477	-2172	-840	0	0	18
	13(OPE)	-1374	-2176	-844	0	0	18
	14(OPE)	-925	-2072	-853	0	0	16
	15(OPE)	-843	-2166	-270	0	5	18
	16(OPE)	-1024	-2184	-1417	0	-5	18
	18(OPE)	-934	-2176	-848	0	0	18
	19(OCC)	457	4	9	-0	0	0
	20(OCC)	-441	0	5	-0	0	0
	21(OCC)	9	104	-5	-0	0	-2
	22(OCC)	91	10	578	-0	5	0
	23(OCC)	-90	-8	-569	0	-5	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-1374/L13	-2184/L16	-1417/L16	0/L6	-5/L16	18/L4
121		TYPE=Rigid +Y;					
	4(OPE)	0	-2664	-266	0	0	0
	6(OPE)	0	-2654	59	0	0	0
	8(OPE)	0	-2654	60	0	0	0
	10(SUS)	-191	-2655	-164	0	0	0
	11(SUS)	-172	-2655	-164	0	0	0
	12(OPE)	0	-2654	98	0	0	0
	13(OPE)	0	-2654	10	0	0	0
	14(OPE)	0	-2654	69	0	0	0
	15(OPE)	0	-2654	265	0	0	0
	16(OPE)	0	-2654	-206	0	0	0
	18(OPE)	0	-2654	59	0	0	0
	19(OCC)	0	-0	38	0	0	0
	20(OCC)	-0	0	-50	0	0	0
	21(OCC)	-0	0	9	0	0	0
	22(OCC)	-0	0	206	0	0	0
	23(OCC)	-0	-0	-266	0	0	0
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	-0	0	0	0	0	0
	MAX	-191/L10	-2664/L4	-266/L4			
160		TYPE=Rigid X; Rigid Z; Rigid -X; Prog Design VSH;					
	4(OPE)	4268	-3916	-578	0	0	0
	6(OPE)	4093	-3228	119	0	0	0
	8(OPE)	4115	-3233	119	0	0	0
	10(SUS)	-191	-2655	-164	0	0	0
	11(SUS)	-172	-2655	-164	0	0	0
	12(OPE)	6581	-3611	195	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	1230	-2464	19	0	0	0
	14(OPE)	3859	-2771	137	0	0	0
	15(OPE)	3944	-3147	640	0	0	0
	16(OPE)	3939	-3261	-413	0	0	0
	18(OPE)	4093	-3228	119	0	0	0
	19(OCC)	2487	-383	76	0	0	0
	20(OCC)	-2863	765	-100	0	0	0
	21(OCC)	-235	457	19	0	0	0
	22(OCC)	-150	82	521	0	0	0
	23(OCC)	-154	-33	-532	0	0	0
	24(OCC)	-1	1	1	0	0	0
	25(OCC)	-0	0	0	0	0	0
	MAX	6581/L12	-3916/L4	640/L15			
300		TYPE=Rigid +Y;					
	4(OPE)	-182	-611	-19	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	125	-1934	-106	0	0	0
	11(SUS)	116	-1918	-106	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	-192	-663	53	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	-9	-35	5	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	-192	-663	53	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	-9	-35	5	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-192/L13	-1934/L10	-106/L11			
400		TYPE=Rigid Z; Rigid Y;					
	4(OPE)	-472	-1574	-1024	0	0	0
	6(OPE)	-553	-1844	-518	0	0	0
	8(OPE)	-552	-1841	-529	0	0	0
	10(SUS)	95	-1658	30	0	0	0
	11(SUS)	89	-1657	30	0	0	0
	12(OPE)	-388	-1292	-842	0	0	0
	13(OPE)	-629	-2096	-218	0	0	0
	14(OPE)	-462	-1541	-533	0	0	0
	15(OPE)	-596	-1987	382	0	0	0
	16(OPE)	-519	-1731	-1418	0	0	0
	18(OPE)	-553	-1844	-518	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OCC)	166	552	-325	0	0	0
	20(OCC)	-76	-252	300	0	0	0
	21(OCC)	91	303	-16	0	0	0
	22(OCC)	-43	-143	899	0	0	0
	23(OCC)	34	113	-901	0	0	0
	24(OCC)	-0	-0	1	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	-629/L13	-2096/L13	-1418/L16			
480		TYPE=Rigid Z; Rigid Y;					
	4(OPE)	-589	-1963	669	0	0	0
	6(OPE)	-518	-1727	169	0	0	0
	8(OPE)	-518	-1727	171	0	0	0
	10(SUS)	83	-1627	-11	0	0	0
	11(SUS)	79	-1620	-11	0	0	0
	12(OPE)	-689	-2298	167	0	0	0
	13(OPE)	-331	-1104	186	0	0	0
	14(OPE)	-463	-1545	174	0	0	0
	15(OPE)	-488	-1626	512	0	0	0
	16(OPE)	-531	-1771	-169	0	0	0
	18(OPE)	-518	-1727	169	0	0	0
	19(OCC)	-171	-571	-2	0	0	0
	20(OCC)	187	623	18	0	0	0
	21(OCC)	54	182	5	0	0	0
	22(OCC)	30	101	343	0	0	0
	23(OCC)	-13	-44	-338	0	0	0
	24(OCC)	0	0	-0	0	0	0
	25(OCC)	0	0	-0	0	0	0
	MAX	-689/L12	-2298/L12	669/L4			
560		TYPE=Rigid Z; Rigid +Y;					
	4(OPE)	-968	-3228	208	0	0	0
	6(OPE)	-862	-2872	67	0	0	0
	8(OPE)	-862	-2872	67	0	0	0
	10(SUS)	-90	-2500	32	0	0	0
	11(SUS)	-90	-2488	32	0	0	0
	12(OPE)	-742	-2473	122	0	0	0
	13(OPE)	-1012	-3372	30	0	0	0
	14(OPE)	-773	-2576	67	0	0	0
	15(OPE)	-880	-2935	385	0	0	0
	16(OPE)	-857	-2857	-237	0	0	0
	18(OPE)	-862	-2872	67	0	0	0
	19(OCC)	120	399	55	0	0	0
	20(OCC)	-150	-500	-37	0	0	0
	21(OCC)	89	295	-0	0	0	0
	22(OCC)	-19	-63	318	0	0	0
	23(OCC)	5	15	-304	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	24(OCC)	0	0	-0	0	0	0
	25(OCC)	-0	-0	-0	0	0	0
	MAX	-1012/L13	-3372/L13	385/L15			
660		TYPE=Rigid +Y;					
	4(OPE)	-896	-3001	-82	0	0	0
	6(OPE)	-943	-3454	-430	0	0	0
	8(OPE)	-943	-3455	-430	0	0	0
	10(SUS)	-630	-2463	-65	0	0	0
	11(SUS)	-627	-2451	-65	0	0	0
	12(OPE)	-1091	-4115	-578	0	0	0
	13(OPE)	-755	-2541	103	0	0	0
	14(OPE)	-870	-3127	-350	0	0	0
	15(OPE)	-745	-3195	603	0	0	0
	16(OPE)	-803	-3778	-799	0	0	0
	18(OPE)	-943	-3454	-430	0	0	0
	19(OCC)	-148	-661	-148	0	0	0
	20(OCC)	188	913	533	0	0	0
	21(OCC)	73	328	80	0	0	0
	22(OCC)	198	259	1033	0	0	0
	23(OCC)	140	-323	-369	0	0	0
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	-0	0	0	0	0	0
	MAX	-1091/L12	-4115/L12	1033/L22			
720		TYPE=Rigid ANC;					
	4(OPE)	672	915	-466	147	77	-764
	6(OPE)	856	1591	32	185	197	-241
	8(OPE)	856	1591	32	185	197	-241
	10(SUS)	603	984	33	32	7	-63
	11(SUS)	600	978	32	32	7	-63
	12(OPE)	1493	2287	330	210	242	-338
	13(OPE)	40	665	-331	187	-152	-114
	14(OPE)	793	1445	16	186	156	-238
	15(OPE)	712	1423	239	325	-522	-215
	16(OPE)	455	1857	-320	61	716	-118
	18(OPE)	856	1591	32	185	197	-241
	19(OCC)	637	696	298	25	46	-97
	20(OCC)	-816	-927	-363	2	-348	127
	21(OCC)	-64	-146	-15	1	-41	3
	22(OCC)	-144	-168	208	140	-719	26
	23(OCC)	-401	266	-352	-124	520	123
	24(OCC)	0	-0	0	0	-0	-0
	25(OCC)	0	-0	0	0	-0	-0
	MAX	1493/L12	2287/L12	-466/L4	325/L15	-719/L22	-764/L4

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
780		TYPE=Rigid ANC;					
	4(OPE)	-207	-2466	-546	-17	114	-2058
	6(OPE)	-22	-2244	-368	62	382	-1800
	8(OPE)	-22	-2244	-369	62	382	-1800
	10(SUS)	-27	-1859	-33	20	37	-1171
	11(SUS)	-27	-1853	-33	20	37	-1165
	12(OPE)	605	-2208	-193	135	484	-2375
	13(OPE)	-733	-2257	-239	120	-194	-1056
	14(OPE)	-22	-2016	-311	83	308	-1647
	15(OPE)	62	-2153	865	591	-765	-1687
	16(OPE)	-126	-2301	-1307	-349	1127	-1805
	18(OPE)	-22	-2244	-368	62	382	-1800
	19(OCC)	627	35	176	73	102	-575
	20(OCC)	-712	-13	130	58	-576	744
	21(OCC)	0	227	57	21	-74	153
	22(OCC)	83	91	1233	529	-1147	113
	23(OCC)	-105	-57	-938	-411	745	-6
	24(OCC)	0	0	0	0	-0	0
	25(OCC)	0	0	0	0	-0	0
	MAX	-733/L13	-2466/L4	-1307/L16	591/L15	-1147/L22	-2375/L12
860		TYPE=Rigid ANC;					
	4(OPE)	-207	-2466	-546	-2347	114	-1173
	6(OPE)	-22	-2244	-368	-1509	382	-1707
	8(OPE)	-22	-2244	-369	-1510	382	-1707
	10(SUS)	-27	-1859	-33	-120	37	-1057
	11(SUS)	-27	-1853	-33	-119	37	-1052
	12(OPE)	605	-2208	-193	-687	484	-4957
	13(OPE)	-733	-2257	-239	-898	-194	2073
	14(OPE)	-22	-2016	-311	-1244	308	-1555
	15(OPE)	62	-2153	865	4278	-765	-1949
	16(OPE)	-126	-2301	-1307	-5922	1127	-1267
	18(OPE)	-22	-2244	-368	-1509	382	-1707
	19(OCC)	627	35	176	822	102	-3250
	20(OCC)	-712	-13	130	611	-576	3780
	21(OCC)	0	227	57	265	-74	152
	22(OCC)	83	91	1233	5787	-1147	-242
	23(OCC)	-105	-57	-938	-4413	745	441
	24(OCC)	0	0	0	0	-0	-0
	25(OCC)	0	0	0	0	-0	-0
	MAX	-733/L13	-2466/L4	-1307/L16	-5922/L16	-1147/L22	-4957/L12
1040		TYPE=Rigid +Y;					
	4(OPE)	886	-3009	-173	0	0	0
	6(OPE)	870	-2938	-142	0	0	0
	8(OPE)	910	-3073	-148	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(SUS)	-72	-1545	265	0	0	0
	11(SUS)	-71	-1535	265	0	0	0
	12(OPE)	896	-3023	-141	0	0	0
	13(OPE)	921	-3116	-161	0	0	0
	14(OPE)	760	-2567	-126	0	0	0
	15(OPE)	849	-2868	-137	0	0	0
	16(OPE)	894	-3023	-151	0	0	0
	18(OPE)	870	-2938	-142	0	0	0
	19(OCC)	26	-86	1	0	0	0
	20(OCC)	51	-178	-18	0	0	0
	21(OCC)	-110	371	16	0	0	0
	22(OCC)	-20	70	5	0	0	0
	23(OCC)	24	-85	-9	0	0	0
	24(OCC)	0	-1	-0	0	0	0
	25(OCC)	-0	0	-0	0	0	0
	MAX	921/L13	-3116/L13	265/L10			
1230		TYPE=Rigid ANC;					
	4(OPE)	2545	10	2581	0	0	10
	6(OPE)	1753	-156	1838	0	0	10
	8(OPE)	1794	-146	1886	0	0	10
	10(SUS)	-44	-558	-89	0	0	10
	11(SUS)	-44	-554	-90	0	0	10
	12(OPE)	2416	-51	2275	0	-0	10
	13(OPE)	1058	-268	1390	0	-0	10
	14(OPE)	1784	-90	1847	0	-0	9
	15(OPE)	1912	-191	2439	0	3	10
	16(OPE)	1604	-145	1244	0	-3	10
	18(OPE)	1753	-156	1838	0	-0	10
	19(OCC)	663	104	438	0	-0	0
	20(OCC)	-694	-112	-447	0	-0	-0
	21(OCC)	31	66	10	0	-0	-1
	22(OCC)	159	-35	601	0	3	-0
	23(OCC)	-148	11	-594	0	-3	0
	24(OCC)	-0	-2	1	0	-0	-0
	25(OCC)	-0	-0	-0	0	-0	-0
	MAX	2545/L4	-558/L10	2581/L4	0/L16	-3/L16	10/L4
1231		TYPE=Displ. Reaction;					
	4(OPE)	2545	-188	2581	0	0	0
	6(OPE)	1753	-354	1838	0	0	0
	8(OPE)	1794	-345	1886	0	0	0
	10(SUS)	-44	-756	-89	0	0	0
	11(SUS)	-44	-752	-90	0	0	0
	12(OPE)	2467	-250	2275	0	0	0
	13(OPE)	1007	-466	1390	0	0	0
	14(OPE)	1784	-265	1847	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	15(OPE)	1912	-389	2490	0	0	0
	16(OPE)	1604	-343	1192	0	0	0
	18(OPE)	1753	-354	1838	0	0	0
	19(OCC)	715	104	438	0	0	0
	20(OCC)	-746	-112	-447	0	0	0
	21(OCC)	31	89	10	0	0	0
	22(OCC)	159	-35	653	0	0	0
	23(OCC)	-148	11	-645	0	0	0
	24(OCC)	-0	-2	1	0	0	0
	25(OCC)	-0	-0	-0	0	0	0
	MAX	2545/L4	-756/L10	2581/L4			
1280		TYPE=Rigid Y; Rigid Z;					
	4(OPE)	546	-1820	-1594	0	0	0
	6(OPE)	565	-1883	-866	0	0	0
	8(OPE)	544	-1814	-901	0	0	0
	10(SUS)	21	-2779	24	0	0	0
	11(SUS)	21	-2771	24	0	0	0
	12(OPE)	587	-1958	-1282	0	0	0
	13(OPE)	473	-1575	-418	0	0	0
	14(OPE)	500	-1666	-936	0	0	0
	15(OPE)	575	-1918	-109	0	0	0
	16(OPE)	551	-1835	-1584	0	0	0
	18(OPE)	565	-1883	-866	0	0	0
	19(OCC)	23	-75	-416	0	0	0
	20(OCC)	-92	307	448	0	0	0
	21(OCC)	-65	217	-71	0	0	0
	22(OCC)	11	-35	757	0	0	0
	23(OCC)	-14	47	-718	0	0	0
	24(OCC)	-1	3	9	0	0	0
	25(OCC)	-0	0	0	0	0	0
	MAX	587/L12	-2779/L10	-1594/L4			
1380		TYPE=Rigid Y; Rigid Z;					
	4(OPE)	1215	-4050	682	0	0	0
	6(OPE)	1033	-3443	336	0	0	0
	8(OPE)	1022	-3406	345	0	0	0
	10(SUS)	137	-1705	-9	0	0	0
	11(SUS)	135	-1695	-9	0	0	0
	12(OPE)	969	-3228	486	0	0	0
	13(OPE)	1113	-3711	171	0	0	0
	14(OPE)	955	-3184	373	0	0	0
	15(OPE)	1023	-3409	957	0	0	0
	16(OPE)	1034	-3446	-264	0	0	0
	18(OPE)	1033	-3443	336	0	0	0
	19(OCC)	-64	215	150	0	0	0
	20(OCC)	80	-267	-165	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	-78	259	37	0	0	0
	22(OCC)	-10	34	621	0	0	0
	23(OCC)	1	-2	-600	0	0	0
	24(OCC)	0	-1	-0	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	MAX	1215/L4	-4050/L4	957/L15			
1460		TYPE=Rigid +Y; Rigid Z;					
	4(OPE)	256	-854	104	0	0	0
	6(OPE)	-323	-1076	101	0	0	0
	8(OPE)	-224	-1089	99	0	0	0
	10(SUS)	-100	-1708	7	0	0	0
	11(SUS)	-99	-1693	7	0	0	0
	12(OPE)	344	-1148	102	0	0	0
	13(OPE)	-296	-986	95	0	0	0
	14(OPE)	-109	-891	90	0	0	0
	15(OPE)	-156	-1113	321	0	0	0
	16(OPE)	-316	-1054	-143	0	0	0
	18(OPE)	-323	-1076	101	0	0	0
	19(OCC)	667	-72	1	0	0	0
	20(OCC)	27	90	-6	0	0	0
	21(OCC)	214	185	-12	0	0	0
	22(OCC)	166	-37	220	0	0	0
	23(OCC)	7	22	-244	0	0	0
	24(OCC)	0	0	-1	0	0	0
	25(OCC)	0	0	-0	0	0	0
	MAX	667/L19	-1708/L10	321/L15			
1500		TYPE=Rigid +Y; Rigid Z;					
	4(OPE)	0	-1231	-122	0	0	0
	6(OPE)	0	-1520	13	0	0	0
	8(OPE)	0	-1535	16	0	0	0
	10(SUS)	0	-2042	-6	0	0	0
	11(SUS)	0	-2024	-6	0	0	0
	12(OPE)	0	-1624	43	0	0	0
	13(OPE)	0	-1391	-6	0	0	0
	14(OPE)	0	-1266	11	0	0	0
	15(OPE)	0	-1385	681	0	0	0
	16(OPE)	0	-1643	-620	0	0	0
	18(OPE)	0	-1520	13	0	0	0
	19(OCC)	0	-104	30	0	0	0
	20(OCC)	0	128	-19	0	0	0
	21(OCC)	0	253	-2	0	0	0
	22(OCC)	0	135	668	0	0	0
	23(OCC)	0	-123	-633	0	0	0
	24(OCC)	0	1	1	0	0	0
	25(OCC)	0	0	0	0	0	0

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX		-2042/L10	681/L15			
1520		TYPE=Rigid +Y; Rigid Z w/gap;					
	4(OPE)	-286	-988	2868	0	0	0
	6(OPE)	-281	-986	1787	0	0	0
	8(OPE)	-279	-981	1740	0	0	0
	10(SUS)	-173	-1607	10	0	0	0
	11(SUS)	-172	-1593	10	0	0	0
	12(OPE)	-265	-999	901	0	0	0
	13(OPE)	-287	-984	2694	0	0	0
	14(OPE)	-244	-860	1786	0	0	0
	15(OPE)	-397	-1400	2297	0	0	0
	16(OPE)	-181	-636	1215	0	0	0
	18(OPE)	-281	-986	1787	0	0	0
	19(OCC)	15	-13	-886	0	0	0
	20(OCC)	-6	2	907	0	0	0
	21(OCC)	36	126	-1	0	0	0
	22(OCC)	-117	-414	510	0	0	0
	23(OCC)	99	350	-572	0	0	0
	24(OCC)	-0	-1	0	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	-397/L15	-1607/L10	2868/L4			
1560		TYPE=Rigid +Y; Rigid X w/gap;					
	4(OPE)	-6468	-7363	-2025	0	0	0
	6(OPE)	-4809	-6730	-1374	0	0	0
	8(OPE)	-4707	-6733	-1323	0	0	0
	10(SUS)	-225	-1224	-0	0	0	0
	11(SUS)	-223	-1213	-0	0	0	0
	12(OPE)	-2402	-6570	-430	0	0	0
	13(OPE)	-7275	-6887	-2382	0	0	0
	14(OPE)	-4650	-6168	-1243	0	0	0
	15(OPE)	-4651	-6774	-650	0	0	0
	16(OPE)	-5088	-6697	-2020	0	0	0
	18(OPE)	-4809	-6730	-1374	0	0	0
	19(OCC)	2407	160	943	0	0	0
	20(OCC)	-2467	-157	-1008	0	0	0
	21(OCC)	158	562	131	0	0	0
	22(OCC)	158	-44	723	0	0	0
	23(OCC)	-280	33	-647	0	0	0
	24(OCC)	-2	0	-1	0	0	0
	25(OCC)	-0	0	-0	0	0	0
	MAX	-7275/L13	-7363/L4	-2382/L13			

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1660		TYPE=Rigid ANC;					
	4(OPE)	574	118	-276	415	-537	1065
	6(OPE)	460	-137	-279	337	-296	653
	8(OPE)	451	-134	-279	337	-281	652
	10(SUS)	171	-792	-12	78	-32	-283
	11(SUS)	169	-786	-12	77	-32	-280
	12(OPE)	878	-164	-307	323	-84	355
	13(OPE)	46	-107	-253	354	-516	956
	14(OPE)	432	-17	-255	331	-318	719
	15(OPE)	347	239	155	899	-797	1194
	16(OPE)	552	-439	-744	-142	259	215
	18(OPE)	460	-137	-279	337	-296	653
	19(OCC)	418	-28	-28	-14	212	-298
	20(OCC)	-414	29	26	17	-220	303
	21(OCC)	-28	119	24	-6	-22	66
	22(OCC)	-113	376	434	562	-501	541
	23(OCC)	92	-303	-465	-479	554	-438
	24(OCC)	0	0	0	0	-0	0
	25(OCC)	0	-0	0	-0	-0	0
	MAX	878/L12	-792/L10	-744/L16	899/L15	-797/L15	1194/L15
1700		TYPE=Rigid ANC;					
	4(OPE)	574	-183	-276	352	-537	934
	6(OPE)	460	-438	-279	273	-296	548
	8(OPE)	451	-436	-279	274	-281	549
	10(SUS)	171	-1094	-12	75	-32	-322
	11(SUS)	169	-1088	-12	74	-32	-319
	12(OPE)	957	-466	-307	253	-84	143
	13(OPE)	-32	-409	-253	296	-516	956
	14(OPE)	432	-283	-255	272	-318	620
	15(OPE)	347	-63	233	945	-797	1115
	16(OPE)	552	-741	-823	-323	259	88
	18(OPE)	460	-438	-279	273	-296	548
	19(OCC)	497	-28	-28	-20	212	-404
	20(OCC)	-492	29	26	23	-220	408
	21(OCC)	-28	155	24	-1	-22	72
	22(OCC)	-113	376	513	672	-501	567
	23(OCC)	92	-303	-544	-596	554	-459
	24(OCC)	0	0	0	0	-0	0
	25(OCC)	0	-0	0	-0	-0	-0
	MAX	957/L12	-1094/L10	-823/L16	945/L15	-797/L15	1115/L15
1780		TYPE=Rigid ANC;					
	4(OPE)	-889	388	366	130	498	-1296
	6(OPE)	-151	-61	303	17	224	-358
	8(OPE)	-151	-61	303	17	224	-358

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(SUS)	-50	-615	-10	19	17	-4
	11(SUS)	-49	-612	-10	19	17	-4
	12(OPE)	373	131	474	-29	219	-122
	13(OPE)	-722	-274	143	51	254	-624
	14(OPE)	-166	-1	292	17	222	-368
	15(OPE)	-222	8	606	-75	343	-412
	16(OPE)	-192	-182	20	83	158	-375
	18(OPE)	-151	-61	303	17	224	-358
	19(OCC)	524	192	171	-46	-5	235
	20(OCC)	-571	-213	-160	34	30	-266
	21(OCC)	-14	59	-11	0	-3	-11
	22(OCC)	-70	69	303	-92	119	-55
	23(OCC)	-41	-121	-283	66	-66	-18
	24(OCC)	0	0	0	0	0	-0
	25(OCC)	0	0	0	0	0	0
	MAX	-889/L4	-615/L10	606/L15	130/L4	498/L4	-1296/L4
1820		TYPE=Rigid ANC;					
	4(OPE)	889	-690	-366	-214	-498	1092
	6(OPE)	151	-241	-303	-86	-224	323
	8(OPE)	151	-241	-303	-86	-224	323
	10(SUS)	50	314	10	-17	-17	-8
	11(SUS)	49	311	10	-17	-17	-8
	12(OPE)	-294	-433	-474	-80	-219	201
	13(OPE)	644	-28	-143	-83	-254	466
	14(OPE)	166	-264	-292	-84	-222	331
	15(OPE)	222	-310	-528	-56	-343	362
	16(OPE)	192	-120	-99	-95	-158	332
	18(OPE)	151	-241	-303	-86	-224	323
	19(OCC)	-446	-192	-171	6	5	-123
	20(OCC)	493	213	160	3	-30	143
	21(OCC)	14	-23	11	2	3	7
	22(OCC)	70	-69	-225	30	-119	38
	23(OCC)	41	121	204	-9	66	8
	24(OCC)	-0	-0	0	-0	-0	0
	25(OCC)	0	0	0	-0	0	0
	MAX	889/L4	-690/L4	-528/L15	-214/L4	-498/L4	1092/L4
1840		TYPE=Rigid X; Rigid Z w/gap; Rigid Y;					
	4(OPE)	243	-6887	87	0	0	0
	6(OPE)	461	-7788	385	0	0	0
	8(OPE)	484	-7789	387	0	0	0
	10(SUS)	188	-9487	6	0	0	0
	11(SUS)	186	-9472	6	0	0	0
	12(OPE)	5848	-7773	372	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	-4883	-7801	374	0	0	0
	14(OPE)	307	-6632	190	0	0	0
	15(OPE)	-190	-8415	4558	0	0	0
	16(OPE)	658	-7221	-920	0	0	0
	18(OPE)	461	-7788	385	0	0	0
	19(OCC)	5386	16	-13	0	0	0
	20(OCC)	-5345	-12	-11	0	0	0
	21(OCC)	-154	1156	-195	0	0	0
	22(OCC)	-652	-626	4173	0	0	0
	23(OCC)	197	568	-1304	0	0	0
	24(OCC)	-1	0	0	0	0	0
	25(OCC)	-0	0	0	0	0	0
	MAX	5848/L12	-9487/L10	4558/L15			
1860		TYPE=Rigid Y; Rigid Z w/gap;					
	4(OPE)	-780	-7795	0	0	0	0
	6(OPE)	-783	-7827	0	0	0	0
	8(OPE)	-783	-7827	0	0	0	0
	10(SUS)	-0	-7658	1	0	0	0
	11(SUS)	-0	-7652	1	0	0	0
	12(OPE)	-775	-7752	0	0	0	0
	13(OPE)	-790	-7904	0	0	0	0
	14(OPE)	-691	-6914	0	0	0	0
	15(OPE)	-474	-7873	3368	0	0	0
	16(OPE)	-537	-7789	-565	0	0	0
	18(OPE)	-783	-7827	0	0	0	0
	19(OCC)	8	75	-0	0	0	0
	20(OCC)	-8	-77	-0	0	0	0
	21(OCC)	91	913	-0	0	0	0
	22(OCC)	309	-45	3368	0	0	0
	23(OCC)	246	38	-565	0	0	0
	24(OCC)	-0	-0	0	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	-790/L13	-7904/L13	3368/L15			
1880		TYPE=Rigid Y; Rigid Z w/gap;					
	4(OPE)	-745	-7728	-205	0	0	0
	6(OPE)	-752	-7799	-206	0	0	0
	8(OPE)	-752	-7798	-206	0	0	0
	10(SUS)	0	-7656	1	0	0	0
	11(SUS)	0	-7650	1	0	0	0
	12(OPE)	-746	-7738	-205	0	0	0
	13(OPE)	-758	-7858	-208	0	0	0
	14(OPE)	-664	-6885	-182	0	0	0
	15(OPE)	-541	-7854	569	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OPE)	-1322	-7749	-3471	0	0	0
	18(OPE)	-752	-7799	-206	0	0	0
	19(OCC)	6	61	2	0	0	0
	20(OCC)	-6	-59	-2	0	0	0
	21(OCC)	88	914	24	0	0	0
	22(OCC)	211	-55	775	0	0	0
	23(OCC)	-570	50	-3264	0	0	0
	24(OCC)	-0	-0	-0	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	-1322/L16	-7858/L13	-3471/L16			
1900		TYPE=Rigid X; Rigid Z w/gap; Rigid Y;					
	4(OPE)	827	-7516	-752	0	0	0
	6(OPE)	1180	-8251	-825	0	0	0
	8(OPE)	1155	-8250	-825	0	0	0
	10(SUS)	123	-9507	3	0	0	0
	11(SUS)	122	-9491	3	0	0	0
	12(OPE)	5900	-8208	-821	0	0	0
	13(OPE)	-3586	-8329	-833	0	0	0
	14(OPE)	1090	-7087	-709	0	0	0
	15(OPE)	1172	-7111	711	0	0	0
	16(OPE)	1300	-9349	-5215	0	0	0
	18(OPE)	1180	-8251	-825	0	0	0
	19(OCC)	4720	43	4	0	0	0
	20(OCC)	-4766	-77	-8	0	0	0
	21(OCC)	-90	1164	116	0	0	0
	22(OCC)	-8	1140	1536	0	0	0
	23(OCC)	120	-1098	-4390	0	0	0
	24(OCC)	1	0	0	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	MAX	5900/L12	-9507/L10	-5215/L16			
1985		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	-96	-321	-5	0	0	0
	8(OPE)	-96	-321	-5	0	0	0
	10(SUS)	9	-37	6	0	0	0
	11(SUS)	10	-39	7	0	0	0
	12(OPE)	-131	-460	-42	0	0	0
	13(OPE)	-51	-176	11	0	0	0
	14(OPE)	-75	-249	-2	0	0	0
	15(OPE)	-59	-286	62	0	0	0
	16(OPE)	-90	-327	-38	0	0	0
	18(OPE)	-96	-321	-5	0	0	0
	19(OCC)	-35	-139	-37	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	20(OCC)	45	145	17	0	0	0
	21(OCC)	21	72	3	0	0	0
	22(OCC)	37	35	68	0	0	0
	23(OCC)	6	-6	-33	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-131/L12	-460/L12	68/L22			
2000		TYPE=Rigid +Y; Rigid Z w/gap;					
	4(OPE)	-348	-1168	-39	0	0	0
	6(OPE)	-320	-1152	-131	0	0	0
	8(OPE)	-320	-1152	-131	0	0	0
	10(SUS)	23	-1165	-14	0	0	0
	11(SUS)	22	-1136	-14	0	0	0
	12(OPE)	-228	-1118	-246	0	0	0
	13(OPE)	-361	-1208	-35	0	0	0
	14(OPE)	-288	-1028	-110	0	0	0
	15(OPE)	-285	-1109	279	0	0	0
	16(OPE)	-312	-1251	-685	0	0	0
	18(OPE)	-320	-1152	-131	0	0	0
	19(OCC)	92	34	-115	0	0	0
	20(OCC)	-41	-56	96	0	0	0
	21(OCC)	32	124	21	0	0	0
	22(OCC)	35	43	410	0	0	0
	23(OCC)	8	-99	-554	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-361/L13	-1251/L16	-685/L16			
2180		TYPE=Rigid +Y; Rigid Z w/gap;					
	4(OPE)	0	-993	-134	0	0	0
	6(OPE)	0	-1020	-101	0	0	0
	8(OPE)	0	-947	-100	0	0	0
	10(SUS)	0	-1044	0	0	0	0
	11(SUS)	0	-1037	0	0	0	0
	12(OPE)	0	-997	-84	0	0	0
	13(OPE)	0	-974	-170	0	0	0
	14(OPE)	0	-899	-98	0	0	0
	15(OPE)	0	-999	112	0	0	0
	16(OPE)	0	-1030	-396	0	0	0
	18(OPE)	0	-1020	-101	0	0	0
	19(OCC)	0	22	18	0	0	0
	20(OCC)	0	45	-69	0	0	0
	21(OCC)	0	121	3	0	0	0
	22(OCC)	0	21	213	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	23(OCC)	0	-10	-295	0	0	0
	24(OCC)	0	-3	-20	0	0	0
	25(OCC)	0	0	-0	0	0	0
	MAX		-1044/L10	-396/L16			
2190		TYPE=Rigid +Y;					
	4(OPE)	-52	-396	-107	0	0	0
	6(OPE)	-43	-347	-95	0	0	0
	8(OPE)	-142	-854	-213	0	0	0
	10(SUS)	22	-826	-59	0	0	0
	11(SUS)	22	-821	-59	0	0	0
	12(OPE)	-7	-323	-97	0	0	0
	13(OPE)	-48	-299	-76	0	0	0
	14(OPE)	-27	-222	-61	0	0	0
	15(OPE)	-77	-433	-105	0	0	0
	16(OPE)	-31	-295	-83	0	0	0
	18(OPE)	-43	-347	-95	0	0	0
	19(OCC)	36	24	-2	0	0	0
	20(OCC)	-5	48	19	0	0	0
	21(OCC)	16	125	34	0	0	0
	22(OCC)	-34	-86	-10	0	0	0
	23(OCC)	11	52	12	0	0	0
	24(OCC)	18	105	26	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-142/L8	-854/L8	-213/L8			
2220		TYPE=Rigid +Y; Rigid X w/gap;					
	4(OPE)	-70	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	-1203	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	-168	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	-1203	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	-168	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-1203/L13					

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
2320		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	-2484	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		-2484/L8				
2500		TYPE=Rigid Z w/gap; Rigid X w/gap; Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	-228	-2534	87	0	0	0
	11(SUS)	-230	-2534	87	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	435	0	0	0
	16(OPE)	0	0	-527	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	435	0	0	0
	23(OCC)	0	0	-527	0	0	0
	24(OCC)	0	0	-1362	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-230/L11	-2534/L10	-1362/L24			

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
2600		TYPE=Rigid +Y;					
	4(OPE)	0	-3034	0	0	0	0
	6(OPE)	0	-3340	0	0	0	0
	8(OPE)	0	-1403	0	0	0	0
	10(SUS)	0	-2008	0	0	0	0
	11(SUS)	0	-2008	0	0	0	0
	12(OPE)	0	-3474	0	0	0	0
	13(OPE)	0	-3224	0	0	0	0
	14(OPE)	0	-2845	0	0	0	0
	15(OPE)	0	-3981	0	0	0	0
	16(OPE)	0	-2480	0	0	0	0
	18(OPE)	0	-3339	0	0	0	0
	19(OCC)	0	-135	0	0	0	0
	20(OCC)	0	115	0	0	0	0
	21(OCC)	0	494	0	0	0	0
	22(OCC)	0	-642	0	0	0	0
	23(OCC)	0	860	0	0	0	0
	24(OCC)	0	393	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		-3981/L15				
2620		TYPE=Rigid +Y;					
	4(OPE)	0	-2229	0	0	0	0
	6(OPE)	0	-1765	0	0	0	0
	8(OPE)	0	-2430	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(OPE)	0	-854	0	0	0	0
	13(OPE)	0	-1842	0	0	0	0
	14(OPE)	0	-1499	0	0	0	0
	15(OPE)	0	-1474	0	0	0	0
	16(OPE)	0	-895	0	0	0	0
	18(OPE)	0	-883	0	0	0	0
	19(OCC)	0	912	0	0	0	0
	20(OCC)	0	-76	0	0	0	0
	21(OCC)	0	266	0	0	0	0
	22(OCC)	0	292	0	0	0	0
	23(OCC)	0	871	0	0	0	0
	24(OCC)	0	1765	0	0	0	0
	25(OCC)	0	883	0	0	0	0
	MAX		-2430/L8				
2800		TYPE=Rigid Z; Rigid X; Rigid +Y;					
	4(OPE)	-314	0	1233	0	0	0
	6(OPE)	-160	-270	1322	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	8(OPE)	-1404	-2422	-681	0	0	0
	10(SUS)	-215	-3855	-18	0	0	0
	11(SUS)	-215	-3850	-18	0	0	0
	12(OPE)	802	-1194	1274	0	0	0
	13(OPE)	-1000	-124	1379	0	0	0
	14(OPE)	-82	0	1293	0	0	0
	15(OPE)	-372	0	2947	0	0	0
	16(OPE)	141	-2011	-286	0	0	0
	18(OPE)	1838	-153	1322	0	0	0
	19(OCC)	962	-924	-48	0	0	0
	20(OCC)	-839	146	57	0	0	0
	21(OCC)	79	270	-30	0	0	0
	22(OCC)	-211	270	1625	0	0	0
	23(OCC)	302	-1741	-1608	0	0	0
	24(OCC)	955	-1164	-581	0	0	0
	25(OCC)	1998	117	-0	0	0	0
	MAX	1998/L25	-3855/L10	2947/L15			
3100		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	-0	-337	-101	0	0	0
	11(SUS)	-0	-336	-101	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-0/L10	-337/L10	-101/L10			
3120		TYPE=Rigid X;					
	4(OPE)	6385	0	0	0	0	0
	6(OPE)	6350	0	0	0	0	0
	8(OPE)	-253	0	0	0	0	0
	10(SUS)	399	0	0	0	0	0
	11(SUS)	400	0	0	0	0	0
	12(OPE)	7725	0	0	0	0	0
	13(OPE)	5662	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	6307	0	0	0	0	0
	15(OPE)	6591	0	0	0	0	0
	16(OPE)	6091	0	0	0	0	0
	18(OPE)	6352	0	0	0	0	0
	19(OCC)	1374	0	0	0	0	0
	20(OCC)	-688	0	0	0	0	0
	21(OCC)	-44	0	0	0	0	0
	22(OCC)	241	0	0	0	0	0
	23(OCC)	-259	0	0	0	0	0
	24(OCC)	-1003	0	0	0	0	0
	25(OCC)	1	0	0	0	0	0
	MAX	7725/L12					
4140		TYPE=Rigid +Y;					
	4(OPE)	-314	-1051	-22	0	0	0
	6(OPE)	-253	-848	23	0	0	0
	8(OPE)	-253	-848	23	0	0	0
	10(SUS)	-2	-774	-2	0	0	0
	11(SUS)	-2	-754	-2	0	0	0
	12(OPE)	-251	-843	35	0	0	0
	13(OPE)	-253	-848	-23	0	0	0
	14(OPE)	-225	-753	14	0	0	0
	15(OPE)	-223	-868	134	0	0	0
	16(OPE)	-231	-815	-81	0	0	0
	18(OPE)	-253	-848	23	0	0	0
	19(OCC)	3	5	11	0	0	0
	20(OCC)	0	1	-46	0	0	0
	21(OCC)	28	96	-10	0	0	0
	22(OCC)	30	-19	110	0	0	0
	23(OCC)	23	33	-105	0	0	0
	24(OCC)	-0	0	-0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-314/L4	-1051/L4	134/L15			
4160		TYPE=Rigid +Y; Rigid Z;					
	4(OPE)	-91	-61	241	0	0	0
	6(OPE)	-248	-644	184	0	0	0
	8(OPE)	-248	-644	184	0	0	0
	10(SUS)	-7	-874	-0	0	0	0
	11(SUS)	-6	-851	-0	0	0	0
	12(OPE)	-271	-646	257	0	0	0
	13(OPE)	-205	-642	41	0	0	0
	14(OPE)	-212	-539	167	0	0	0
	15(OPE)	-350	-638	530	0	0	0
	16(OPE)	-255	-652	-198	0	0	0
	18(OPE)	-248	-644	184	0	0	0
	19(OCC)	-23	-3	73	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	20(OCC)	43	1	-143	0	0	0
	21(OCC)	37	104	-18	0	0	0
	22(OCC)	-102	5	346	0	0	0
	23(OCC)	-7	-8	-382	0	0	0
	24(OCC)	0	0	-0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-350/L15	-874/L10	530/L15			
4200		TYPE=Rigid ANC;					
	4(OPE)	1416	-977	-70	-281	-82	1623
	6(OPE)	978	-501	-76	-180	-88	458
	8(OPE)	978	-501	-76	-180	-88	458
	10(SUS)	8	-318	0	-180	0	12
	11(SUS)	8	-314	0	-175	0	12
	12(OPE)	1639	-500	-106	-184	-124	457
	13(OPE)	223	-502	-8	-176	-10	458
	14(OPE)	890	-463	-67	-158	-78	456
	15(OPE)	1014	-503	-76	-181	-181	460
	16(OPE)	880	-498	-66	-177	16	455
	18(OPE)	978	-501	-76	-180	-88	458
	19(OCC)	661	1	-31	-3	-36	-1
	20(OCC)	-755	-0	67	4	78	0
	21(OCC)	-88	38	9	22	10	-2
	22(OCC)	36	-2	-1	-1	-93	2
	23(OCC)	-98	3	10	4	104	-4
	24(OCC)	-0	-0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	1639/L12	-977/L4	-106/L12	-281/L4	-181/L15	1623/L4
4260		TYPE=Rigid ANC;					
	4(OPE)	1416	-1190	-70	-281	-100	1909
	6(OPE)	978	-714	-76	-180	-107	624
	8(OPE)	978	-714	-76	-180	-107	624
	10(SUS)	8	-531	0	-180	0	132
	11(SUS)	8	-526	0	-175	0	131
	12(OPE)	1694	-713	-106	-184	-150	623
	13(OPE)	168	-715	-8	-176	-12	625
	14(OPE)	890	-651	-67	-158	-94	608
	15(OPE)	1014	-716	-21	-181	-190	627
	16(OPE)	880	-711	-122	-177	-11	620
	18(OPE)	978	-714	-76	-180	-107	624
	19(OCC)	716	1	-31	-3	-43	-1
	20(OCC)	-810	-0	67	4	95	0
	21(OCC)	-88	64	9	22	13	-16
	22(OCC)	36	-2	55	-1	-83	3
	23(OCC)	-98	3	-46	4	96	-4
	24(OCC)	-0	-0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	0	-0	0	0	0	0
	MAX	1694/L12	-1190/L4	-122/L16	-281/L4	-190/L15	1909/L4
4320		TYPE=Rigid ANC;					
	4(OPE)	1416	-1190	-70	-464	-132	-1227
	6(OPE)	978	-714	-76	-377	-142	-1590
	8(OPE)	978	-714	-76	-377	-142	-1590
	10(SUS)	8	-531	0	-180	0	355
	11(SUS)	8	-526	0	-175	0	352
	12(OPE)	1694	-713	-106	-460	-199	-3454
	13(OPE)	168	-715	-8	-198	-16	517
	14(OPE)	890	-651	-67	-332	-125	-1407
	15(OPE)	1014	-716	-21	-236	-200	-1681
	16(OPE)	880	-711	-122	-493	-67	-1341
	18(OPE)	978	-714	-76	-377	-142	-1590
	19(OCC)	716	1	-31	-83	-57	-1864
	20(OCC)	-810	-0	67	179	126	2107
	21(OCC)	-88	64	9	46	17	184
	22(OCC)	36	-2	55	141	-58	-91
	23(OCC)	-98	3	-46	-115	75	250
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	1694/L12	-1190/L4	-122/L16	-493/L16	-200/L15	-3454/L12
4340		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	-60	-752	217	0	0	0
	8(OPE)	-60	-751	217	0	0	0
	10(SUS)	55	-1583	9	0	0	0
	11(SUS)	54	-1575	9	0	0	0
	12(OPE)	240	-817	51	0	0	0
	13(OPE)	-188	-683	80	0	0	0
	14(OPE)	-54	-563	160	0	0	0
	15(OPE)	-110	-837	226	0	0	0
	16(OPE)	49	-692	-73	0	0	0
	18(OPE)	-60	-752	217	0	0	0
	19(OCC)	300	-66	-166	0	0	0
	20(OCC)	-129	69	-137	0	0	0
	21(OCC)	6	189	-57	0	0	0
	22(OCC)	-50	-85	8	0	0	0
	23(OCC)	109	60	-290	0	0	0
	24(OCC)	-0	-0	0	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	300/L19	-1583/L10	-290/L23			
4360		TYPE=Rigid +Y;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	-108	-1725	-2	0	0	0
	11(SUS)	-107	-1710	-2	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-108/L10	-1725/L10	-2/L10			
4385		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	-76	-1736	-4	0	0	0
	11(SUS)	-75	-1721	-4	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-76/L10	-1736/L10	-4/L10			
4480		TYPE=Rigid ANC;					
	4(OPE)	-437	394	-298	-446	-378	1427
	6(OPE)	-301	56	-243	-321	-244	908
	8(OPE)	-295	55	-243	-322	-230	904
	10(SUS)	171	-792	12	-78	32	-283
	11(SUS)	169	-786	12	-77	32	-280

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	375	-34	-221	-290	54	539
	13(OPE)	-982	146	-266	-349	-549	1279
	14(OPE)	-317	179	-228	-331	-262	978
	15(OPE)	-273	29	174	116	-728	864
	16(OPE)	-323	68	-694	-697	296	934
	18(OPE)	-301	56	-243	-321	-244	908
	19(OCC)	676	-90	22	31	298	-369
	20(OCC)	-680	90	-23	-28	-305	371
	21(OCC)	-16	123	15	-10	-18	70
	22(OCC)	29	-27	417	438	-483	-44
	23(OCC)	-21	13	-451	-376	540	26
	24(OCC)	-0	0	0	-0	-0	0
	25(OCC)	-0	0	-0	0	-0	0
	MAX	-982/L13	-792/L10	-694/L16	-697/L16	-728/L15	1427/L4
4500		TYPE=Rigid ANC;					
	4(OPE)	-437	92	-298	-514	-378	1526
	6(OPE)	-301	-246	-243	-377	-244	977
	8(OPE)	-295	-247	-243	-377	-230	971
	10(SUS)	171	-1094	12	-75	32	-322
	11(SUS)	169	-1088	12	-74	32	-319
	12(OPE)	453	-336	-221	-341	54	442
	13(OPE)	-1060	-156	-266	-410	-549	1515
	14(OPE)	-317	-87	-228	-383	-262	1051
	15(OPE)	-273	-273	253	167	-728	926
	16(OPE)	-323	-233	-773	-866	296	1008
	18(OPE)	-301	-246	-243	-377	-244	977
	19(OCC)	755	-90	22	36	298	-534
	20(OCC)	-759	90	-23	-34	-305	538
	21(OCC)	-16	159	15	-7	-18	74
	22(OCC)	29	-27	496	544	-483	-51
	23(OCC)	-21	13	-530	-490	540	31
	24(OCC)	-0	0	0	-0	-0	0
	25(OCC)	-0	0	-0	0	-0	0
	MAX	-1060/L13	-1094/L10	-773/L16	-866/L16	-728/L15	1526/L4
4520		TYPE=Rigid ANC;					
	4(OPE)	254	679	-474	-99	-104	-613
	6(OPE)	75	-19	-284	-25	-123	-216
	8(OPE)	75	-19	-284	-25	-123	-216
	10(SUS)	19	-604	20	-26	17	38
	11(SUS)	19	-601	19	-25	17	37
	12(OPE)	378	101	-387	-5	-170	-104
	13(OPE)	-186	-151	-157	-53	-45	-302
	14(OPE)	72	47	-283	-21	-122	-221
	15(OPE)	110	-23	14	-143	-26	-177
	16(OPE)	124	-50	-525	76	-150	-203

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	18(OPE)	75	-19	-284	-25	-123	-216
	19(OCC)	303	120	-103	21	-47	112
	20(OCC)	-261	-132	127	-28	78	-86
	21(OCC)	-3	66	1	4	1	-5
	22(OCC)	35	-4	298	-117	97	39
	23(OCC)	49	-31	-241	101	-27	13
	24(OCC)	-0	0	-0	0	-0	-0
	25(OCC)	0	0	0	0	-0	-0
	MAX	378/L12	679/L4	-525/L16	-143/L15	-170/L12	-613/L4
4540		TYPE=Rigid ANC;					
	4(OPE)	-254	-981	474	207	104	671
	6(OPE)	-75	-283	284	90	123	233
	8(OPE)	-75	-283	284	90	123	233
	10(SUS)	-19	302	-20	21	-17	-34
	11(SUS)	-19	300	-19	21	-17	-33
	12(OPE)	-299	-403	387	93	170	183
	13(OPE)	107	-150	157	89	45	267
	14(OPE)	-72	-312	283	86	122	238
	15(OPE)	-110	-279	64	147	26	202
	16(OPE)	-124	-251	447	37	150	231
	18(OPE)	-75	-283	284	90	123	233
	19(OCC)	-224	-120	103	3	47	-50
	20(OCC)	182	132	-127	-1	-78	34
	21(OCC)	3	-29	-1	-4	-1	4
	22(OCC)	-35	4	-220	56	-97	-32
	23(OCC)	-49	31	162	-53	27	-2
	24(OCC)	0	-0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-299/L12	-981/L4	474/L4	207/L4	170/L12	671/L4
4670		TYPE=Rigid +Y;					
	4(OPE)	0	-2037	0	0	0	0
	6(OPE)	0	-1365	0	0	0	0
	8(OPE)	0	-1365	0	0	0	0
	10(SUS)	0	-405	0	0	0	0
	11(SUS)	0	-397	0	0	0	0
	12(OPE)	0	-1505	0	0	0	0
	13(OPE)	0	-1249	0	0	0	0
	14(OPE)	0	-1269	0	0	0	0
	15(OPE)	0	-1566	0	0	0	0
	16(OPE)	0	-1230	0	0	0	0
	18(OPE)	0	-1365	0	0	0	0
	19(OCC)	0	-140	0	0	0	0
	20(OCC)	0	116	0	0	0	0
	21(OCC)	0	96	0	0	0	0
	22(OCC)	0	-201	0	0	0	0

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	23(OCC)	0	135	0	0	0	0
	24(OCC)	0	-0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		-2037/L4				
4680		TYPE=Rigid +Y;					
	4(OPE)	0	-1700	0	0	0	0
	6(OPE)	0	-1016	0	0	0	0
	8(OPE)	0	-1016	0	0	0	0
	10(SUS)	0	-536	0	0	0	0
	11(SUS)	0	-525	0	0	0	0
	12(OPE)	0	-1087	0	0	0	0
	13(OPE)	0	-878	0	0	0	0
	14(OPE)	0	-961	0	0	0	0
	15(OPE)	0	-941	0	0	0	0
	16(OPE)	0	-921	0	0	0	0
	18(OPE)	0	-1016	0	0	0	0
	19(OCC)	0	-70	0	0	0	0
	20(OCC)	0	138	0	0	0	0
	21(OCC)	0	56	0	0	0	0
	22(OCC)	0	75	0	0	0	0
	23(OCC)	0	95	0	0	0	0
	24(OCC)	0	-0	0	0	0	0
	25(OCC)	0	-0	0	0	0	0
	MAX		-1700/L4				
4690		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	0	-600	0	0	0	0
	11(SUS)	0	-587	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		-600/L10				

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
4710		TYPE=Rigid +Y;					
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	217	-728	26	0	0	0
	11(SUS)	215	-723	31	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	217/L10	-728/L10	31/L11			
5000		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	4(OPE)	-20	-3318	7010	0	0	0
	6(OPE)	0	-3279	6969	0	0	0
	8(OPE)	262	-1474	-1744	0	0	0
	10(SUS)	31	-1337	44	0	0	0
	11(SUS)	31	-1336	45	0	0	0
	12(OPE)	-26	-3215	6922	0	0	0
	13(OPE)	210	-3400	6524	0	0	0
	14(OPE)	20	-3111	6710	0	0	0
	15(OPE)	-156	-3318	9897	0	0	0
	16(OPE)	46	-3148	3907	0	0	0
	18(OPE)	1	-3279	6970	0	0	0
	19(OCC)	-27	63	-48	0	0	0
	20(OCC)	210	-121	-445	0	0	0
	21(OCC)	20	168	-260	0	0	0
	22(OCC)	-157	-39	2928	0	0	0
	23(OCC)	45	131	-3062	0	0	0
	24(OCC)	64	-21	-112	0	0	0
	25(OCC)	0	-1	0	0	0	0
	MAX	262/L8	-3400/L13	9897/L15			
5020		TYPE=Rigid X w/gap; Rigid +Y;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	-6957	-8399	-2480	0	0	0
	6(OPE)	-7020	-8362	-2469	0	0	0
	8(OPE)	575	-6908	1991	0	0	0
	10(SUS)	94	-6952	44	0	0	0
	11(SUS)	94	-6944	44	0	0	0
	12(OPE)	-3380	-8361	-2469	0	0	0
	13(OPE)	-11429	-8412	-2484	0	0	0
	14(OPE)	-7117	-7541	-2227	0	0	0
	15(OPE)	-6247	-8148	-2406	0	0	0
	16(OPE)	-7648	-8536	-2521	0	0	0
	18(OPE)	-7019	-8362	-2470	0	0	0
	19(OCC)	3639	1	0	0	0	0
	20(OCC)	-4409	-51	-15	0	0	0
	21(OCC)	-97	821	242	0	0	0
	22(OCC)	773	214	63	0	0	0
	23(OCC)	-628	-175	-52	0	0	0
	24(OCC)	-33	-84	-25	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	MAX	-11429/L13	-8536/L16	-2521/L16			
5050		TYPE=Rigid +Y;					
	4(OPE)	-1272	-5079	838	0	0	0
	6(OPE)	-1273	-5086	841	0	0	0
	8(OPE)	1282	-4397	-313	0	0	0
	10(SUS)	-43	-4513	-2	0	0	0
	11(SUS)	-43	-4507	-2	0	0	0
	12(OPE)	-1278	-5028	801	0	0	0
	13(OPE)	-1227	-5161	945	0	0	0
	14(OPE)	-1131	-4546	762	0	0	0
	15(OPE)	-1194	-5090	952	0	0	0
	16(OPE)	-1363	-5085	686	0	0	0
	18(OPE)	-1273	-5086	841	0	0	0
	19(OCC)	-5	58	-40	0	0	0
	20(OCC)	47	-75	104	0	0	0
	21(OCC)	142	540	-78	0	0	0
	22(OCC)	80	-4	112	0	0	0
	23(OCC)	-89	1	-155	0	0	0
	24(OCC)	1	6	-2	0	0	0
	25(OCC)	0	0	-0	0	0	0
	MAX	-1363/L16	-5161/L13	952/L15			
5080		TYPE=Rigid +Y;					
	4(OPE)	-121	-3992	1192	0	0	0
	6(OPE)	-122	-3994	1192	0	0	0
	8(OPE)	-294	-3929	-1141	0	0	0
	10(SUS)	18	-3947	-0	0	0	0
	11(SUS)	18	-3942	-0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	-67	-3986	1194	0	0	0
	13(OPE)	-231	-4004	1179	0	0	0
	14(OPE)	-113	-3521	1050	0	0	0
	15(OPE)	-149	-3999	1190	0	0	0
	16(OPE)	-87	-3992	1194	0	0	0
	18(OPE)	-122	-3994	1192	0	0	0
	19(OCC)	55	9	2	0	0	0
	20(OCC)	-109	-10	-13	0	0	0
	21(OCC)	9	474	-142	0	0	0
	22(OCC)	-27	-4	-2	0	0	0
	23(OCC)	35	3	2	0	0	0
	24(OCC)	-0	3	-1	0	0	0
	25(OCC)	-0	0	-0	0	0	0
	MAX	-294/L8	-4004/L13	1194/L16			
5090		TYPE=Rigid X w/gap; Rigid +Y;					
	4(OPE)	1651	-3542	1061	0	0	0
	6(OPE)	1657	-3541	1061	0	0	0
	8(OPE)	-391	-3754	-1056	0	0	0
	10(SUS)	-2	-3721	-0	0	0	0
	11(SUS)	-2	-3717	-0	0	0	0
	12(OPE)	3579	-3557	1066	0	0	0
	13(OPE)	-224	-3519	1054	0	0	0
	14(OPE)	1498	-3094	927	0	0	0
	15(OPE)	756	-3541	1061	0	0	0
	16(OPE)	2584	-3540	1060	0	0	0
	18(OPE)	1656	-3541	1061	0	0	0
	19(OCC)	1922	-16	5	0	0	0
	20(OCC)	-1880	22	-7	0	0	0
	21(OCC)	-159	447	-134	0	0	0
	22(OCC)	-900	-1	0	0	0	0
	23(OCC)	928	1	-0	0	0	0
	24(OCC)	-0	-1	0	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	3579/L12	-3754/L8	1066/L12			
5100		TYPE=Rigid X w/gap; Rigid +Y;					
	4(OPE)	269	-3430	0	0	0	0
	6(OPE)	277	-3431	0	0	0	0
	8(OPE)	0	-3375	0	0	0	0
	10(SUS)	0	-3383	0	0	0	0
	11(SUS)	0	-3379	0	0	0	0
	12(OPE)	1498	-3426	0	0	0	0
	13(OPE)	-648	-3436	0	0	0	0
	14(OPE)	352	-3025	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	15(OPE)	614	-3430	0	0	0	0
	16(OPE)	0	-3431	0	0	0	0
	18(OPE)	277	-3431	0	0	0	0
	19(OCC)	1221	4	0	0	0	0
	20(OCC)	-925	-6	0	0	0	0
	21(OCC)	75	406	0	0	0	0
	22(OCC)	337	0	0	0	0	0
	23(OCC)	-277	-0	0	0	0	0
	24(OCC)	1	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	1498/L12	-3436/L13				
5110		TYPE=Rigid +Y;					
	4(OPE)	104	-4016	1200	0	0	0
	6(OPE)	103	-4016	1200	0	0	0
	8(OPE)	-143	-4029	-1200	0	0	0
	10(SUS)	0	-4027	-0	0	0	0
	11(SUS)	0	-4022	-0	0	0	0
	12(OPE)	226	-4017	1184	0	0	0
	13(OPE)	-253	-4014	1177	0	0	0
	14(OPE)	90	-3532	1056	0	0	0
	15(OPE)	92	-4016	1201	0	0	0
	16(OPE)	93	-4015	1201	0	0	0
	18(OPE)	103	-4016	1200	0	0	0
	19(OCC)	124	-1	-17	0	0	0
	20(OCC)	-356	1	-23	0	0	0
	21(OCC)	-13	483	-144	0	0	0
	22(OCC)	-10	-0	1	0	0	0
	23(OCC)	-10	0	1	0	0	0
	24(OCC)	-0	-0	0	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	-356/L20	-4029/L8	1201/L15			
5120		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	4(OPE)	-25	-1400	-9596	0	0	0
	6(OPE)	-25	-1400	-9648	0	0	0
	8(OPE)	86	-1397	4426	0	0	0
	10(SUS)	-0	-1398	-0	0	0	0
	11(SUS)	-0	-1396	-0	0	0	0
	12(OPE)	714	-1399	-10155	0	0	0
	13(OPE)	-761	-1400	-9521	0	0	0
	14(OPE)	-24	-1232	-9316	0	0	0
	15(OPE)	-41	-1400	-4990	0	0	0
	16(OPE)	-17	-1400	-14462	0	0	0
	18(OPE)	-25	-1400	-9648	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OCC)	739	0	-507	0	0	0
	20(OCC)	-736	-0	128	0	0	0
	21(OCC)	1	168	333	0	0	0
	22(OCC)	-16	0	4658	0	0	0
	23(OCC)	8	-0	-4814	0	0	0
	24(OCC)	-0	0	-141	0	0	0
	25(OCC)	-0	0	0	0	0	0
	MAX	-761/L13	-1400/L13	-14462/L16			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP
CASE 10 (SUS) W+P1+H
CASE 11 (SUS) WNC+H
CASE 26 (OCC) L26=L19+L10
CASE 27 (OCC) L27=L20+L10
CASE 28 (OCC) L28=L21+L10
CASE 29 (OCC) L29=L22+L10
CASE 30 (OCC) L30=L23+L10
CASE 31 (OCC) L31=L24+L10
CASE 32 (OCC) L32=L25+L10
CASE 33 (EXP) L33=L4-L10
CASE 34 (EXP) L34=L6-L10
CASE 35 (EXP) L35=L4-L6
CASE 36 (EXP) L36=L8-L10
CASE 37 (EXP) L37=L4-L8
CASE 38 (EXP) L38=L6-L8

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 3 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 3 (HYD) WW+HP			
Ratio (%):	38.9	@Node	2000
Code Stress:	66978.2	Allowable Stress:	172368.9
Axial Stress:	38450.5	@Node	1920
Bending Stress:	43001.0	@Node	2180
Torsion Stress:	9140.0	@Node	2200
Hoop Stress:	78278.3	@Node	1929
Max Stress Intensity:	84189.9	@Node	2000

CODE STRESS CHECK PASSED : LOADCASE 10 (SUS) W+P1+H

Highest Stresses: (KPa) LOADCASE 10 (SUS) W+P1+H			
Ratio (%):	57.1	@Node	2180
Code Stress:	78679.9	Allowable Stress:	137819.5
Axial Stress:	25638.7	@Node	4649
Bending Stress:	60527.7	@Node	2180
Torsion Stress:	12892.7	@Node	2200
Hoop Stress:	52185.5	@Node	1929
Max Stress Intensity:	78679.3	@Node	2180

CODE STRESS CHECK PASSED : LOADCASE 11 (SUS) WNC+H

Highest Stresses: (KPa) LOADCASE 11 (SUS) WNC+H			
Ratio (%):	43.7	@Node	2180
Code Stress:	60254.7	Allowable Stress:	137819.5
Axial Stress:	2321.6	@Node	660
Bending Stress:	60132.0	@Node	2180
Torsion Stress:	12811.6	@Node	2200

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Hoop Stress:                  0.0       @Node     58
Max Stress Intensity:       60254.7     @Node   2180

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L19+L10

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L19+L10
Ratio (%):                   46.4       @Node    280
Code Stress:                85067.6     Allowable Stress:     183400.5
Axial Stress:               25645.5      @Node   4670
Bending Stress:            100150.1      @Node    280
Torsion Stress:             19386.7      @Node    280
Hoop Stress:                52185.5      @Node   1929
Max Stress Intensity:      117988.7      @Node    280

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L20+L10

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L20+L10
Ratio (%):                   48.0       @Node    280
Code Stress:                88047.0     Allowable Stress:     183400.5
Axial Stress:               26009.2      @Node   4260
Bending Stress:            103426.0      @Node    280
Torsion Stress:             20881.6      @Node    280
Hoop Stress:                52185.5      @Node   1929
Max Stress Intensity:      122405.1      @Node    280

 CODE STRESS CHECK PASSED      : LOADCASE 28 (OCC) L28=L21+L10

Highest Stresses: (   KPa    ) LOADCASE 28 (OCC) L28=L21+L10
Ratio (%):                   46.8       @Node   2180
Code Stress:                85716.7     Allowable Stress:     183299.9
Axial Stress:               25658.8      @Node   4649
Bending Stress:             67523.6      @Node   2180
Torsion Stress:             11457.8      @Node   2200
Hoop Stress:                52185.5      @Node   1929
Max Stress Intensity:       85716.1      @Node   2180

 CODE STRESS CHECK PASSED      : LOADCASE 29 (OCC) L29=L22+L10

Highest Stresses: (   KPa    ) LOADCASE 29 (OCC) L29=L22+L10
Ratio (%):                   48.6       @Node   2180
Code Stress:                89076.8     Allowable Stress:     183299.9
Axial Stress:               25677.8      @Node   4649
Bending Stress:             70643.2      @Node   2180
Torsion Stress:             13845.6      @Node   2760
Hoop Stress:                52185.5      @Node   1929
Max Stress Intensity:       89076.2      @Node   2180

 CODE STRESS CHECK PASSED      : LOADCASE 30 (OCC) L30=L23+L10

Highest Stresses: (   KPa    ) LOADCASE 30 (OCC) L30=L23+L10
Ratio (%):                   53.6       @Node   2180
Code Stress:                98217.2     Allowable Stress:     183299.9
Axial Stress:               25687.2      @Node   1920
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Bending Stress:             79982.8       @Node   2180
Torsion Stress:             13353.7       @Node   2200
Hoop Stress:                52185.5       @Node   1929
Max Stress Intensity:       98216.6       @Node   2180

 CODE STRESS CHECK PASSED      : LOADCASE 31 (OCC) L31=L24+L10

Highest Stresses: (   KPa    ) LOADCASE 31 (OCC) L31=L24+L10
Ratio (%):                    50.4       @Node   2700
Code Stress:                92352.5       Allowable Stress:     183299.9
Axial Stress:               25638.7       @Node   4649
Bending Stress:             75814.9       @Node   2700
Torsion Stress:             18750.0       @Node   2400
Hoop Stress:                52185.5       @Node   1929
Max Stress Intensity:       92715.8       @Node   2280

 CODE STRESS CHECK PASSED      : LOADCASE 32 (OCC) L32=L25+L10

Highest Stresses: (   KPa    ) LOADCASE 32 (OCC) L32=L25+L10
Ratio (%):                    42.9       @Node   2180
Code Stress:                78689.4       Allowable Stress:     183299.9
Axial Stress:               25638.7       @Node   4649
Bending Stress:             60537.0       @Node   2180
Torsion Stress:             12899.8       @Node   2200
Hoop Stress:                52185.5       @Node   1929
Max Stress Intensity:       78688.8       @Node   2180

 CODE STRESS CHECK PASSED      : LOADCASE 33 (EXP) L33=L4-L10

Highest Stresses: (   KPa    ) LOADCASE 33 (EXP) L33=L4-L10
Ratio (%):                    40.9       @Node    280
Code Stress:               122285.4       Allowable Stress:     299061.7
Axial Stress:                5561.1       @Node   3140
Bending Stress:            112884.6       @Node   5058
Torsion Stress:             40821.9       @Node    280
Hoop Stress:                    0.0       @Node     58
Max Stress Intensity:      301713.0       @Node   5058

 CODE STRESS CHECK PASSED      : LOADCASE 34 (EXP) L34=L6-L10

Highest Stresses: (   KPa    ) LOADCASE 34 (EXP) L34=L6-L10
Ratio (%):                    36.1       @Node   5059
Code Stress:               113582.9       Allowable Stress:     314480.8
Axial Stress:                5164.7       @Node   3140
Bending Stress:            113891.7       @Node   5058
Torsion Stress:             29392.2       @Node    280
Hoop Stress:                    0.0       @Node     58
Max Stress Intensity:      304402.3       @Node   5058

 CODE STRESS CHECK PASSED      : LOADCASE 35 (EXP) L35=L4-L6

Highest Stresses: (   KPa    ) LOADCASE 35 (EXP) L35=L4-L6
Ratio (%):                    12.9       @Node   4098
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Code Stress:	33047.1	Allowable Stress:	257020.1
Axial Stress:	525.5	@Node	1539
Bending Stress:	32713.8	@Node	4098
Torsion Stress:	11429.7	@Node	280
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	59870.6	@Node	280

CODE STRESS CHECK PASSED : LOADCASE 36 (EXP) L36=L8-L10

Highest Stresses: (KPa) LOADCASE 36 (EXP) L36=L8-L10			
Ratio (%):	31.8	@Node	280
Code Stress:	95160.6	Allowable Stress:	299061.7
Axial Stress:	2626.2	@Node	2700
Bending Stress:	80889.2	@Node	280
Torsion Stress:	30029.9	@Node	280
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	191106.5	@Node	280

CODE STRESS CHECK PASSED : LOADCASE 37 (EXP) L37=L4-L8

Highest Stresses: (KPa) LOADCASE 37 (EXP) L37=L4-L8			
Ratio (%):	40.8	@Node	2030
Code Stress:	128759.2	Allowable Stress:	315492.0
Axial Stress:	4661.5	@Node	3140
Bending Stress:	127598.6	@Node	2030
Torsion Stress:	16258.7	@Node	2400
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	339627.5	@Node	5058

CODE STRESS CHECK PASSED : LOADCASE 38 (EXP) L38=L6-L8

Highest Stresses: (KPa) LOADCASE 38 (EXP) L38=L6-L8			
Ratio (%):	41.2	@Node	2030
Code Stress:	130125.8	Allowable Stress:	315492.0
Axial Stress:	4265.1	@Node	3140
Bending Stress:	129031.6	@Node	2030
Torsion Stress:	17972.2	@Node	2400
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	342316.9	@Node	5058

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
HANGER REPORT ((TABLE DATA FROM DESIGN RUNS)) 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 13:37
Job:: BNK-GCS-CN-036-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

HANGER REPORT
(TABLE DATA FROM DESIGN RUNS)

NODE	NUM RQD	FIG. NO.	SIZE	VERTICAL MOVEMENT (mm.)	HOT LOAD (N.)	THEORETICAL INSTALLED LOAD (N.)	ACTUAL INSTALLED LOAD (N.)	SPRING RATE (N./cm.)	HORIZONTAL MOVEMENT (mm.)
160	1		2931	-0.113	2661.	2654.	0.	667.	0.000
	LISEGA					LOAD	VARIATION =	0%	

** VARIABLE SUPPORT SPRING DESIGNED ..... SHORT RANGE
MINIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 1668.083
MAXIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 5004.250
RECOMMENDED INSTALLATION CLEARANCE ..... (mm.) 203.200

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 13:37
Job:: BNK-GCS-CN-036-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 13:37
Job:: BNK-GCS-CN-036-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 4 (OPE) W+D1+T1+P1+H
CASE 6 (OPE) W+D1+T2+P1+H
CASE 8 (OPE) W+D1+T3+P1+H
CASE 10 (SUS) W+P1+H
CASE 11 (SUS) WNC+H

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
780		Absolute Method								
	Limits	11201	11201	8400		6720	4480	5820		
	4(OPE)	2466	-546	207	0.220	-114	-2058	17	0.459	
	6(OPE)	2244	-368	22	0.200	-382	-1800	-62	0.402	
	8(OPE)	2244	-369	22	0.200	-382	-1800	-62	0.402	
	10(SUS)	1859	-33	27	0.166	-37	-1171	-20	0.261	
	11(SUS)	1853	-33	27	0.165	-37	-1165	-20	0.260	
1230		Absolute Method								
	Limits	8500	8500	6500		6000	2000	5000		
	4(OPE)	2545	10	2581	0.397	0	0	10	0.002	
	6(OPE)	1753	-156	1838	0.283	0	0	10	0.002	
	8(OPE)	1794	-146	1886	0.290	0	0	10	0.002	
	10(SUS)	-44	-558	-89	0.066	0	0	10	0.002	
	11(SUS)	-44	-554	-90	0.065	0	0	10	0.002	
4500		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	-92	-298	437	0.109	378	1526	514	0.936	
	6(OPE)	246	-243	301	0.075	244	977	377	0.599	
	8(OPE)	247	-243	295	0.074	230	971	377	0.596	

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 13:37
Job:: BNK-GCS-CN-036-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
	10(SUS)	1094	12	-171	0.217	-32	-322	75	0.197	
	11(SUS)	1088	12	-169	0.216	-32	-319	74	0.196	
4520		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	-679	-474	-254	0.135	104	-613	99	0.376	
	6(OPE)	19	-284	-75	0.056	123	-216	25	0.133	
	8(OPE)	19	-284	-75	0.056	123	-216	25	0.133	
	10(SUS)	604	20	-19	0.120	-17	38	26	0.024	
	11(SUS)	601	19	-19	0.119	-17	37	25	0.023	
1700		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	183	-276	-574	0.143	537	934	-352	0.573	
	6(OPE)	438	-279	-460	0.115	296	548	-273	0.336	
	8(OPE)	436	-279	-451	0.113	281	549	-274	0.337	
	10(SUS)	1094	-12	-171	0.217	32	-322	-75	0.197	
	11(SUS)	1088	-12	-169	0.216	32	-319	-74	0.196	
1780		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	-388	366	889	0.222	-498	-1296	-130	0.795	
	6(OPE)	61	303	151	0.060	-224	-358	-17	0.220	
	8(OPE)	61	303	151	0.060	-224	-358	-17	0.220	
	10(SUS)	615	-10	50	0.122	-17	-4	-19	0.009	
	11(SUS)	612	-10	49	0.122	-17	-4	-19	0.009	

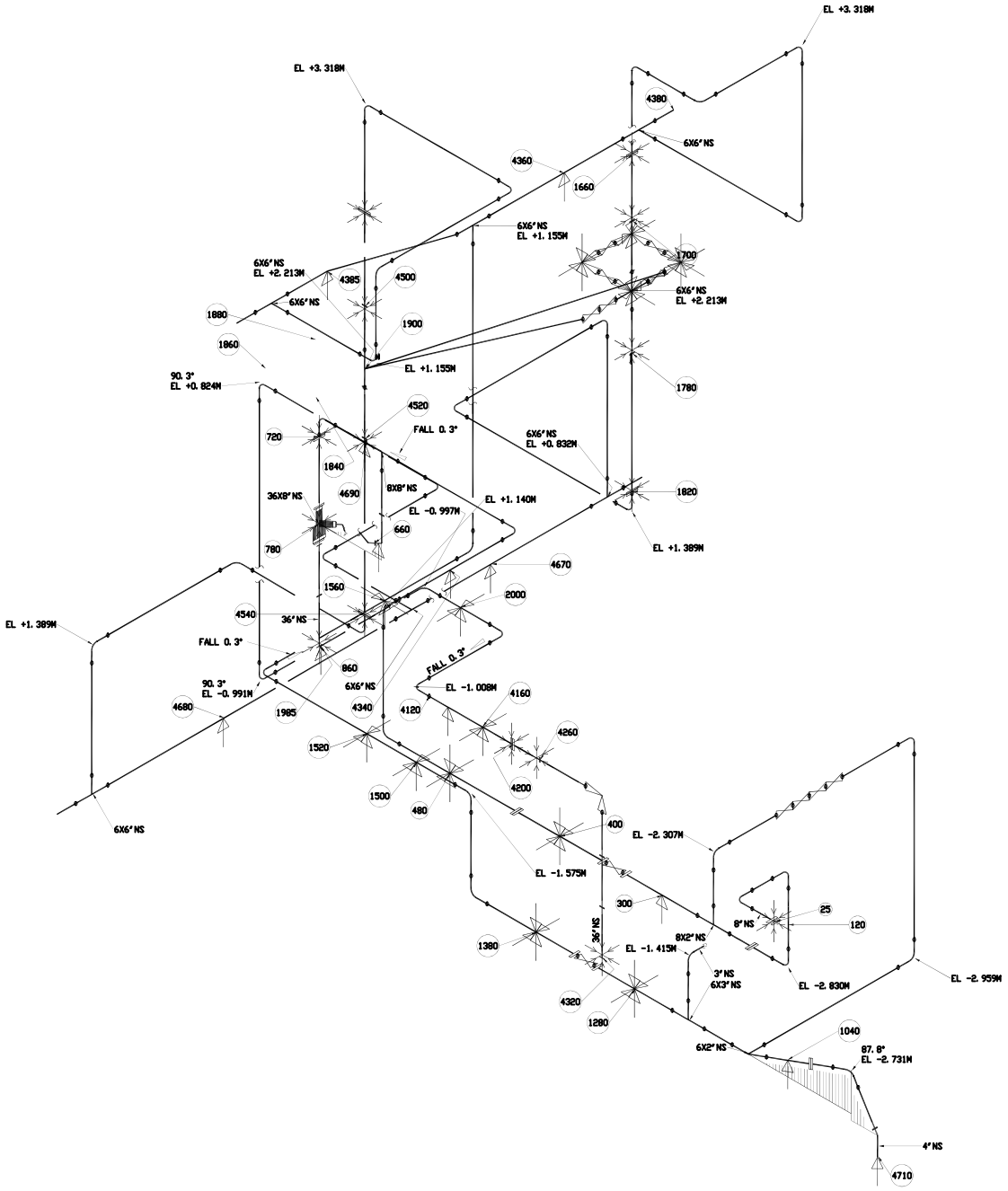
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 13:37
Job:: BNK-GCS-CN-036-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
4260		Absolute Method								
	Limits	8400	8400	6300		3780	2520	3280		
	4(OPE)	1416	-1190	-70	0.169	-281	-100	1909	0.582	
	6(OPE)	978	-714	-76	0.116	-180	-107	624	0.190	
	8(OPE)	978	-714	-76	0.116	-180	-107	624	0.190	
	10(SUS)	8	-531	0	0.063	-180	0	132	0.048	
	11(SUS)	8	-526	0	0.063	-175	0	131	0.046	
25		Absolute Method								
	Limits	8500	8500	6500		6000	2000	5000		
	4(OPE)	452	-1253	195	0.147	-0	-0	-18	0.004	
	6(OPE)	934	-2176	848	0.256	-0	-0	-18	0.004	
	8(OPE)	934	-2176	849	0.256	-0	-0	-18	0.004	
	10(SUS)	50	-863	-40	0.101	0	0	-18	0.004	
	11(SUS)	50	-859	-40	0.101	0	0	-18	0.004	

BNK-GCS-CN-037

1. GAS-111-0031C-CN05-8"-ET
2. GAS-111-0034C-CN05-2"-PT
3. GAS-111-0035C-CN05-2"-PT
4. GAS-111-0036C-CN05-6"-IS
5. GAS-111-0037C-CS00-6"-IS
6. GAS-111-0032C-CN05-3"-PT
7. GAS-111-0033C-CN05-2"-PT
8. FL-112-0014C-AN07-6"-PT
9. FL-112-0016C-AN07-6"-PT
10. FL-112-0015C-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 5

REV.	CHANGE	DATE
		15 MAY 2024

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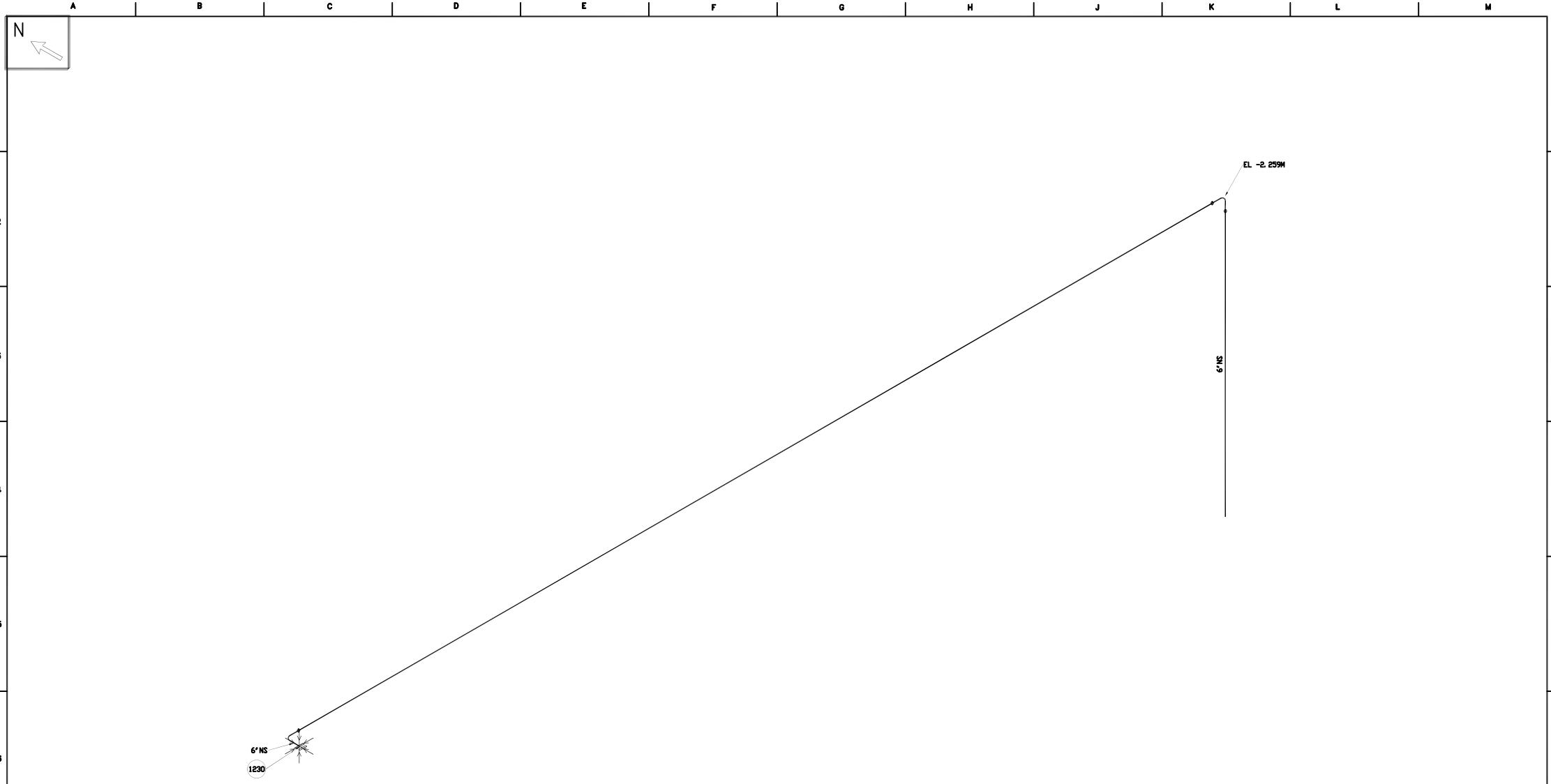

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

2 OF 5

REV.	CHANGE	DATE
		15 MAY 2024

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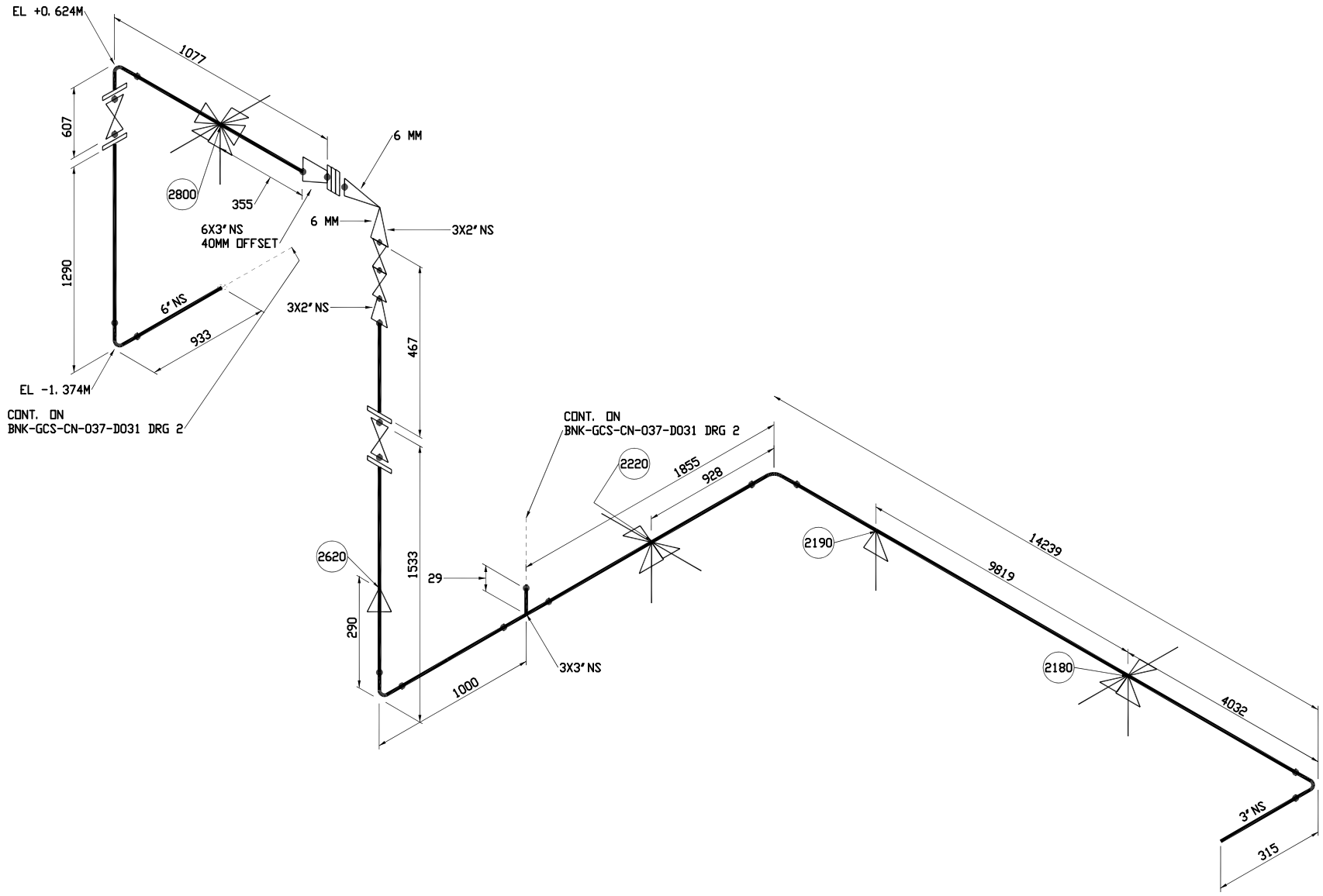

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 3 OF 5

REV.	CHANGE	DATE
		15 MAY 2024

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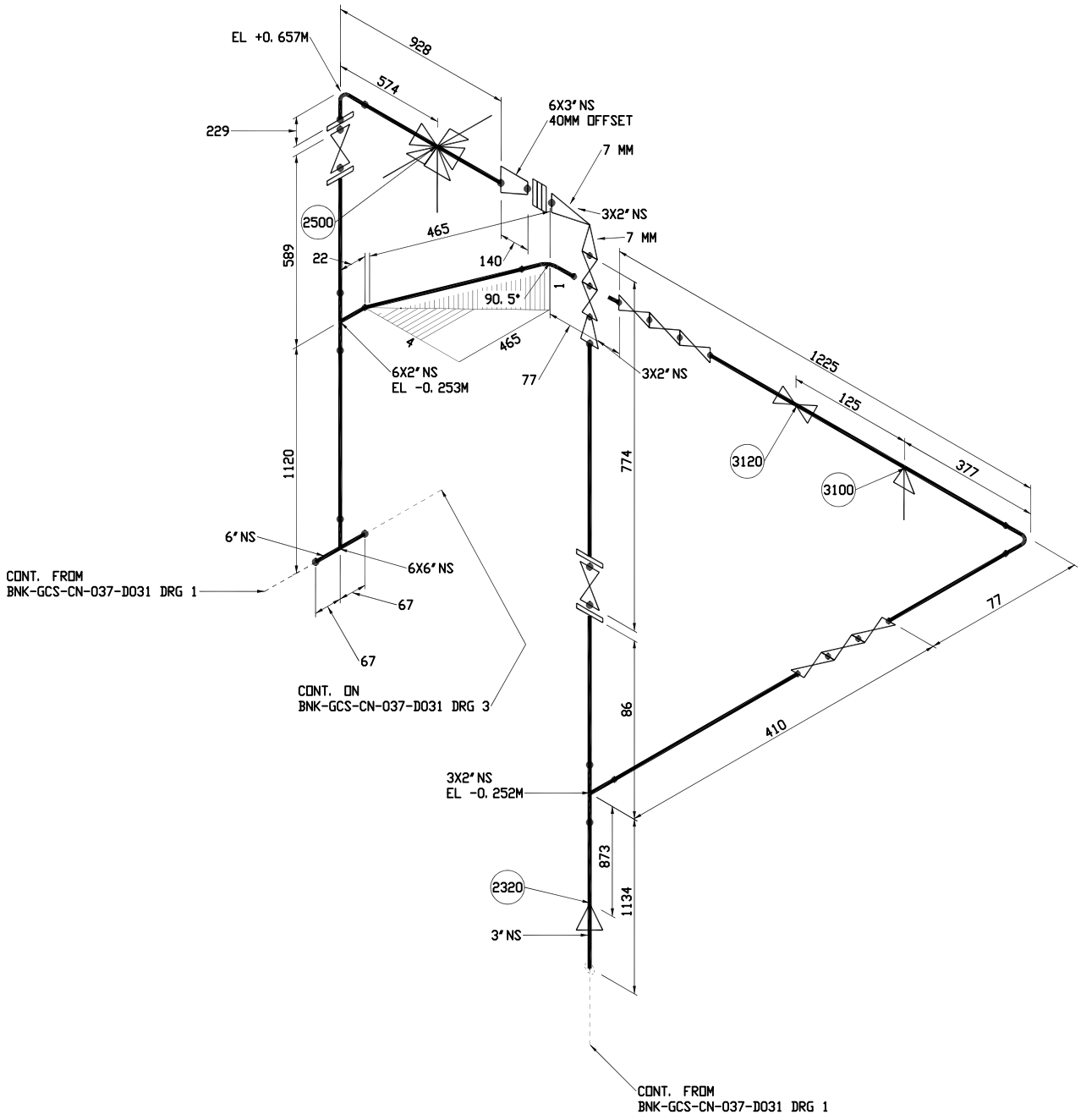

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

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REV.	CHANGE	DATE
		15 MAY 2024

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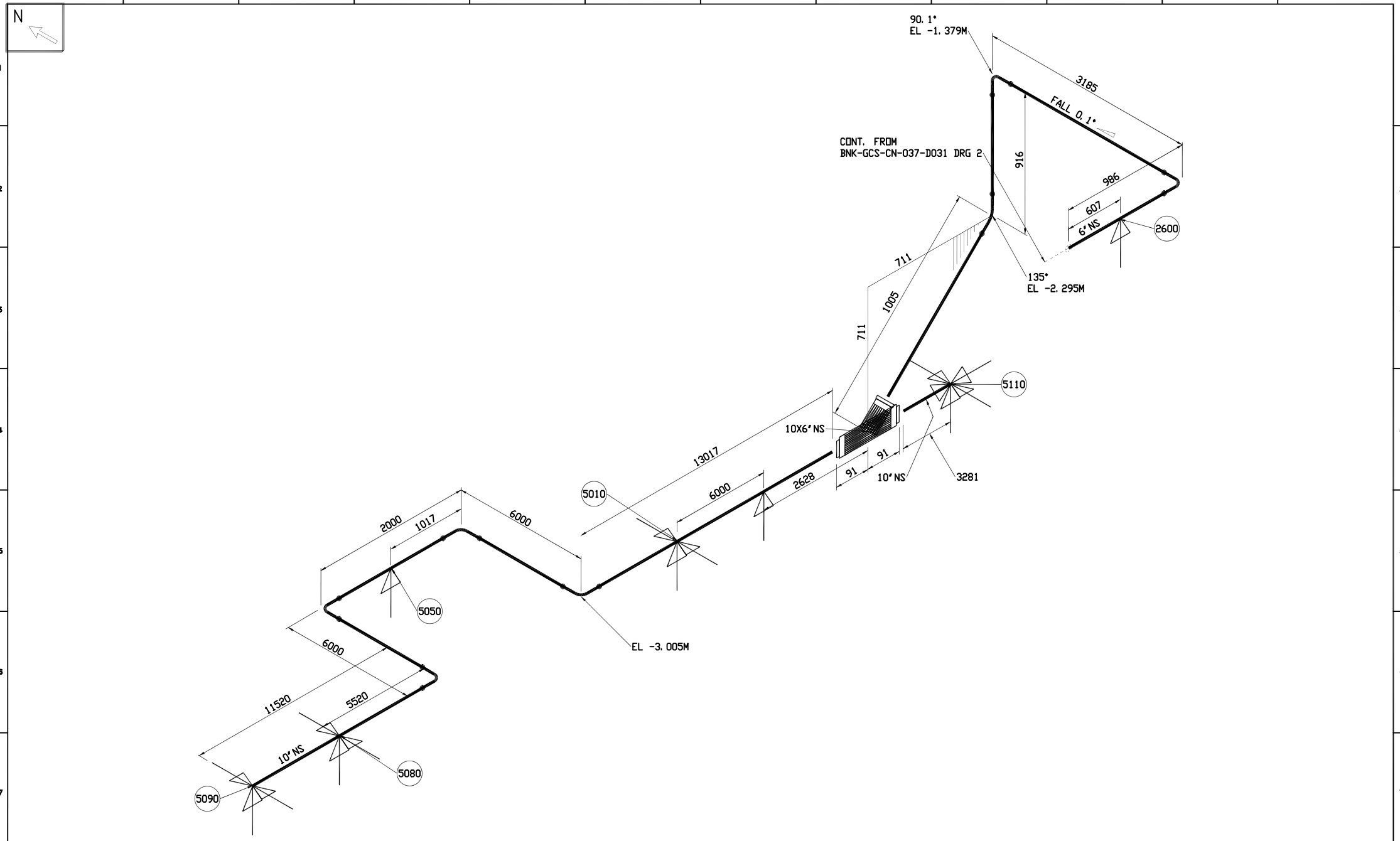

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

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REV.	CHANGE	DATE
		15 MAY 2024

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Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
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CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
                                                        File created by FEATools
CAESAR II 2018  Ver.10.00.00.7700,  (Build 170726)  MAY 19,2024  15:11:24

PIPE DATA
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
From  40  To  60  DX= -805.000 mm.
PIPE
   Dia= 219.075 mm.   Wall= 8.179 mm.   Cor= 3.0000 mm.
GENERAL
   T1= 85 C   T2= 37 C   T3= 37 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
   Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 199,086,608 KPa
   EH2= 202,097,632 KPa   EH3= 202,097,632 KPa   EH4= 203,401,232 KPa
   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000058 kg./cu.cm.
   Insul Thk= 40.000 mm.   Insul Den= .0001500 kg./cu.cm.
BEND at "TO" end
   Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 59
   Angle/Node @2= .00 58
UNIFORM LOAD
  Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
  Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
  Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
ALLOWABLE STRESSES
   B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
   Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
   Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
   Sh9= 137,895 KPa   Sy= 241,316 KPa
-------------------------------------------------------------------------------
From  60  To  80 DY= .000 mm.  DZ= -1,690.000 mm.
BEND at "TO" end
   Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 79
-------------------------------------------------------------------------------
From  80  To  100  DX= .000 mm.  DY= -1,410.000 mm.
-------------------------------------------------------------------------------
From  100  To  120 DY= -1,114.000 mm.
-------------------------------------------------------------------------------
From  180  To  140  DX= 71.842 mm.  DY= -71.842 mm.
RIGID  Weight= .00 N.
-------------------------------------------------------------------------------
From  140  To  160 DY= -200.000 mm.
PIPE
   Dia= 168.275 mm.   Wall= 7.112 mm.
GENERAL
   T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
   Fluid Den= .0000000 kg./cu.cm.   Insul Thk= 40.000 mm.
RESTRAINTS
   Node  160  -X   Mu = .30
   Node  160  Z   Cnode  121
```

INPUT LISTING
```
    Node  121  +Y   Mu = .10
    Node  160  X   Cnode  121
 HANGERS
    Hanger Node = 160   Hanger Connecting Node = 121
    Available Space = -1,000.0000 mm.   Allowed Load Variation = 25.0000
    No. Hangers = 0.0   Short Range Flag = -1   User Operating Load = .00 N.
    Free Node = 0   Free Node = 0   Free Code = 0.0   Spring Rate = .00 N./cm.
    Theoretical Cold Load = .00 N.
 SIF's & TEE's
    Node  140   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  120  To  180 DY= -306.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 6.350 mm.
 GENERAL
    T1= 85 C   T2= 36 C   T3= 36 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Fluid Den= .0000058 kg./cu.cm.   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 179
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  180  To  200  DX= -306.000 mm.
 ------------------------------------------------------------------------------
 From  200  To  220  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  220  To  240  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  240  To  260  DX= -398.000 mm.
 ------------------------------------------------------------------------------
 From  260  To  280  DX= -300.000 mm.
 SIF's & TEE's
    Node  280   Weldolet
 ------------------------------------------------------------------------------
 From  280  To  300  DX= -500.000 mm.
 RESTRAINTS
    Node  300  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  300  To  320  DX= -176.000 mm.
 ------------------------------------------------------------------------------
 From  320  To  340  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
```

INPUT LISTING
```
 From  340  To  360  DX= -587.000 mm.
    Element Name= GATE_NOFLG_300
 RIGID  Weight= 1,023.41 N.
 ------------------------------------------------------------------------------
 From  360  To  380  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  380  To  400  DX= -1,000.000 mm.
 RESTRAINTS
    Node  400  Y   Mu = .30
    Node  400  Z
 ------------------------------------------------------------------------------
 From  400  To  420  DX= -1,287.800 mm.
 ------------------------------------------------------------------------------
 From  420  To  440  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  440  To  460  DX= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ------------------------------------------------------------------------------
 From  460  To  480  DX= -1,500.000 mm.
 RESTRAINTS
    Node  480  Y   Mu = .30
    Node  480  Z
 ------------------------------------------------------------------------------
 From  480  To  500  DX= -3,460.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 499
    Angle/Node @2= .00 498
 ------------------------------------------------------------------------------
 From  500  To  520 DY= 305.000 mm.
 ------------------------------------------------------------------------------
 From  520  To  540 DY= -305.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  540  To  560 DY= -300.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Fluid Den= .0000000 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  560  +Y   Mu = .30
    Node  560  Z
 SIF's & TEE's
    Node  540   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  520  To  4330 DY= 3,665.000 mm.
```

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INPUT LISTING
```
 PIPE
    Dia= 219.075 mm.   Wall= 6.350 mm.
 GENERAL
    T1= 85 C   T2= 36 C   T3= 36 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Fluid Den= .0000058 kg./cu.cm.   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4329
    Angle/Node @2= .00 4328
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  4330  To  4340 DZ= -3,375.000 mm.
 RESTRAINTS
    Node  4340  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  4340  To  580 DZ= -3,375.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 579
    Angle/Node @2= .00 578
 ------------------------------------------------------------------------------
 From  580  To  600  DX= -730.000 mm.  DZ= .000 mm.
 ------------------------------------------------------------------------------
 From  600  To  620  DX= -462.000 mm.  DZ= .000 mm.
 ------------------------------------------------------------------------------
 From  620  To  640 DY= -84.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  640  To  660 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Fluid Den= .0000000 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  660  +Y   Cnode  800   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  620  To  680  DX= -462.000 mm.  DZ= .000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 6.350 mm.
 GENERAL
    T1= 85 C   T2= 36 C   T3= 36 C   P1= 900.0205 KPa   PHyd= 1,350.0308 KPa
    Fluid Den= .0000058 kg./cu.cm.   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 679
    Angle/Node @2= .00 678
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
```

INPUT LISTING
```
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  680  To  700 DY= -305.000 mm.
 ---------------------------------------------------------------------------
 From  700  To  720 DY= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 RESTRAINTS
    Node  720  ANC   Cnode  740
 ---------------------------------------------------------------------------
 From  740  To  760 DY= -114.300 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 302.48 N.
 ---------------------------------------------------------------------------
 From  760  To  780 DY= -181.400 mm.
 RESTRAINTS
    Node  780  ANC   Cnode  820
 EQUIPMENT LIMITS
    Nozzle Node = 780
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 11,200.56 N.   FB= 11,200.56 N.
    FC= 8,400.42 N.   MA= 6,720.29 N.m.   MB= 4,480.19 N.m.   MC= 5,820.25 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  780  To  800  DX= 462.000 mm.  DY= 331.000 mm.  DZ= .000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  820  To  840 DY= -3,065.000 mm.
 PIPE
    Dia= 914.400 mm.   Wall= 15.000 mm.
 GENERAL
    Mat= (383)A516 70   E= 203,401,232 KPa   EH1= 199,086,608 KPa
    EH2= 202,155,536 KPa   EH3= 202,155,536 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Insul Thk= 40.000 mm.
 RIGID  Weight= .00 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 160,648 KPa
    Sh1= 160,062 KPa   Sh2= 160,648 KPa   Sh3= 160,648 KPa   Sh4= 160,648 KPa
    Sh5= 160,648 KPa   Sh6= 160,648 KPa   Sh7= 160,648 KPa   Sh8= 160,648 KPa
    Sh9= 160,648 KPa   Sy= 262,001 KPa
 ---------------------------------------------------------------------------
 From  840  To  860 DY= -1,200.000 mm.
 PIPE
    Dia= 914.400 mm.   Wall= 12.000 mm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  860  ANC
 ---------------------------------------------------------------------------
 From  280  To  880 DY= 523.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
 GENERAL
```

INPUT LISTING
```
    P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 199,086,608 KPa   EH2= 202,155,536 KPa
    EH3= 202,155,536 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 879
    Angle/Node @2= .00 878
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  880  To  900 DZ= -510.000 mm.
 ------------------------------------------------------------------------------
 From  900  To  910 DZ= -73.025 mm.
    Element Name= BALL_FLG_600
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 1,900.0433 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000430 kg./cu.cm.
 RIGID  Weight= 44.48 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  910  To  920 DZ= -301.000 mm.
 RIGID  Weight= 66.72 N.
 ------------------------------------------------------------------------------
 From  920  To  930 DZ= -275.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Element Name= CHECK_FLG_150
 GENERAL
    P1= 2,200.0500 KPa   Fluid Den= .0000154 kg./cu.cm.   Insul Thk= 40.000 mm.
 RIGID  Weight= 355.86 N.
 ------------------------------------------------------------------------------
 From  930  To  940 DZ= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  940  To  960 DZ= -77.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 959
    Angle/Node @2= .00 958
 ------------------------------------------------------------------------------
 From  960  To  980 DY= -652.400 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 979
    Angle/Node @2= .00 978
 ------------------------------------------------------------------------------
 From  980  To  1000 DZ= 77.000 mm.
 ------------------------------------------------------------------------------
 From  1000  To  1020 DZ= 621.000 mm.
    Element Name= CHECK_FLG_600
```

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INPUT LISTING

```
 SIF's & TEE's
    Node  1020   Weldolet
 ---------------------------------------------------------------------------
 From  1020  To  1040  DX= 300.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    Fluid Den= .0000154 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  1040  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1040  To  1060  DX= 318.000 mm.
 ---------------------------------------------------------------------------
 From  1060  To  1080  DX= 101.600 mm.
    Element Name= FLG.PR_FLG_150
 RIGID  Weight= 191.27 N.
 ---------------------------------------------------------------------------
 From  1080  To  1100  DX= 101.600 mm.
    Element Name= FLG.PR_FLG_150
 RIGID  Weight= 191.27 N.
 ---------------------------------------------------------------------------
 From  1100  To  1120  DX= 990.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1119
    Angle/Node @2= .00 1118
 ---------------------------------------------------------------------------
 From  1120  To  1140 DY= 700.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1139
    Angle/Node @2= .00 1138
 ---------------------------------------------------------------------------
 From  1140  To  1160  DX= .000 mm.  DZ= 763.333 mm.
 ---------------------------------------------------------------------------
 From  1120  To  4700  DX= 53.882 mm.  DY= -53.882 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1160  To  1180  DX= .000 mm.  DZ= 763.333 mm.
 ---------------------------------------------------------------------------
 From  1180  To  1200 DZ= 763.333 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1199
    Angle/Node @2= .00 1198
 ---------------------------------------------------------------------------
 From  1200  To  1220  DX= 229.000 mm.
 ---------------------------------------------------------------------------
 From  1220  To  1230  DX= 101.600 mm.
    Element Name= FLANGE_FLG_600
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1230  ANC   Cnode  1231
 ALLOWABLE STRESSES
```

INPUT LISTING
```
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 EQUIPMENT LIMITS
    Nozzle Node = 1230
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,500.42 N.   FB= 8,500.42 N.
    FC= 6,500.32 N.   MA= 6,000.25 N.m.   MB= 2,000.08 N.m.   MC= 5,000.21 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ------------------------------------------------------------------------------
 From  1231  To  1240  DX= 101.600 mm.
 RIGID  Weight= 191.27 N.
 DISPLACEMENTS
    Node  1231   DX1= 4.000 mm.   DY1= 2.100 mm.   DZ1= .900 mm.
 ------------------------------------------------------------------------------
 From  1020  To  1260  DX= -1,207.940 mm.
 SIF's & TEE's
    Node  1260   Welding Tee
 ------------------------------------------------------------------------------
 From  1260  To  1280  DX= -1,274.610 mm.
 RESTRAINTS
    Node  1280  Y   Mu = .30
    Node  1280  Z
 ------------------------------------------------------------------------------
 From  1280  To  1300  DX= -369.000 mm.
 ------------------------------------------------------------------------------
 From  1300  To  1320  DX= -101.600 mm.
    Element Name= FLANGE_FLG_600
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  1320  To  1340  DX= -453.000 mm.
    Element Name= CHECK_NOFLG_600
 RIGID  Weight= 1,850.46 N.
 ------------------------------------------------------------------------------
 From  1340  To  1360  DX= -101.600 mm.
    Element Name= FLANGE_NOFLG_600
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  1360  To  1380  DX= -1,973.000 mm.
 RESTRAINTS
    Node  1380  Y   Mu = .30
    Node  1380  Z
 ------------------------------------------------------------------------------
 From  1380  To  1400  DX= -3,826.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1399
    Angle/Node @2= .00 1398
 ------------------------------------------------------------------------------
 From  1400  To  1420 DY= 229.000 mm.
 ------------------------------------------------------------------------------
 From  1420  To  1440 DY= -229.000 mm.
 RIGID  Weight= .00 N.
 ------------------------------------------------------------------------------
 From  1440  To  1460 DY= -300.000 mm.
 PIPE
```

INPUT LISTING

```
    Dia= 114.300 mm.   Wall= 6.020 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Fluid Den= .0000000 kg./cu.cm.   Insul Thk= 40.000 mm.
 RESTRAINTS
    Node  1460  +Y   Mu = .30
    Node  1460  Z
 SIF's & TEE's
    Node  1440   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1420  To  1480 DY= 1,155.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 1,900.0433 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000154 kg./cu.cm.
    Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1479
    Angle/Node @2= .00 1478
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1480  To  1500  DX= -5,760.000 mm.
 RESTRAINTS
    Node  1500  +Y
    Node  1500  Z
 ------------------------------------------------------------------------------
 From  1500  To  1520  DX= -6,000.000 mm.
 RESTRAINTS
    Node  1520  +Y   Mu = .30
    Node  1520  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  1520  To  1540  DX= -2,481.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1539
    Angle/Node @2= .00 1538
 ------------------------------------------------------------------------------
 From  1540  To  1560 DZ= -1,432.000 mm.
 RESTRAINTS
    Node  1560  +Y   Mu = .30
    Node  1560  X   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1560  To  1580 DZ= -629.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1579
    Angle/Node @2= .00 1578
 ------------------------------------------------------------------------------
```

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```
 From  1580  To  4350 DY= 2,730.000 mm.
 SIF's & TEE's
    Node  4350   Welding Tee
 ------------------------------------------------------------------------------
 From  4350  To  4360 DZ= -482.500 mm.
 RESTRAINTS
    Node  4360  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  4360  To  4370 DZ= -432.500 mm.
 SIF's & TEE's
    Node  4370   Welding Tee
 ------------------------------------------------------------------------------
 From  4370  To  4380 DZ= -245.000 mm.
 ------------------------------------------------------------------------------
 From  4350  To  4385 DZ= 482.500 mm.
 RESTRAINTS
    Node  4385  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  4385  To  4420 DZ= 432.500 mm.
 ------------------------------------------------------------------------------
 From  4420  To  4430 DZ= 245.000 mm.
 ------------------------------------------------------------------------------
 From  4420  To  4440  DX= 472.000 mm.  DY= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4439
    Angle/Node @2= .00 4438
 ------------------------------------------------------------------------------
 From  4440  To  4450 DY= 2,163.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4449
    Angle/Node @2= .00 4448
 ------------------------------------------------------------------------------
 From  4450  To  4820 DZ= -325.000 mm.
 ------------------------------------------------------------------------------
 From  4820  To  4455 DZ= -325.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4454
    Angle/Node @2= .00 4453
 ------------------------------------------------------------------------------
 From  4455  To  4810  DX= -1,067.000 mm.
 ------------------------------------------------------------------------------
 From  4810  To  4460  DX= -1,173.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4459
    Angle/Node @2= .00 4458
 ------------------------------------------------------------------------------
 From  4460  To  4470 DY= -510.000 mm.
 ------------------------------------------------------------------------------
 From  4470  To  4480 DY= -126.000 mm.
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  4480  ANC   Cnode  4481
 ------------------------------------------------------------------------------
 From  4481  To  4490 DY= -101.600 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 21.946 mm.
```

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```
 GENERAL
    T1= 155 C   T2= 129 C   T3= 129 C   P1= 2,200.0500 KPa
    PHyd= 2,860.0652 KPa   Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 -------------------------------------------------------------------------------
 From  4490  To  4500 DY= -127.000 mm.
 RESTRAINTS
    Node  4500  ANC   Cnode  4501
 EQUIPMENT LIMITS
    Nozzle Node = 4500
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 -------------------------------------------------------------------------------
 From  4501  To  4400 DY= -240.000 mm.
 RIGID  Weight= .00 N.
 -------------------------------------------------------------------------------
 From  4400  To  4510 DY= -240.000 mm.
 GENERAL
    T1= 155 C   T2= 60 C   T3= 60 C
 RIGID  Weight= .00 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 -------------------------------------------------------------------------------
 From  4520  To  4530 DY= -127.000 mm.
 RESTRAINTS
    Node  4520  ANC   Cnode  4510
 EQUIPMENT LIMITS
    Nozzle Node = 4520
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 -------------------------------------------------------------------------------
 From  4530  To  4540 DY= -101.600 mm.
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  4540  ANC   Cnode  4541
 -------------------------------------------------------------------------------
 From  4370  To  1600  DX= 472.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 7.112 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 1,900.0433 KPa
    PHyd= 3,300.0752 KPa   Insul Thk= 40.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1599
```

INPUT LISTING
```
    Angle/Node @2= .00 1598
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1600  To  4390 DY= 2,163.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4389
    Angle/Node @2= .00 4388
 ---------------------------------------------------------------------------
 From  4390  To  4830 DZ= 325.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  4830  To  1610 DZ= 325.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1609
    Angle/Node @2= .00 1608
 ---------------------------------------------------------------------------
 From  1610  To  4800  DX= -1,067.000 mm.
 ---------------------------------------------------------------------------
 From  4800  To  1620  DX= -1,173.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1619
    Angle/Node @2= .00 1618
 ---------------------------------------------------------------------------
 From  1620  To  1640 DY= -510.000 mm.
 ---------------------------------------------------------------------------
 From  1640  To  1660 DY= -126.000 mm.
    Element Name= FLANGE_NOFLG_600
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1660  ANC   Cnode  1661
 ---------------------------------------------------------------------------
 From  1661  To  1680 DY= -101.600 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 21.946 mm.   Element Name= FLANGE_NOFLG_600
 GENERAL
    T1= 155 C   T2= 129 C   T3= 129 C   P1= 2,200.0500 KPa
    PHyd= 2,860.0652 KPa   Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1680  To  1700 DY= -127.000 mm.
 RESTRAINTS
    Node  1700  ANC   Cnode  1720
 EQUIPMENT LIMITS
```

INPUT LISTING

```
    Nozzle Node = 1700
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1720  To  4410 DY= -240.000 mm.
 GENERAL
    P1= 2,200.0500 KPa
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  4410  To  1760 DY= -240.000 mm.
 GENERAL
    T1= 155 C   T2= 60 C   T3= 60 C
 RIGID  Weight= .00 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1780  To  1800 DY= -127.000 mm.
 RESTRAINTS
    Node  1780  ANC   Cnode  1760
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 EQUIPMENT LIMITS
    Nozzle Node = 1780
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1800  To  1820 DY= -101.600 mm.
    Element Name= FLANGE_NOFLG_150
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  1820  ANC   Cnode  1821
 ---------------------------------------------------------------------------
 From  1740  To  4400 DZ= 265.000 mm.
 GENERAL
    T1= 155 C   T2= 94 C   T3= 94 C
 RIGID  Weight= 658.96 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  4400  To  1840 DZ= 435.000 mm.
 RIGID  Weight= 1,591.15 N.
 RESTRAINTS
    Node  1840  Y   Mu = .10
```

INPUT LISTING

```
    Node  1840  X   Mu = .30
    Node  1840  Z   Gap= 6.000 mm.
 ---------------------------------------------------------------------------
 From  1840  To  1860  DX= -5,100.000 mm.
 RIGID  Weight=10,500.52 N.
 RESTRAINTS
    Node  1860  Y   Mu = .10
    Node  1860  Z   Gap= 6.000 mm.
 ---------------------------------------------------------------------------
 From  1860  To  1880 DZ= -1,400.000 mm.
 RIGID  Weight= 4,500.22 N.
 RESTRAINTS
    Node  1880  Y   Mu = .10
    Node  1880  Z   Gap= 6.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1880  To  1900  DX= 5,100.000 mm.
 RIGID  Weight=10,500.52 N.
 RESTRAINTS
    Node  1900  Y   Mu = .10
    Node  1900  X
    Node  1900  Z   Gap= 6.000 mm.   Mu = .30
 ---------------------------------------------------------------------------
 From  1900  To  4410 DZ= 435.000 mm.
 RIGID  Weight= 1,591.15 N.
 ---------------------------------------------------------------------------
 From  4410  To  1740 DZ= 265.000 mm.
 RIGID  Weight= 658.96 N.
 ---------------------------------------------------------------------------
 From  1821  To  1920 DY= -126.420 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 3.404 mm.   Cor= .0000 mm.
    Element Name= FLANGE_NOFLG_150
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 188,652,912 KPa
    EH2= 192,364,096 KPa   EH3= 192,364,096 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000183 kg./cu.cm.
    Insul Thk= 40.000 mm.
 RIGID  Weight= 191.27 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ---------------------------------------------------------------------------
 From  1920  To  1930 DY= -229.000 mm.
 GENERAL
    P1= 2,200.0500 KPa   Fluid Den= .0000183 kg./cu.cm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1929
 ---------------------------------------------------------------------------
 From  1930  To  1940  DX= -611.000 mm.  DY= .000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1939
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  1940  To  1945 DY= .000 mm.  DZ= -650.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1944
    Angle/Node @2= .00 1943
 ---------------------------------------------------------------------------
 From  1945  To  1950 DY= -557.000 mm.  DZ= .000 mm.
 SIF's & TEE's
    Node  1950   Welding Tee
 ---------------------------------------------------------------------------
 From  1950  To  4550 DZ= -245.000 mm.
 ---------------------------------------------------------------------------
 From  1950  To  4670 DZ= 457.500 mm.
 RESTRAINTS
    Node  4670  +Y
 ---------------------------------------------------------------------------
 From  4670  To  4560 DZ= 457.500 mm.
 SIF's & TEE's
    Node  4560   Welding Tee
 ---------------------------------------------------------------------------
 From  4560  To  4630  DX= -372.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4629
    Angle/Node @2= .00 4628
 ---------------------------------------------------------------------------
 From  4630  To  4640 DZ= -1,097.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4639
    Angle/Node @2= .00 4638
 ---------------------------------------------------------------------------
 From  4640  To  4690  DX= -828.500 mm.  DY= -4.145 mm.
 RESTRAINTS
    Node  4690  +Y
 ---------------------------------------------------------------------------
 From  4690  To  4650  DX= -828.500 mm.  DY= -4.145 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 89.713   Angle/Node @1= 44.86 4649
    Angle/Node @2= .00 4648
 ---------------------------------------------------------------------------
 From  4650  To  4660 DY= -907.500 mm.
 ---------------------------------------------------------------------------
 From  4560  To  4680 DZ= 457.500 mm.
 RESTRAINTS
    Node  4680  +Y
 ---------------------------------------------------------------------------
 From  4680  To  4570 DZ= 457.500 mm.
 SIF's & TEE's
    Node  4570   Welding Tee
 ---------------------------------------------------------------------------
 From  4570  To  4580 DZ= 245.000 mm.
 ---------------------------------------------------------------------------
 From  4570  To  4590 DY= 557.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4589
    Angle/Node @2= .00 4588
 ---------------------------------------------------------------------------
```

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Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 From  4590  To  4600 DZ= -650.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4599
    Angle/Node @2= .00 4598
 ------------------------------------------------------------------------------
 From  4600  To  4610  DX= 611.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4609
    Angle/Node @2= .00 4608
 ------------------------------------------------------------------------------
 From  4610  To  4620 DY= 229.000 mm.
 ------------------------------------------------------------------------------
 From  4541  To  4620 DY= -126.420 mm.
 RIGID  Weight= 191.27 N.
 ------------------------------------------------------------------------------
 From  4660  To  1980 DY= -907.500 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 89.706   Angle/Node @1= 44.85 1979
    Angle/Node @2= .00 1978
 ------------------------------------------------------------------------------
 From  1980  To  1985 DY= -3.070 mm.  DZ= -599.000 mm.
 RESTRAINTS
    Node  1985  +Y
 ------------------------------------------------------------------------------
 From  1985  To  1990 DY= -3.070 mm.  DZ= -599.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1989
    Angle/Node @2= .00 1988
 ------------------------------------------------------------------------------
 From  1990  To  2000  DX= 1,952.000 mm.
 RESTRAINTS
    Node  2000  +Y   Mu = .30
    Node  2000  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  1260  To  2140 DY= 1,544.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 2,200.0500 KPa
    PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 194,667,600 KPa   EH2= 196,617,104 KPa   EH3= 196,617,104 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000154 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2139
    Angle/Node @2= .00 2138
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2140  To  2160  DX= .000 mm.  DZ= -429.000 mm.
 BEND at "TO" end
```

INPUT LISTING
```
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2159
    Angle/Node @2= .00 2158
 ---------------------------------------------------------------------------
 From  2160  To  2180  DX= -4,032.000 mm.
 RESTRAINTS
    Node  2180  +Y
    Node  2180  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  2180  To  2190  DX= -9,819.000 mm.
 RESTRAINTS
    Node  2190  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  2190  To  2200  DX= -388.000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2199
    Angle/Node @2= .00 2198
 ---------------------------------------------------------------------------
 From  2200  To  2220 DZ= 927.500 mm.
 RESTRAINTS
    Node  2220  +Y   Mu = .30
    Node  2220  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  2220  To  2280 DZ= 927.500 mm.
 SIF's & TEE's
    Node  2280   Welding Tee
 ---------------------------------------------------------------------------
 From  2280  To  2290  DX= .000 mm.  DZ= 500.000 mm.
 ---------------------------------------------------------------------------
 From  2280  To  2320 DY= 290.000 mm.
 RESTRAINTS
    Node  2320  +Y
 ---------------------------------------------------------------------------
 From  2320  To  2330 DY= 873.000 mm.
 SIF's & TEE's
    Node  2330   Welding Tee
 ---------------------------------------------------------------------------
 From  2330  To  2340 DY= 86.000 mm.
 ---------------------------------------------------------------------------
 From  2340  To  2346 DY= 82.550 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Element Name= GATE_FLG_600
    Insul Thk= .000 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  2346  To  2352 DY= 212.000 mm.
 RIGID  Weight= 258.00 N.
 ---------------------------------------------------------------------------
 From  2352  To  2360 DY= 82.550 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  2360  To  2380 DY= 250.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 ---------------------------------------------------------------------------
 From  2380  To  2400 DY= 90.000 mm.
```

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INPUT LISTING
```
 REDUCER
    Diam2= 60.325 mm.   Wall2= 5.537 mm.
 ----------------------------------------------------------------------------
 From  2400  To  2410 DY= 73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ----------------------------------------------------------------------------
 From  2410  To  2420 DY= 73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 FORCES & MOMENTS
    Node  2420   FY1= 1,000.05 N.   FZ1= -2,000.10 N.
 ----------------------------------------------------------------------------
 From  2420  To  2430  DX= -82.550 mm.  DZ= .000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 71.17 N.
 ----------------------------------------------------------------------------
 From  2430  To  2440  DX= -82.550 mm.  DZ= .000 mm.
 RIGID  Weight= 71.17 N.
 ----------------------------------------------------------------------------
 From  2440  To  2460  DX= -73.025 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.   Cor= 6.0000 mm.
    Element Name= FLANGE_FLG_150
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 54.49 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  2460  To  2480  DX= -140.000 mm.  DY= -39.700 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ----------------------------------------------------------------------------
 From  2480  To  2500  DX= -354.500 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2500  +Y   Mu = .30
    Node  2500  Z   Gap= 3.000 mm.
    Node  2500  X   Gap= 3.000 mm.
 ----------------------------------------------------------------------------
 From  2500  To  2520  DX= -573.500 mm.  DZ= .000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2519
```

INPUT LISTING

```
    Angle/Node @2= .00 2518
 ------------------------------------------------------------------------------
 From  2520  To  2540 DY= -229.000 mm.
 ------------------------------------------------------------------------------
 From  2540  To  2546 DY= -92.075 mm.
    Element Name= BALL_FLG_150
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  2546  To  2552 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 ------------------------------------------------------------------------------
 From  2552  To  2560 DY= -92.075 mm.
 RIGID  Weight= 111.21 N.
 ------------------------------------------------------------------------------
 From  2560  To  2570 DY= -221.000 mm.
 ------------------------------------------------------------------------------
 From  2570  To  2580 DY= -1,120.000 mm.
 SIF's & TEE's
    Node  2580   Welding Tee
 ------------------------------------------------------------------------------
 From  2580  To  2600  DX= .000 mm.  DZ= -674.000 mm.
 RESTRAINTS
    Node  2600  +Y
 ------------------------------------------------------------------------------
 From  2290  To  2300 DZ= 500.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 2,200.0500 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000154 kg./cu.cm.   Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 114.300 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2301
    Angle/Node @2= .00 2302
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2300  To  2620 DY= 290.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= 3.0000 mm.
 GENERAL
    P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa   Fluid Den= .0000154 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2620  +Y
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2620  To  2640 DY= 958.000 mm.
 ------------------------------------------------------------------------------
 From  2640  To  2646 DY= 73.025 mm.
```

INPUT LISTING
```
    Element Name= GATE_FLG_600
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  2646  To  2652 DY= 212.000 mm.
 RIGID  Weight= 258.00 N.
 ------------------------------------------------------------------------------
 From  2652  To  2660 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  2660  To  2680 DY= 250.000 mm.
 ------------------------------------------------------------------------------
 From  2680  To  2700 DY= 90.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 5.537 mm.
 ------------------------------------------------------------------------------
 From  2700  To  2710 DY= 66.675 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  2710  To  2720 DY= 66.675 mm.
 RIGID  Weight= 31.14 N.
 FORCES & MOMENTS
    Node  2720   FX2= 2,000.10 N.   FY2= 1,000.05 N.   FZ2= .00 N.
 ------------------------------------------------------------------------------
 From  2720  To  2730  DX= -73.025 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 54.49 N.
 ------------------------------------------------------------------------------
 From  2730  To  2740  DX= -73.025 mm.
 RIGID  Weight= 54.49 N.
 ------------------------------------------------------------------------------
 From  2740  To  2760  DX= -82.550 mm.  DZ= .000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 7.620 mm.   Cor= 6.0000 mm.
    Element Name= FLANGE_FLG_150
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 71.17 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2760  To  2780  DX= -140.000 mm.  DY= -39.700 mm.
 REDUCER
    Diam2= 168.275 mm.   Wall2= 10.973 mm.
 ------------------------------------------------------------------------------
 From  2780  To  2800  DX= -354.500 mm.  DZ= .000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 10.973 mm.
```

INPUT LISTING
```
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  2800  +Y
    Node  2800  Z
    Node  2800  X
 -------------------------------------------------------------------------------
 From  2800  To  2820  DX= -583.000 mm.
 SINGLE FLANGED BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2819
    Angle/Node @2= .00 2818
 -------------------------------------------------------------------------------
 From  2820  To  2840 DY= -229.000 mm.
 -------------------------------------------------------------------------------
 From  2840  To  2846 DY= -101.600 mm.
    Element Name= BALL_FLG_150
 RIGID  Weight= 191.27 N.
 -------------------------------------------------------------------------------
 From  2846  To  2852 DY= -276.000 mm.
 RIGID  Weight= 1,005.30 N.
 -------------------------------------------------------------------------------
 From  2852  To  2860 DY= -101.600 mm.
 RIGID  Weight= 191.27 N.
 -------------------------------------------------------------------------------
 From  2860  To  2880 DY= -1,290.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2879
    Angle/Node @2= .00 2878
 -------------------------------------------------------------------------------
 From  2880  To  2580  DX= .551 mm.  DY= .000 mm.  DZ= -1,000.000 mm.
 -------------------------------------------------------------------------------
 From  2600  To  2920 DZ= -379.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2919
    Angle/Node @2= .00 2918
 -------------------------------------------------------------------------------
 From  2920  To  2940  DX= -3,185.000 mm.  DY= -6.370 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 89.885   Angle/Node @1= 44.94 2939
    Angle/Node @2= .00 2938
 -------------------------------------------------------------------------------
 From  2940  To  2980 DY= -916.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 45.040   Angle/Node @1= 22.52 2979
    Angle/Node @2= .00 2978
 -------------------------------------------------------------------------------
 From  2980  To  2030 DY= -710.000 mm.  DZ= 711.000 mm.
 SIF's & TEE's
    Node  2030   <No Type Specified>   SIF(in)= 2.660   SIF(out)= 3.160
 -------------------------------------------------------------------------------
 From  2330  To  3000  DX= .000 mm.  DZ= -77.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 155 C   T2= 125 C   T3= 125 C   P1= 2,200.0500 KPa
    PHyd= 3,300.0752 KPa   Fluid Den= .0000154 kg./cu.cm.   Insul Thk= .000 mm.
 ALLOWABLE STRESSES
```

INPUT LISTING
```
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,819 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  3000  To  3020 DZ= -73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  3020  To  3040 DY= .000 mm.  DZ= -187.000 mm.
 RIGID  Weight= 209.07 N.
 ---------------------------------------------------------------------------
 From  3040  To  3060 DY= .000 mm.  DZ= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  3060  To  3080 DY= .000 mm.  DZ= -77.000 mm.
    Element Name= BALL_FLG_600
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3079
    Angle/Node @2= .00 3078
 ---------------------------------------------------------------------------
 From  3080  To  3100  DX= -377.000 mm.  DY= .000 mm.
 RESTRAINTS
    Node  3100  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  3100  To  3120  DX= -125.000 mm.  DZ= .000 mm.
 RESTRAINTS
    Node  3120  X
 ---------------------------------------------------------------------------
 From  3120  To  3140  DX= -307.000 mm.
 ---------------------------------------------------------------------------
 From  3140  To  3146  DX= -73.025 mm.  DZ= .000 mm.
    Element Name= GLOBE_FLG_600
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  3146  To  3152  DX= -276.000 mm.  DZ= .000 mm.
 RIGID  Weight= 458.17 N.
 ---------------------------------------------------------------------------
 From  3152  To  3160  DX= -66.675 mm.  DZ= .000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 272 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  3160  To  3180  DX= -77.000 mm.  DZ= .000 mm.
 PIPE
    Cor= 6.0000 mm.
```

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INPUT LISTING
```
 GENERAL
    P1= 750.0171 KPa   PHyd= 825.0188 KPa   Fluid Den= .0000015 kg./cu.cm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3179
    Angle/Node @2= .00 3178
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,365 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  3180  To  2570 DZ= 487.000 mm.
 SIF's & TEE's
    Node  2570   Welding Tee
 ------------------------------------------------------------------------------
 From  2000  To  4100  DX= 3,995.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 3.404 mm.   Cor= .0000 mm.
 GENERAL
    T1= 155 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Mat= (165)A312 TP316L   E= 195,127,520 KPa   EH1= 185,780,080 KPa
    EH2= 192,364,096 KPa   EH3= 192,364,096 KPa   EH4= 195,127,520 KPa
    EH5= 195,127,520 KPa   EH6= 195,127,520 KPa   EH7= 195,127,520 KPa
    EH8= 195,127,520 KPa   EH9= 195,127,520 KPa   v = .292
    Pipe Den= .0080272 kg./cu.cm.   Fluid Den= .0000183 kg./cu.cm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4099
    Angle/Node @2= .00 4098
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 114,386 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ------------------------------------------------------------------------------
 From  4100  To  4120 DY= -11.040 mm.  DZ= 2,207.000 mm.
 BEND at "TO" end
    Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4119
    Angle/Node @2= .00 4118
 ------------------------------------------------------------------------------
 From  4120  To  4140  DX= 555.000 mm.  DY= .000 mm.
 RESTRAINTS
    Node  4140  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  4140  To  4160  DX= 6,000.000 mm.
 RESTRAINTS
    Node  4160  +Y   Mu = .30
    Node  4160  Z   Mu = .30
 ------------------------------------------------------------------------------
 From  4160  To  4180  DX= 3,596.000 mm.
 ------------------------------------------------------------------------------
 From  4180  To  4200  DX= 101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 RESTRAINTS
    Node  4200  ANC   Cnode  4220
```

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INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  4220  To  4240  DX= 101.600 mm.
    Element Name= FLANGE_FLG_300
 RIGID  Weight= 191.27 N.
 ----------------------------------------------------------------------------
 From  4240  To  4260  DX= 150.000 mm.
 RESTRAINTS
    Node  4260  ANC   Cnode  4261
 EQUIPMENT LIMITS
    Nozzle Node = 4260
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,400.42 N.   FB= 8,400.42 N.
    FC= 6,300.31 N.   MA= 3,780.16 N.m.   MB= 2,520.11 N.m.   MC= 3,280.14 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ----------------------------------------------------------------------------
 From  4261  To  4280  DX= 459.000 mm.
 PIPE
    Dia= 919.480 mm.   Wall= 12.000 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  4280  To  4300 DY= -1,300.000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  4300  To  4310 DY= -1,000.000 mm.
 RIGID  Weight= .00 N.
 ----------------------------------------------------------------------------
 From  4310  To  4320 DY= -300.000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  4320  ANC
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 115,142 KPa
    Sh1= 115,142 KPa   Sh2= 115,142 KPa   Sh3= 115,142 KPa   Sh4= 115,142 KPa
    Sh5= 115,142 KPa   Sh6= 115,142 KPa   Sh7= 115,142 KPa   Sh8= 115,142 KPa
    Sh9= 115,142 KPa   Sy= 172,369 KPa
 ----------------------------------------------------------------------------
 From  10  To  20  DX= -114.300 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 8.179 mm.   Cor= 3.0000 mm.
    Element Name= FLANGE_FLG_150
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 2,200.0500 KPa   P2= .0000 KPa
    PHyd= 3,300.0752 KPa   Mat= (106)A106 Grade B   E= 203,401,232 KPa
    EH1= 199,086,608 KPa   EH2= 202,097,632 KPa   EH3= 202,097,632 KPa
    EH4= 203,401,232 KPa   EH5= 203,401,232 KPa   EH6= 203,401,232 KPa
    EH7= 203,401,232 KPa   EH8= 203,401,232 KPa   EH9= 203,401,232 KPa
    v = .292   Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000181 kg./cu.cm.
    Insul Thk= 40.000 mm.   Insul Den= .0001362 kg./cu.cm.
 RIGID  Weight= 302.48 N.
 DISPLACEMENTS
    Node  20   DX1= 4.000 mm.   DY1= 2.100 mm.   DZ1= .900 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
```

INPUT LISTING
```
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  25  To  40  DX= -114.300 mm.
 RIGID  Weight= 302.48 N.
 RESTRAINTS
    Node  25  ANC   Cnode  20
 EQUIPMENT LIMITS
    Nozzle Node = 25   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,500.42 N.
    FB= 8,500.42 N.   FC= 6,500.32 N.   MA= 6,000.25 N.m.   MB= 2,000.08 N.m.
    MC= 5,000.21 N.m.   Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  4700  To  4710 DY= -300.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 6.020 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  4710  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  5000  To  5010 DZ= 6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0001362 kg./cu.cm.
 RESTRAINTS
    Node  5010  +Y   Mu = .30
    Node  5010  X
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  5010  To  5020 DZ= 4,480.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5019
```

INPUT LISTING
```
    Angle/Node @2= .00 5018
 ------------------------------------------------------------------------------
 From  5020  To  5030  DX= -6,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5029
    Angle/Node @2= .00 5028
 ------------------------------------------------------------------------------
 From  5030  To  5040 DZ= 517.000 mm.
 ------------------------------------------------------------------------------
 From  5040  To  5050 DZ= 500.000 mm.
 RESTRAINTS
    Node  5050  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  5050  To  5060 DZ= 983.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5059
    Angle/Node @2= .00 5058
 ------------------------------------------------------------------------------
 From  5060  To  5070  DX= 6,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5069
    Angle/Node @2= .00 5068
 ------------------------------------------------------------------------------
 From  5070  To  5080 DZ= 5,520.000 mm.
 RESTRAINTS
    Node  5080  +Y   Mu = .30
    Node  5080  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  5080  To  5090 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  5090  +Y   Mu = .30
    Node  5090  X
 ------------------------------------------------------------------------------
 From  5000  To  2030 DZ= -2,628.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  5000  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  2030  To  5110 DZ= -3,372.000 mm.
 RESTRAINTS
    Node  5110  +Y   Mu = .30
    Node  5110  Z   Gap= 3.000 mm.
```

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INPUT LISTING
Node 5110 X Gap= 3.000 mm.
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MATERIAL Changes:

40	60	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
820	840	Mat= (383)A516 70 E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
280	880	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
1821	1920	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
1260	2140	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
2000	4100	Mat= (165)A312 TP316L E= 195,127,520 KPa v = .292 Density= .0080 kg./cu.cm.
10	20	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
4700	4710	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
5000	5010	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
5000	2030	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.

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ALLOWABLE STRESS Changes

40	60	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
140	160	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
120	180	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
540	560	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa

INPUT LISTING

```
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   520             4330         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   640              660         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   620              680         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   820              840         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 160,648 KPa   Sh1= 160,062 KPa
                                Sh2= 160,648 KPa   Sh3= 160,648 KPa
                                Sh4= 160,648 KPa   Sh5= 160,648 KPa
                                Sh6= 160,648 KPa   Sh7= 160,648 KPa
                                Sh8= 160,648 KPa   Sh9= 160,648 KPa
                                Sy= 262,001 KPa
   280              880         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
   900              910         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1020             1040         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1220             1230         B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
```

INPUT LISTING

```
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1440            1460          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1420            1480          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4481            4490          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4400            4510          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4370            1600          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4390            4830          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1661            1680          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4410            1760          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
```

INPUT LISTING

```
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1780            1800          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1740            4400          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  1821            1920          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  1260            2140          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2440            2460          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2290            2300          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2300            2620          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2740            2760          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
```

INPUT LISTING

```
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2330            3000          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,819 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  3152            3160          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  3160            3180          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,365 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  2000            4100          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 114,386 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
  4310            4320          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 115,142 KPa   Sh1= 115,142 KPa
                                Sh2= 115,142 KPa   Sh3= 115,142 KPa
                                Sh4= 115,142 KPa   Sh5= 115,142 KPa
                                Sh6= 115,142 KPa   Sh7= 115,142 KPa
                                Sh8= 115,142 KPa   Sh9= 115,142 KPa
                                Sy= 172,369 KPa
    10              20          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  4700            4710          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 137,895 KPa
                                Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                Sy= 241,316 KPa
  5000            5010          B31.3 (2016)        Cycle Max Switch = ---
                                Sc= 137,895 KPa   Sh1= 129,638 KPa
                                Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                Sh6= 137,895 KPa   Sh7= 137,895 KPa
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  5000            2030            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
 CAESAR II 2018  Ver.10.00.00.7700,  (Build 170726)  MAY 19,2024  15:11:24



 BEND ELEMENTS
    40             60             Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 59
                                  Angle/Node @2= .00 58
    60             80             Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 79
   120            180             Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 179
   480            500             Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 499   Angle/Node @2= .00 498
   520           4330             Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 4329   Angle/Node @2= .00 4328
  4340            580             Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 579   Angle/Node @2= .00 578
   620            680             Radius= 304.800 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 679   Angle/Node @2= .00 678
   280            880             Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 879   Angle/Node @2= .00 878
   940            960             Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 959   Angle/Node @2= .00 958
   960            980             Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 979   Angle/Node @2= .00 978
  1100           1120             Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 1119   Angle/Node @2= .00 1118
  1120           1140             Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 1139   Angle/Node @2= .00 1138
  1180           1200             Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 1199   Angle/Node @2= .00 1198
  1380           1400             Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 1399   Angle/Node @2= .00 1398
  1420           1480             Radius= 228.600 mm. (LONG)
```

INPUT LISTING

```
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1479   Angle/Node @2= .00 1478
  1520            1540            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1539   Angle/Node @2= .00 1538
  1560            1580            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1579   Angle/Node @2= .00 1578
  4420            4440            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4439   Angle/Node @2= .00 4438
  4440            4450            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4449   Angle/Node @2= .00 4448
  4820            4455            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4454   Angle/Node @2= .00 4453
  4810            4460            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4459   Angle/Node @2= .00 4458
  4370            1600            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1599   Angle/Node @2= .00 1598
  1600            4390            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4389   Angle/Node @2= .00 4388
  4830            1610            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1609   Angle/Node @2= .00 1608
  4800            1620            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1619   Angle/Node @2= .00 1618
  1920            1930            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1929
  1930            1940            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1939
  1940            1945            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                1944   Angle/Node @2= .00 1943
  4560            4630            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4629   Angle/Node @2= .00 4628
  4630            4640            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4639   Angle/Node @2= .00 4638
  4690            4650            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 89.713   Angle/Node @1= 44.86
                                4649   Angle/Node @2= .00 4648
  4570            4590            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4589   Angle/Node @2= .00 4588
  4590            4600            Radius= 228.600 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                4599   Angle/Node @2= .00 4598
```

INPUT LISTING

4600	4610	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4609 Angle/Node @2= .00 4608
4660	1980	Radius= 228.600 mm. (LONG) Bend Angle= 89.706 Angle/Node @1= 44.85 1979 Angle/Node @2= .00 1978
1985	1990	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1989 Angle/Node @2= .00 1988
1260	2140	Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2139 Angle/Node @2= .00 2138
2140	2160	Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2159 Angle/Node @2= .00 2158
2190	2200	Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2199 Angle/Node @2= .00 2198
2500	2520	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2519 Angle/Node @2= .00 2518
2290	2300	Radius= 114.300 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2301 Angle/Node @2= .00 2302
2800	2820	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2819 Angle/Node @2= .00 2818
2860	2880	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2879 Angle/Node @2= .00 2878
2600	2920	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2919 Angle/Node @2= .00 2918
2920	2940	Radius= 228.600 mm. (LONG) Bend Angle= 89.885 Angle/Node @1= 44.94 2939 Angle/Node @2= .00 2938
2940	2980	Radius= 228.600 mm. (LONG) Bend Angle= 45.040 Angle/Node @1= 22.52 2979 Angle/Node @2= .00 2978
3060	3080	Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3079 Angle/Node @2= .00 3078
3160	3180	Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3179 Angle/Node @2= .00 3178
2000	4100	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4099 Angle/Node @2= .00 4098
4100	4120	Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4119 Angle/Node @2= .00 4118
5010	5020	Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5019 Angle/Node @2= .00 5018
5020	5030	Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00

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INPUT LISTING

```
                                  5029   Angle/Node @2= .00 5028
  5050            5060              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  5059   Angle/Node @2= .00 5058
  5060            5070              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                  5069   Angle/Node @2= .00 5068
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 RIGIDS
   180             140           RIGID  Weight= .00 N.
   200             220           RIGID  Weight= 302.48 N.
   220             240           RIGID  Weight= 302.48 N.
   320             340           RIGID  Weight= 302.48 N.
   340             360           RIGID  Weight= 1,023.41 N.
   360             380           RIGID  Weight= 302.48 N.
   420             440           RIGID  Weight= 302.48 N.
   440             460           RIGID  Weight= 302.48 N.
   520             540           RIGID  Weight= .00 N.
   620             640           RIGID  Weight= .00 N.
   700             720           RIGID  Weight= 302.48 N.
   740             760           RIGID  Weight= 302.48 N.
   780             800           RIGID  Weight= .00 N.
   820             840           RIGID  Weight= .00 N.
   840             860           RIGID  Weight= .00 N.
   900             910           RIGID  Weight= 44.48 N.
   910             920           RIGID  Weight= 66.72 N.
   920             930           RIGID  Weight= 355.86 N.
   930             940           RIGID  Weight= 44.48 N.
  1060            1080           RIGID  Weight= 191.27 N.
  1080            1100           RIGID  Weight= 191.27 N.
  1120            4700           RIGID  Weight= .00 N.
  1220            1230           RIGID  Weight= 191.27 N.
  1231            1240           RIGID  Weight= 191.27 N.
  1300            1320           RIGID  Weight= 191.27 N.
  1320            1340           RIGID  Weight= 1,850.46 N.
  1340            1360           RIGID  Weight= 191.27 N.
  1420            1440           RIGID  Weight= .00 N.
  4470            4480           RIGID  Weight= 191.27 N.
  4481            4490           RIGID  Weight= 191.27 N.
  4501            4400           RIGID  Weight= .00 N.
  4400            4510           RIGID  Weight= .00 N.
  4530            4540           RIGID  Weight= 191.27 N.
  1640            1660           RIGID  Weight= 191.27 N.
  1661            1680           RIGID  Weight= 191.27 N.
  1720            4410           RIGID  Weight= .00 N.
  4410            1760           RIGID  Weight= .00 N.
  1800            1820           RIGID  Weight= 191.27 N.
  1740            4400           RIGID  Weight= 658.96 N.
  4400            1840           RIGID  Weight= 1,591.15 N.
  1840            1860           RIGID  Weight=10,500.52 N.
  1860            1880           RIGID  Weight= 4,500.22 N.
  1880            1900           RIGID  Weight=10,500.52 N.
  1900            4410           RIGID  Weight= 1,591.15 N.
```

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4410	1740	RIGID	Weight= 658.96 N.
1821	1920	RIGID	Weight= 191.27 N.
4541	4620	RIGID	Weight= 191.27 N.
2340	2346	RIGID	Weight= 71.17 N.
2346	2352	RIGID	Weight= 258.00 N.
2352	2360	RIGID	Weight= 71.17 N.
2400	2410	RIGID	Weight= 44.48 N.
2410	2420	RIGID	Weight= 44.48 N.
2420	2430	RIGID	Weight= 71.17 N.
2430	2440	RIGID	Weight= 71.17 N.
2440	2460	RIGID	Weight= 54.49 N.
2540	2546	RIGID	Weight= 111.21 N.
2546	2552	RIGID	Weight= 1,005.30 N.
2552	2560	RIGID	Weight= 111.21 N.
2640	2646	RIGID	Weight= 44.48 N.
2646	2652	RIGID	Weight= 258.00 N.
2652	2660	RIGID	Weight= 44.48 N.
2700	2710	RIGID	Weight= 31.14 N.
2710	2720	RIGID	Weight= 31.14 N.
2720	2730	RIGID	Weight= 54.49 N.
2730	2740	RIGID	Weight= 54.49 N.
2740	2760	RIGID	Weight= 71.17 N.
2840	2846	RIGID	Weight= 191.27 N.
2846	2852	RIGID	Weight= 1,005.30 N.
2852	2860	RIGID	Weight= 191.27 N.
3000	3020	RIGID	Weight= 44.48 N.
3020	3040	RIGID	Weight= 209.07 N.
3040	3060	RIGID	Weight= 44.48 N.
3140	3146	RIGID	Weight= 44.48 N.
3146	3152	RIGID	Weight= 458.17 N.
3152	3160	RIGID	Weight= 31.14 N.
4180	4200	RIGID	Weight= 191.27 N.
4220	4240	RIGID	Weight= 191.27 N.
4261	4280	RIGID	Weight= .00 N.
4280	4300	RIGID	Weight= .00 N.
4300	4310	RIGID	Weight= .00 N.
4310	4320	RIGID	Weight= .00 N.
10	20	RIGID	Weight= 302.48 N.
25	40	RIGID	Weight= 302.48 N.

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SIF's & TEE's

140	160	Node	140	Unreinforced Tee
260	280	Node	280	Weldolet
540	560	Node	540	Unreinforced Tee
1000	1020	Node	1020	Weldolet
1020	1260	Node	1260	Welding Tee
1440	1460	Node	1440	Unreinforced Tee
1580	4350	Node	4350	Welding Tee
4360	4370	Node	4370	Welding Tee
1945	1950	Node	1950	Welding Tee
4670	4560	Node	4560	Welding Tee
4680	4570	Node	4570	Welding Tee
2220	2280	Node	2280	Welding Tee

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```
  2320            2330              Node  2330   Welding Tee
  2570            2580              Node  2580   Welding Tee
  2980            2030              Node  2030   <No Type Specified>
                                    SIF(in)= 2.660   SIF(out)= 3.160
  3180            2570              Node  2570   Welding Tee
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```
 REDUCERS
  2380            2400              Diam2= 60.325 mm.   Wall2= 5.537 mm.
  2460            2480              Diam2= 168.275 mm.   Wall2= 10.973 mm.
  2680            2700              Diam2= 60.325 mm.   Wall2= 5.537 mm.
  2760            2780              Diam2= 168.275 mm.   Wall2= 10.973 mm.
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```

RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
160	-X				.30	1.000	.000	.000
160	Z	121				.000	.000	1.000
121	+Y				.10	.000	1.000	.000
160	X	121				1.000	.000	.000
300	+Y				.30	.000	1.000	.000
400	Y				.30	.000	1.000	.000
400	Z					.000	.000	1.000
480	Y				.30	.000	1.000	.000
480	Z					.000	.000	1.000
560	+Y				.30	.000	1.000	.000
560	Z					.000	.000	1.000
4340	+Y				.30	.000	1.000	.000
660	+Y	800			.30	.000	1.000	.000
720	ANC	740				.000	.000	.000
780	ANC	820				.000	.000	.000
860	ANC					.000	.000	.000
1040	+Y				.30	.000	1.000	.000
1230	ANC	1231				.000	.000	.000
1280	Y				.30	.000	1.000	.000
1280	Z					.000	.000	1.000
1380	Y				.30	.000	1.000	.000
1380	Z					.000	.000	1.000
1460	+Y				.30	.000	1.000	.000
1460	Z					.000	.000	1.000
1500	+Y					.000	1.000	.000
1500	Z					.000	.000	1.000
1520	+Y				.30	.000	1.000	.000
1520	Z			3.00		.000	.000	1.000
1560	+Y				.30	.000	1.000	.000
1560	X			3.00	.30	1.000	.000	.000
4360	+Y				.30	.000	1.000	.000
4385	+Y				.30	.000	1.000	.000
4480	ANC	4481				.000	.000	.000
4500	ANC	4501				.000	.000	.000
4520	ANC	4510				.000	.000	.000
4540	ANC	4541				.000	.000	.000

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1660	ANC	1661			.000	.000	.000
1700	ANC	1720			.000	.000	.000
1780	ANC	1760			.000	.000	.000
1820	ANC	1821			.000	.000	.000
1840	Y			.10	.000	1.000	.000
1840	X			.30	1.000	.000	.000
1840	Z		6.00		.000	.000	1.000
1860	Y			.10	.000	1.000	.000
1860	Z		6.00		.000	.000	1.000
1880	Y			.10	.000	1.000	.000
1880	Z		6.00	.30	.000	.000	1.000
1900	Y			.10	.000	1.000	.000
1900	X				1.000	.000	.000
1900	Z		6.00	.30	.000	.000	1.000
4670	+Y				.000	1.000	.000
4690	+Y				.000	1.000	.000
4680	+Y				.000	1.000	.000
1985	+Y				.000	1.000	.000
2000	+Y			.30	.000	1.000	.000
2000	Z		3.00		.000	.000	1.000
2180	+Y				.000	1.000	.000
2180	Z		3.00		.000	.000	1.000
2190	+Y			.30	.000	1.000	.000
2220	+Y			.30	.000	1.000	.000
2220	X		3.00		1.000	.000	.000
2320	+Y				.000	1.000	.000
2500	+Y			.30	.000	1.000	.000
2500	Z		3.00		.000	.000	1.000
2500	X		3.00		1.000	.000	.000
2600	+Y				.000	1.000	.000
2620	+Y				.000	1.000	.000
2800	+Y				.000	1.000	.000
2800	Z				.000	.000	1.000
2800	X				1.000	.000	.000
3100	+Y			.30	.000	1.000	.000
3120	X				1.000	.000	.000
4140	+Y			.30	.000	1.000	.000
4160	+Y			.30	.000	1.000	.000
4160	Z			.30	.000	.000	1.000
4200	ANC	4220			.000	.000	.000
4260	ANC	4261			.000	.000	.000
4320	ANC				.000	.000	.000
25	ANC	20			.000	.000	.000
4710	+Y			.30	.000	1.000	.000
5010	+Y			.30	.000	1.000	.000
5010	X				1.000	.000	.000
5050	+Y			.30	.000	1.000	.000
5080	+Y			.30	.000	1.000	.000
5080	X		3.00		1.000	.000	.000
5090	+Y			.30	.000	1.000	.000
5090	X				1.000	.000	.000
5000	+Y			.30	.000	1.000	.000
5110	+Y			.30	.000	1.000	.000
5110	Z		3.00		.000	.000	1.000
5110	X		3.00		1.000	.000	.000

INPUT LISTING

DISPLACEMENTS

1231	1240	Node 1231 DX1= 4.000 mm. DY1= 2.100 mm. DZ1= .900 mm.
10	20	Node 20 DX1= 4.000 mm. DY1= 2.100 mm. DZ1= .900 mm.

HANGER CONTROL AND LOCATION DATA

No. of Hanger Design Load Cases = 1
Actual Cold Load Flag = 0.0
Short Range Spring Flag = 1
Allowed Load Variation (%) = 25.0000
Default Hanger Table = 5

140	160	Hanger Node = 160 Hanger Connecting Node = 121 Available Space = -1,000.0000 mm. Allowed Load Variation = 25.0000 No. Hangers = 0.0 Short Range Flag = -1 User Operating Load = .00 N. Free Node = 0 Free Node = 0 Free Code = 0.0 Spring Rate = .00 N./cm. Theoretical Cold Load = .00 N.

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EQUIPMENT LIMITS

760	780	Nozzle Node = 780

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 11,200.56 N. FB= 11,200.56 N.
FC= 8,400.42 N. MA= 6,720.29 N.m. MB= 4,480.19 N.m. MC= 5,820.25 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute

1220	1230	Nozzle Node = 1230

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 8,500.42 N. FB= 8,500.42 N.
FC= 6,500.32 N. MA= 6,000.25 N.m. MB= 2,000.08 N.m. MC= 5,000.21 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute

4490	4500	Nozzle Node = 4500

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 5,030.25 N. FB= 5,030.25 N.
FC= 4,000.20 N. MA= 3,050.13 N.m. MB= 1,630.07 N.m. MC= 2,140.09 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000
Interact. Mtd= Absolute

4520	4530	Nozzle Node = 4520

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```
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  1680            1700             Nozzle Node = 1700


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  1780            1800             Nozzle Node = 1780


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 5,030.25 N.   FB= 5,030.25 N.
    FC= 4,000.20 N.   MA= 3,050.13 N.m.   MB= 1,630.07 N.m.   MC= 2,140.09 N.m.
    Equipment Major Direction Vector= .0000  .0000  1.0000
    Interact. Mtd= Absolute
  4240            4260             Nozzle Node = 4260


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,400.42 N.   FB= 8,400.42 N.
    FC= 6,300.31 N.   MA= 3,780.16 N.m.   MB= 2,520.11 N.m.   MC= 3,280.14 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
    25               40             Nozzle Node = 25


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 8,500.42 N.   FB= 8,500.42 N.
    FC= 6,500.32 N.   MA= 6,000.25 N.m.   MB= 2,000.08 N.m.   MC= 5,000.21 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
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FORCES AND MOMENTS
  2410            2420             Node  2420   FY1= 1,000.05 N.
                                   FZ1= -2,000.10 N.
  2710            2720             Node  2720   FX2= 2,000.10 N.
                                   FY2= 1,000.05 N.   FZ2= .00 N.
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UNIFORM LOAD Changes
    40               60           Vector1 in G-s
                                  X1 Dir = .26 g's  Y1 Dir = .00 g's
                                  Z1 Dir = .00 g's
                                  Vector2 in G-s
                                  X2 Dir = .00 g's  Y2 Dir = .12 g's
                                  Z2 Dir = .00 g's
                                  Vector3 in G-s
                                  X3 Dir = .00 g's  Y3 Dir = .00 g's
                                  Z3 Dir = .26 g's
```

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INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	=	N./cm.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS =	NO

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INPUT LISTING

```
  MISSING MASS ZPA =                EXTRACTED
  MIN WALL MILL TOLERANCE =           12.5000
  WRC-107 VERSION =                 MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =           LAST VALUE
  DEFAULT AMBIENT TEMPERATURE=        21.1111       C
  BOURDON PRESSURE=                 NONE
  COEFFICIENT OF FRICTION (MU) =         0.000000
  INCLUDE SPRG STIF IN HGR OPE =    NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =            B31.1(POST1980)
  USE WRC329                        NO
  NO REDUCED SIF FOR RFT AND WLT    NO
  B31.1 REDUCED Z FIX =             YES
  CLASS 1 BRANCH FLEX               NO
  ALL STRESS CASES CORRODED =       NO
  ADD TORSION IN SL STRESS =        DEFAULT
  ADD F/A IN STRESS =               DEFAULT
  OCCASIONAL LOAD FACTOR =               0.000000
  DEFAULT CODE =                    B31.3
  B31.3 SUS CASE SIF FACTOR =            0.000000
  ALLOW USERS BEND SIF =            NO
  USE SCHNEIDER                     NO
  YIELD CRITERION STRESS =          MAX 3D SHEAR
  USE PD/4T                          NO
  BASE HOOP STRESS ON ? =            ID
  EN13480 USE IN OUTPLANE SIFS=      NO
  LIBERAL EXPANSION ALLOWABLE=      YES
  B31.3 SEC 319.2.3C SAXIAL=        Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178      YES
  IGNORE B31.1/B31.3 Wc FACTOR=     YES
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152730
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
    Uniform Load Option ........    1.000
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
 CAESAR II 2018  Ver.10.00.00.7700,  (Build 170726)  MAY 19,2024  15:11:24

 COORDINATE REPORT
          /--------------------(mm.)----------------------/
  NODE           X              Y              Z
    40          .000          .000          .000
    60      -805.000          .000          .000
    80      -805.000          .000     -1690.000
   100      -805.000     -1410.000     -1690.000
   120      -805.000     -2524.000     -1690.000
   180      -805.000     -2830.000     -1690.000
   140      -733.158     -2901.842     -1690.000
   160      -733.158     -3101.842     -1690.000
   120      -805.000     -2524.000     -1690.000
   180      -805.000     -2830.000     -1690.000
   200     -1111.000     -2830.000     -1690.000
   220     -1225.300     -2830.000     -1690.000
   240     -1339.600     -2830.000     -1690.000
   260     -1737.600     -2830.000     -1690.000
   280     -2037.600     -2830.000     -1690.000
   300     -2537.600     -2830.000     -1690.000
   320     -2713.600     -2830.000     -1690.000
   340     -2827.900     -2830.000     -1690.000
   360     -3414.900     -2830.000     -1690.000
   380     -3529.200     -2830.000     -1690.000
   400     -4529.200     -2830.000     -1690.000
   420     -5817.000     -2830.000     -1690.000
   440     -5931.300     -2830.000     -1690.000
   460     -6045.600     -2830.000     -1690.000
   480     -7545.600     -2830.000     -1690.000
   500    -11005.600     -2830.000     -1690.000
   520    -11005.600     -2525.000     -1690.000
   540    -11005.600     -2830.000     -1690.000
   560    -11005.600     -3130.000     -1690.000
   520    -11005.600     -2525.000     -1690.000
  4330    -11005.600      1140.000     -1690.000
  4340    -11005.600      1140.000     -5065.000
   580    -11005.600      1140.000     -8440.000
   600    -11735.600      1140.000     -8440.000
   620    -12197.600      1140.000     -8440.000
   640    -12197.600      1056.000     -8440.000
   660    -12197.600       756.000     -8440.000
   620    -12197.600      1140.000     -8440.000
   680    -12659.600      1140.000     -8440.000
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CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

700	-12659.600	835.000	-8440.000
720	-12659.600	720.700	-8440.000
760	-12659.600	606.400	-8440.000
780	-12659.600	425.000	-8440.000
780	-12659.600	425.000	-8440.000
660	-12197.600	756.000	-8440.000
780	-12659.600	425.000	-8440.000
840	-12659.600	-2640.000	-8440.000
860	-12659.600	-3840.000	-8440.000
280	-2037.600	-2830.000	-1690.000
880	-2037.600	-2307.000	-1690.000
900	-2037.600	-2307.000	-2200.000
910	-2037.600	-2307.000	-2273.025
920	-2037.600	-2307.000	-2574.025
930	-2037.600	-2307.000	-2849.025
940	-2037.600	-2307.000	-2922.050
960	-2037.600	-2307.000	-2999.050
980	-2037.600	-2959.400	-2999.050
1000	-2037.600	-2959.400	-2922.050
1020	-2037.600	-2959.400	-2301.050
1040	-1737.600	-2959.400	-2301.050
1060	-1419.600	-2959.400	-2301.050
1080	-1318.000	-2959.400	-2301.050
1100	-1216.400	-2959.400	-2301.050
1120	-226.400	-2959.400	-2301.050
1140	-226.400	-2259.400	-2301.050
1160	-226.400	-2259.400	-1537.717
1120	-226.400	-2959.400	-2301.050
4700	-172.519	-3013.281	-2301.050
1160	-226.400	-2259.400	-1537.717
1180	-226.400	-2259.400	-774.384
1200	-226.400	-2259.400	-11.051
1220	2.600	-2259.400	-11.051
1230	104.200	-2259.400	-11.051
1240	205.800	-2259.400	-11.051
1020	-2037.600	-2959.400	-2301.050
1260	-3245.540	-2959.400	-2301.050
1280	-4520.150	-2959.400	-2301.050
1300	-4889.150	-2959.400	-2301.050
1320	-4990.750	-2959.400	-2301.050
1340	-5443.750	-2959.400	-2301.050
1360	-5545.350	-2959.400	-2301.050
1380	-7518.350	-2959.400	-2301.050
1400	-11344.350	-2959.400	-2301.050
1420	-11344.350	-2730.400	-2301.050
1440	-11344.350	-2959.400	-2301.050
1460	-11344.350	-3259.400	-2301.050
1420	-11344.350	-2730.400	-2301.050
1480	-11344.350	-1575.400	-2301.050
1500	-17104.350	-1575.400	-2301.050
1520	-23104.350	-1575.400	-2301.050
1540	-25585.350	-1575.400	-2301.050
1560	-25585.350	-1575.400	-3733.050
1580	-25585.350	-1575.400	-4362.050
4350	-25585.350	1154.600	-4362.050
4360	-25585.350	1154.600	-4844.550

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

4370	-25585.350	1154.600	-5277.050
4380	-25585.350	1154.600	-5522.050
4350	-25585.350	1154.600	-4362.050
4385	-25585.350	1154.600	-3879.550
4420	-25585.350	1154.600	-3447.050
4430	-25585.350	1154.600	-3202.050
4420	-25585.350	1154.600	-3447.050
4440	-25113.350	1154.600	-3447.050
4450	-25113.350	3317.600	-3447.050
4820	-25113.350	3317.600	-3772.050
4455	-25113.350	3317.600	-4097.050
4810	-26180.350	3317.600	-4097.050
4460	-27353.350	3317.600	-4097.050
4470	-27353.350	2807.600	-4097.050
4480	-27353.350	2681.600	-4097.050
4490	-27353.350	2580.000	-4097.050
4500	-27353.350	2453.000	-4097.050
4400	-27353.350	2213.000	-4097.050
4520	-27353.350	1973.000	-4097.050
4530	-27353.350	1846.000	-4097.050
4540	-27353.350	1744.400	-4097.050
4370	-25585.350	1154.600	-5277.050
1600	-25113.350	1154.600	-5277.050
4390	-25113.350	3317.600	-5277.050
4830	-25113.350	3317.600	-4952.050
1610	-25113.350	3317.600	-4627.050
4800	-26180.350	3317.600	-4627.050
1620	-27353.350	3317.600	-4627.050
1640	-27353.350	2807.600	-4627.050
1660	-27353.350	2681.600	-4627.050
1680	-27353.350	2580.000	-4627.050
1700	-27353.350	2453.000	-4627.050
4410	-27353.350	2213.000	-4627.050
1780	-27353.350	1973.000	-4627.050
1800	-27353.350	1846.000	-4627.050
1820	-27353.350	1744.400	-4627.050
1740	-27353.350	2213.000	-4362.050
4400	-27353.350	2213.000	-4097.050
1840	-27353.350	2213.000	-3662.050
1860	-32453.350	2213.000	-3662.050
1880	-32453.350	2213.000	-5062.050
1900	-27353.350	2213.000	-5062.050
4410	-27353.350	2213.000	-4627.050
1740	-27353.350	2213.000	-4362.050
1820	-27353.350	1744.400	-4627.050
1920	-27353.350	1617.980	-4627.050
1930	-27353.350	1388.980	-4627.050
1940	-27964.350	1388.980	-4627.050
1945	-27964.350	1388.980	-5277.050
1950	-27964.350	831.980	-5277.050
4550	-27964.350	831.980	-5522.050
1950	-27964.350	831.980	-5277.050
4670	-27964.350	831.980	-4819.550
4560	-27964.350	831.980	-4362.050
4630	-28336.350	831.980	-4362.050
4640	-28336.350	831.980	-5459.050

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

4690	-29164.850	827.835	-5459.050
4650	-29993.350	823.690	-5459.050
4660	-29993.350	-83.810	-5459.050
4560	-27964.350	831.980	-4362.050
4680	-27964.350	831.980	-3904.550
4570	-27964.350	831.980	-3447.050
4580	-27964.350	831.980	-3202.050
4570	-27964.350	831.980	-3447.050
4590	-27964.350	1388.980	-3447.050
4600	-27964.350	1388.980	-4097.050
4610	-27353.350	1388.980	-4097.050
4620	-27353.350	1617.980	-4097.050
4540	-27353.350	1744.400	-4097.050
4620	-27353.350	1617.980	-4097.050
4660	-29993.350	-83.810	-5459.050
1980	-29993.350	-991.310	-5459.050
1985	-29993.350	-994.380	-6058.050
1990	-29993.350	-997.450	-6657.050
2000	-28041.350	-997.450	-6657.050
1260	-3245.540	-2959.400	-2301.050
2140	-3245.540	-1415.400	-2301.050
2160	-3245.540	-1415.400	-2730.050
2180	-7277.540	-1415.400	-2730.050
2190	-17096.539	-1415.400	-2730.050
2200	-17484.539	-1415.400	-2730.050
2220	-17484.539	-1415.400	-1802.550
2280	-17484.539	-1415.400	-875.050
2290	-17484.539	-1415.400	-375.050
2280	-17484.539	-1415.400	-875.050
2320	-17484.539	-1125.400	-875.050
2330	-17484.539	-252.400	-875.050
2340	-17484.539	-166.400	-875.050
2346	-17484.539	-83.850	-875.050
2352	-17484.539	128.150	-875.050
2360	-17484.539	210.700	-875.050
2380	-17484.539	460.700	-875.050
2400	-17484.539	550.700	-875.050
2410	-17484.539	623.725	-875.050
2420	-17484.539	696.750	-875.050
2430	-17567.090	696.750	-875.050
2440	-17649.641	696.750	-875.050
2460	-17722.666	696.750	-875.050
2480	-17862.666	657.050	-875.050
2500	-18217.166	657.050	-875.050
2520	-18790.666	657.050	-875.050
2540	-18790.666	428.050	-875.050
2546	-18790.666	335.975	-875.050
2552	-18790.666	59.975	-875.050
2560	-18790.666	-32.100	-875.050
2570	-18790.666	-253.100	-875.050
2580	-18790.666	-1373.100	-875.050
2600	-18790.666	-1373.100	-1549.050
2290	-17484.539	-1415.400	-375.050
2300	-17484.539	-1415.400	124.950
2620	-17484.539	-1125.400	124.950
2640	-17484.539	-167.400	124.950

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

2646	-17484.539	-94.375	124.950
2652	-17484.539	117.625	124.950
2660	-17484.539	190.650	124.950
2680	-17484.539	440.650	124.950
2700	-17484.539	530.650	124.950
2710	-17484.539	597.325	124.950
2720	-17484.539	664.000	124.950
2730	-17557.564	664.000	124.950
2740	-17630.590	664.000	124.950
2760	-17713.141	664.000	124.950
2780	-17853.141	624.300	124.950
2800	-18207.641	624.300	124.950
2820	-18790.641	624.300	124.950
2840	-18790.641	395.300	124.950
2846	-18790.641	293.700	124.950
2852	-18790.641	17.700	124.950
2860	-18790.641	-83.900	124.950
2880	-18790.641	-1373.900	124.950
2880	-18791.217	-1373.100	124.950
2580	-18790.666	-1373.100	-875.050
2600	-18790.666	-1373.100	-1549.050
2920	-18790.666	-1373.100	-1928.050
2940	-21975.666	-1379.470	-1928.050
2980	-21975.666	-2295.470	-1928.050
2030	-21975.666	-3005.470	-1217.050
2330	-17484.539	-252.400	-875.050
3000	-17484.539	-252.400	-952.050
3020	-17484.539	-252.400	-1025.075
3040	-17484.539	-252.400	-1212.075
3060	-17484.539	-252.400	-1285.100
3080	-17484.539	-252.400	-1362.100
3100	-17861.539	-252.400	-1362.100
3120	-17986.539	-252.400	-1362.100
3140	-18293.539	-252.400	-1362.100
3146	-18366.564	-252.400	-1362.100
3152	-18642.564	-252.400	-1362.100
3160	-18709.240	-252.400	-1362.100
3180	-18786.240	-252.400	-1362.100
3180	-18790.666	-253.100	-1362.050
2570	-18790.666	-253.100	-875.050
2000	-28041.350	-997.450	-6657.050
4100	-24046.350	-997.450	-6657.050
4120	-24046.350	-1008.490	-4450.050
4140	-23491.350	-1008.490	-4450.050
4160	-17491.350	-1008.490	-4450.050
4180	-13895.350	-1008.490	-4450.050
4200	-13793.750	-1008.490	-4450.050
4240	-13692.150	-1008.490	-4450.050
4260	-13542.150	-1008.490	-4450.050
4280	-13083.150	-1008.490	-4450.050
4300	-13083.150	-2308.490	-4450.050
4310	-13083.150	-3308.490	-4450.050
4320	-13083.150	-3608.490	-4450.050
10	228.600	.000	.000
25	114.300	.000	.000
40	.000	.000	.000

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

4700	-172.519	-3013.281	-2301.050
4710	-172.519	-3313.281	-2301.050
5000	-21975.666	-3005.470	1410.950
5010	-21975.666	-3005.470	7410.950
5020	-21975.666	-3005.470	11890.950
5030	-27975.666	-3005.470	11890.950
5040	-27975.666	-3005.470	12407.950
5050	-27975.666	-3005.470	12907.950
5060	-27975.666	-3005.470	13890.950
5070	-21975.666	-3005.470	13890.950
5080	-21975.666	-3005.470	19410.949
5090	-21975.666	-3005.470	25410.949
5000	-21975.666	-3005.470	1410.950
2030	-21975.666	-3005.470	-1217.050
5110	-21975.666	-3005.470	-4589.050

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP
CASE 4 (OPE) W+D1+T1+P1+H
CASE 6 (OPE) W+D1+T2+P1+H
CASE 8 (OPE) W+D1+T3+P1+H
CASE 10 (SUS) W+P1+H
CASE 11 (SUS) WNC+H
CASE 12 (OPE) W+D1+T2+P1+H+U1
CASE 13 (OPE) W+D1+T2+P1+H-U1
CASE 14 (OPE) W+D1+T2+P1+H+U2
CASE 15 (OPE) W+D1+T2+P1+H+U3
CASE 16 (OPE) W+D1+T2+P1+H-U3
CASE 18 (OPE) W+D1+T2+P1+H+F2
CASE 19 (OCC) L19=L12-L6
CASE 20 (OCC) L20=L13-L6
CASE 21 (OCC) L21=L14-L6
CASE 22 (OCC) L22=L15-L6
CASE 23 (OCC) L23=L16-L6
CASE 24 (OCC) L24=L17-L6
CASE 25 (OCC) L25=L18-L6

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
20		TYPE=Displ. Reaction;					
	3(HYD)	-72	-1529	89	0	0	0
	4(OPE)	-452	-1566	-196	0	0	0
	6(OPE)	-928	-2474	-840	0	0	0
	8(OPE)	-928	-2474	-840	0	0	0
	10(SUS)	-50	-1177	40	0	0	0
	11(SUS)	-50	-1171	40	0	0	0
	12(OPE)	-390	-2470	-831	0	0	0
	13(OPE)	-1449	-2474	-835	0	0	0
	14(OPE)	-919	-2333	-845	0	0	0
	15(OPE)	-836	-2464	-180	0	0	0
	16(OPE)	-1018	-2482	-1489	0	0	0
	18(OPE)	-928	-2474	-840	0	0	0
	19(OCC)	538	4	9	0	0	0
	20(OCC)	-522	0	4	0	0	0
	21(OCC)	9	141	-5	0	0	0
	22(OCC)	92	10	659	0	0	0
	23(OCC)	-90	-8	-650	0	0	0
	24(OCC)	0	0	1	0	0	0
	25(OCC)	-0	-0	-0	0	0	0
	MAX	-1449/L13	-2482/L16	-1489/L16			
25		TYPE=Rigid ANC;					
	3(HYD)	-72	-1191	89	-0	-0	19
	4(OPE)	-452	-1254	-196	0	-0	18

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	-928	-2162	-840	0	-0	18
	8(OPE)	-928	-2162	-840	0	-0	18
	10(SUS)	-50	-865	40	-0	-0	18
	11(SUS)	-50	-860	40	-0	-0	18
	12(OPE)	-471	-2158	-831	0	0	18
	13(OPE)	-1368	-2162	-835	0	-0	18
	14(OPE)	-919	-2058	-845	0	0	16
	15(OPE)	-836	-2152	-262	0	5	18
	16(OPE)	-1018	-2170	-1408	0	-5	18
	18(OPE)	-928	-2162	-840	0	-0	18
	19(OCC)	457	4	9	0	0	0
	20(OCC)	-441	0	4	0	-0	0
	21(OCC)	9	104	-5	0	0	-2
	22(OCC)	92	10	578	0	5	0
	23(OCC)	-90	-8	-569	0	-5	0
	24(OCC)	0	0	1	-0	0	0
	25(OCC)	-0	-0	-0	-0	0	0
	MAX	-1368/L13	-2170/L16	-1408/L16	0/L6	5/L15	19/L3
121		TYPE=Rigid +Y;					
	3(HYD)	0	-4113	-288	0	0	0
	4(OPE)	0	-2650	-265	0	0	0
	6(OPE)	0	-2639	55	0	0	0
	8(OPE)	0	-2639	56	0	0	0
	10(SUS)	-192	-2640	-181	0	0	0
	11(SUS)	-202	-2640	-163	0	0	0
	12(OPE)	0	-2639	94	0	0	0
	13(OPE)	0	-2639	7	0	0	0
	14(OPE)	0	-2639	65	0	0	0
	15(OPE)	0	-2639	264	0	0	0
	16(OPE)	0	-2639	-210	0	0	0
	18(OPE)	0	-2639	55	0	0	0
	19(OCC)	0	-0	39	0	0	0
	20(OCC)	-0	0	-49	0	0	0
	21(OCC)	-0	0	9	0	0	0
	22(OCC)	-0	0	209	0	0	0
	23(OCC)	-0	-0	-266	0	0	0
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	-0	0	-0	0	0	0
	MAX	-202/L11	-4113/L3	-288/L3			
160		TYPE=Rigid X; Rigid Z; Rigid -X; Prog Design VSH;					
	3(HYD)	28	-4113	-297	0	0	0
	4(OPE)	4277	-3905	-576	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	4093	-3242	111	0	0	0
	8(OPE)	4111	-3245	111	0	0	0
	10(SUS)	-168	-2640	-158	0	0	0
	11(SUS)	-202	-2640	-163	0	0	0
	12(OPE)	6571	-3623	188	0	0	0
	13(OPE)	1218	-2476	14	0	0	0
	14(OPE)	3854	-2784	129	0	0	0
	15(OPE)	3940	-3159	633	0	0	0
	16(OPE)	3936	-3273	-420	0	0	0
	18(OPE)	4091	-3242	111	0	0	0
	19(OCC)	2478	-381	77	0	0	0
	20(OCC)	-2875	766	-97	0	0	0
	21(OCC)	-238	458	19	0	0	0
	22(OCC)	-153	83	522	0	0	0
	23(OCC)	-157	-32	-531	0	0	0
	24(OCC)	-6	2	1	0	0	0
	25(OCC)	-2	0	-0	0	0	0
	MAX	6571/L12	-4113/L3	633/L15			
300		TYPE=Rigid +Y;					
	3(HYD)	45	-2150	0	0	0	0
	4(OPE)	-187	-628	-20	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	114	-1958	-113	0	0	0
	11(SUS)	130	-1938	-107	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	-193	-665	52	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	-10	-36	5	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	-193	-665	52	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	-10	-36	5	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-193/L13	-2150/L3	-113/L10			
400		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	45	-2375	12	0	0	0
	4(OPE)	-470	-1565	-1028	0	0	0
	6(OPE)	-553	-1845	-522	0	0	0
	8(OPE)	-553	-1842	-531	0	0	0
	10(SUS)	88	-1645	33	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	11(SUS)	99	-1650	30	0	0	0
	12(OPE)	-388	-1293	-841	0	0	0
	13(OPE)	-629	-2096	-222	0	0	0
	14(OPE)	-463	-1542	-535	0	0	0
	15(OPE)	-596	-1988	380	0	0	0
	16(OPE)	-519	-1731	-1417	0	0	0
	18(OPE)	-553	-1845	-521	0	0	0
	19(OCC)	165	551	-319	0	0	0
	20(OCC)	-76	-252	300	0	0	0
	21(OCC)	91	302	-14	0	0	0
	22(OCC)	-43	-143	902	0	0	0
	23(OCC)	34	113	-896	0	0	0
	24(OCC)	-0	-1	4	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	-629/L13	-2375/L3	-1417/L16			
480		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	71	-2652	-17	0	0	0
	4(OPE)	-589	-1963	671	0	0	0
	6(OPE)	-518	-1727	171	0	0	0
	8(OPE)	-518	-1728	173	0	0	0
	10(SUS)	78	-1629	-11	0	0	0
	11(SUS)	85	-1621	-11	0	0	0
	12(OPE)	-690	-2299	168	0	0	0
	13(OPE)	-331	-1103	189	0	0	0
	14(OPE)	-464	-1545	175	0	0	0
	15(OPE)	-488	-1626	514	0	0	0
	16(OPE)	-532	-1772	-168	0	0	0
	18(OPE)	-518	-1727	171	0	0	0
	19(OCC)	-172	-572	-3	0	0	0
	20(OCC)	187	624	18	0	0	0
	21(OCC)	55	182	4	0	0	0
	22(OCC)	30	101	343	0	0	0
	23(OCC)	-13	-45	-339	0	0	0
	24(OCC)	0	0	-1	0	0	0
	25(OCC)	0	0	-0	0	0	0
	MAX	-690/L12	-2652/L3	671/L4			
560		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	-166	-4342	49	0	0	0
	4(OPE)	-968	-3228	208	0	0	0
	6(OPE)	-862	-2875	68	0	0	0
	8(OPE)	-862	-2875	68	0	0	0
	10(SUS)	-90	-2500	32	0	0	0
	11(SUS)	-89	-2488	32	0	0	0
	12(OPE)	-742	-2475	123	0	0	0
	13(OPE)	-1013	-3376	32	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	-774	-2579	68	0	0	0
	15(OPE)	-881	-2938	386	0	0	0
	16(OPE)	-858	-2859	-237	0	0	0
	18(OPE)	-862	-2875	68	0	0	0
	19(OCC)	120	400	55	0	0	0
	20(OCC)	-150	-501	-37	0	0	0
	21(OCC)	89	295	-0	0	0	0
	22(OCC)	-19	-63	318	0	0	0
	23(OCC)	5	16	-305	0	0	0
	24(OCC)	-0	-0	-0	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	-1013/L13	-4342/L3	386/L15			
660		TYPE=Rigid +Y;					
	3(HYD)	-1096	-4258	-114	0	0	0
	4(OPE)	-896	-3001	-82	0	0	0
	6(OPE)	-945	-3460	-429	0	0	0
	8(OPE)	-945	-3460	-429	0	0	0
	10(SUS)	-630	-2463	-65	0	0	0
	11(SUS)	-627	-2451	-65	0	0	0
	12(OPE)	-1093	-4123	-579	0	0	0
	13(OPE)	-757	-2545	103	0	0	0
	14(OPE)	-872	-3132	-349	0	0	0
	15(OPE)	-747	-3200	603	0	0	0
	16(OPE)	-804	-3786	-802	0	0	0
	18(OPE)	-945	-3460	-429	0	0	0
	19(OCC)	-147	-663	-150	0	0	0
	20(OCC)	189	915	532	0	0	0
	21(OCC)	73	328	80	0	0	0
	22(OCC)	198	260	1032	0	0	0
	23(OCC)	141	-326	-373	0	0	0
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	0	-0	-0	0	0	0
	MAX	-1096/L3	-4258/L3	1032/L22			
720		TYPE=Rigid ANC;					
	3(HYD)	1049	1914	57	56	12	-110
	4(OPE)	672	915	-466	147	77	-764
	6(OPE)	858	1594	31	186	197	-243
	8(OPE)	858	1594	31	186	197	-243
	10(SUS)	603	984	33	32	7	-63
	11(SUS)	600	978	32	32	7	-63
	12(OPE)	1496	2292	330	211	244	-339
	13(OPE)	40	666	-332	188	-152	-115
	14(OPE)	795	1448	16	187	156	-239
	15(OPE)	713	1425	239	326	-523	-217
	16(OPE)	454	1863	-324	61	722	-118

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	18(OPE)	858	1594	31	186	197	-243
	19(OCC)	637	698	299	25	47	-97
	20(OCC)	-818	-928	-363	2	-349	128
	21(OCC)	-64	-146	-15	1	-41	3
	22(OCC)	-145	-169	208	140	-720	26
	23(OCC)	-404	268	-355	-125	525	124
	24(OCC)	0	-0	0	0	-0	-0
	25(OCC)	-0	0	-0	-0	0	0
	MAX	1496/L12	2292/L12	-466/L4	326/L15	722/L16	-764/L4
780		TYPE=Rigid ANC;					
	3(HYD)	-47	-2802	-57	35	65	-2025
	4(OPE)	-207	-2466	-546	-17	114	-2058
	6(OPE)	-22	-2246	-368	63	381	-1804
	8(OPE)	-22	-2246	-369	63	381	-1804
	10(SUS)	-27	-1859	-33	20	37	-1171
	11(SUS)	-27	-1853	-33	20	37	-1165
	12(OPE)	606	-2211	-194	135	486	-2380
	13(OPE)	-735	-2259	-240	121	-195	-1058
	14(OPE)	-22	-2019	-311	84	307	-1651
	15(OPE)	61	-2155	865	592	-766	-1690
	16(OPE)	-127	-2304	-1313	-350	1133	-1809
	18(OPE)	-22	-2246	-368	63	381	-1804
	19(OCC)	628	35	174	72	105	-576
	20(OCC)	-713	-13	128	58	-576	746
	21(OCC)	-0	227	57	21	-74	153
	22(OCC)	83	91	1233	529	-1147	113
	23(OCC)	-105	-58	-944	-414	752	-6
	24(OCC)	0	0	0	0	-0	0
	25(OCC)	-0	-0	-0	-0	0	-0
	MAX	-735/L13	-2802/L3	-1313/L16	592/L15	-1147/L22	-2380/L12
860		TYPE=Rigid ANC;					
	3(HYD)	-47	-2802	-57	-209	65	-1824
	4(OPE)	-207	-2466	-546	-2347	114	-1173
	6(OPE)	-22	-2246	-368	-1508	381	-1710
	8(OPE)	-22	-2246	-369	-1509	381	-1710
	10(SUS)	-27	-1859	-33	-120	37	-1057
	11(SUS)	-27	-1853	-33	-119	37	-1052
	12(OPE)	606	-2211	-194	-694	486	-4964
	13(OPE)	-735	-2259	-240	-903	-195	2076
	14(OPE)	-22	-2019	-311	-1243	307	-1557
	15(OPE)	61	-2155	865	4279	-766	-1950
	16(OPE)	-127	-2304	-1313	-5950	1133	-1268
	18(OPE)	-22	-2246	-368	-1508	381	-1710
	19(OCC)	628	35	174	814	105	-3254
	20(OCC)	-713	-13	128	606	-576	3787

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	-0	227	57	265	-74	153
	22(OCC)	83	91	1233	5787	-1147	-240
	23(OCC)	-105	-58	-944	-4441	752	443
	24(OCC)	0	0	0	1	-0	-0
	25(OCC)	-0	-0	-0	-0	0	0
	MAX	-735/L13	-2802/L3	-1313/L16	-5950/L16	-1147/L22	-4964/L12
1040		TYPE=Rigid +Y;					
	3(HYD)	-89	-1996	259	0	0	0
	4(OPE)	897	-3045	-174	0	0	0
	6(OPE)	872	-2944	-142	0	0	0
	8(OPE)	909	-3071	-148	0	0	0
	10(SUS)	-72	-1545	264	0	0	0
	11(SUS)	-71	-1536	265	0	0	0
	12(OPE)	891	-3007	-141	0	0	0
	13(OPE)	930	-3146	-162	0	0	0
	14(OPE)	761	-2572	-126	0	0	0
	15(OPE)	863	-2912	-139	0	0	0
	16(OPE)	890	-3010	-151	0	0	0
	18(OPE)	873	-2949	-142	0	0	0
	19(OCC)	20	-63	2	0	0	0
	20(OCC)	58	-202	-19	0	0	0
	21(OCC)	-110	372	16	0	0	0
	22(OCC)	-9	31	4	0	0	0
	23(OCC)	19	-66	-8	0	0	0
	24(OCC)	-0	1	-0	0	0	0
	25(OCC)	1	-5	-0	0	0	0
	MAX	930/L13	-3146/L13	265/L11			
1230		TYPE=Rigid ANC;					
	3(HYD)	-42	-732	-30	0	0	11
	4(OPE)	2556	15	2593	-0	-0	10
	6(OPE)	1758	-153	1842	0	-0	10
	8(OPE)	1793	-147	1880	0	-0	10
	10(SUS)	-44	-558	-89	0	0	10
	11(SUS)	-44	-554	-90	0	0	10
	12(OPE)	2404	-52	2263	-0	-0	10
	13(OPE)	1076	-263	1407	0	-0	10
	14(OPE)	1782	-87	1845	0	-0	9
	15(OPE)	1913	-188	2442	0	3	10
	16(OPE)	1598	-147	1237	0	-3	10
	18(OPE)	1754	-151	1838	0	-0	10
	19(OCC)	646	100	421	-0	0	0
	20(OCC)	-682	-110	-434	0	0	-0
	21(OCC)	24	66	3	-0	0	-1
	22(OCC)	155	-35	600	-0	3	-0
	23(OCC)	-160	6	-605	-0	-3	-0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	24(OCC)	-9	-4	-8	0	0	0
	25(OCC)	-4	2	-4	0	0	-0
	MAX	2556/L4	-732/L3	2593/L4	-0/L4	-3/L16	11/L3
1231		TYPE=Displ. Reaction;					
	3(HYD)	-42	-942	-30	0	0	0
	4(OPE)	2556	-183	2593	0	0	0
	6(OPE)	1758	-351	1842	0	0	0
	8(OPE)	1793	-346	1880	0	0	0
	10(SUS)	-44	-756	-89	0	0	0
	11(SUS)	-44	-752	-90	0	0	0
	12(OPE)	2456	-251	2263	0	0	0
	13(OPE)	1024	-461	1407	0	0	0
	14(OPE)	1782	-262	1845	0	0	0
	15(OPE)	1913	-386	2493	0	0	0
	16(OPE)	1598	-345	1185	0	0	0
	18(OPE)	1754	-349	1838	0	0	0
	19(OCC)	698	100	421	0	0	0
	20(OCC)	-733	-110	-434	0	0	0
	21(OCC)	24	90	3	0	0	0
	22(OCC)	155	-35	652	0	0	0
	23(OCC)	-160	6	-657	0	0	0
	24(OCC)	-9	-4	-8	0	0	0
	25(OCC)	-4	2	-4	0	0	0
	MAX	2556/L4	-942/L3	2593/L4			
1280		TYPE=Rigid Y; Rigid Z;					
	3(HYD)	33	-3185	29	0	0	0
	4(OPE)	540	-1799	-1613	0	0	0
	6(OPE)	565	-1884	-881	0	0	0
	8(OPE)	544	-1814	-910	0	0	0
	10(SUS)	21	-2779	24	0	0	0
	11(SUS)	21	-2771	24	0	0	0
	12(OPE)	591	-1970	-1284	0	0	0
	13(OPE)	469	-1564	-442	0	0	0
	14(OPE)	500	-1666	-949	0	0	0
	15(OPE)	566	-1887	-119	0	0	0
	16(OPE)	554	-1847	-1586	0	0	0
	18(OPE)	564	-1881	-877	0	0	0
	19(OCC)	26	-86	-403	0	0	0
	20(OCC)	-96	320	439	0	0	0
	21(OCC)	-65	218	-68	0	0	0
	22(OCC)	1	-4	762	0	0	0
	23(OCC)	-11	37	-705	0	0	0
	24(OCC)	-0	1	22	0	0	0
	25(OCC)	-1	3	4	0	0	0
	MAX	591/L12	-3185/L3	-1613/L4			

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1380		TYPE=Rigid Y; Rigid Z;					
	3(HYD)	190	-2240	-5	0	0	0
	4(OPE)	1212	-4041	685	0	0	0
	6(OPE)	1031	-3437	338	0	0	0
	8(OPE)	1022	-3408	348	0	0	0
	10(SUS)	137	-1705	-9	0	0	0
	11(SUS)	136	-1695	-9	0	0	0
	12(OPE)	972	-3239	484	0	0	0
	13(OPE)	1108	-3693	176	0	0	0
	14(OPE)	955	-3184	372	0	0	0
	15(OPE)	1024	-3413	957	0	0	0
	16(OPE)	1035	-3451	-264	0	0	0
	18(OPE)	1032	-3441	335	0	0	0
	19(OCC)	-59	198	146	0	0	0
	20(OCC)	77	-256	-162	0	0	0
	21(OCC)	-76	253	34	0	0	0
	22(OCC)	-7	25	619	0	0	0
	23(OCC)	4	-14	-602	0	0	0
	24(OCC)	3	-10	-4	0	0	0
	25(OCC)	1	-4	-3	0	0	0
	MAX	1212/L4	-4041/L4	957/L15			
1460		TYPE=Rigid +Y; Rigid Z;					
	3(HYD)	-136	-2487	2	0	0	0
	4(OPE)	257	-857	105	0	0	0
	6(OPE)	-324	-1078	102	0	0	0
	8(OPE)	-139	-1088	99	0	0	0
	10(SUS)	-100	-1708	7	0	0	0
	11(SUS)	-99	-1693	7	0	0	0
	12(OPE)	343	-1144	103	0	0	0
	13(OPE)	-298	-993	95	0	0	0
	14(OPE)	-163	-891	92	0	0	0
	15(OPE)	-57	-1112	322	0	0	0
	16(OPE)	-316	-1052	-143	0	0	0
	18(OPE)	-323	-1077	104	0	0	0
	19(OCC)	667	-66	1	0	0	0
	20(OCC)	26	86	-7	0	0	0
	21(OCC)	161	187	-10	0	0	0
	22(OCC)	266	-33	220	0	0	0
	23(OCC)	8	26	-245	0	0	0
	24(OCC)	1	4	-1	0	0	0
	25(OCC)	0	1	2	0	0	0
	MAX	667/L19	-2487/L3	322/L15			
1500		TYPE=Rigid +Y; Rigid Z;					

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	3(HYD)	0	-2951	-2	0	0	0
	4(OPE)	0	-1235	-123	0	0	0
	6(OPE)	0	-1523	12	0	0	0
	8(OPE)	0	-1534	16	0	0	0
	10(SUS)	0	-2042	-6	0	0	0
	11(SUS)	0	-2024	-6	0	0	0
	12(OPE)	0	-1620	42	0	0	0
	13(OPE)	0	-1399	-6	0	0	0
	14(OPE)	0	-1267	9	0	0	0
	15(OPE)	0	-1384	680	0	0	0
	16(OPE)	0	-1641	-620	0	0	0
	18(OPE)	0	-1521	11	0	0	0
	19(OCC)	0	-97	30	0	0	0
	20(OCC)	0	123	-19	0	0	0
	21(OCC)	0	256	-3	0	0	0
	22(OCC)	0	139	668	0	0	0
	23(OCC)	0	-118	-632	0	0	0
	24(OCC)	0	5	1	0	0	0
	25(OCC)	0	1	-1	0	0	0
	MAX		-2951/L3	680/L15			
1520		TYPE=Rigid +Y; Rigid Z w/gap;					
	3(HYD)	-232	-2323	9	0	0	0
	4(OPE)	-285	-986	2855	0	0	0
	6(OPE)	-280	-985	1782	0	0	0
	8(OPE)	-279	-981	1736	0	0	0
	10(SUS)	-173	-1607	10	0	0	0
	11(SUS)	-172	-1593	10	0	0	0
	12(OPE)	-266	-1001	914	0	0	0
	13(OPE)	-286	-981	2674	0	0	0
	14(OPE)	-244	-860	1791	0	0	0
	15(OPE)	-397	-1400	2290	0	0	0
	16(OPE)	-182	-637	1222	0	0	0
	18(OPE)	-280	-985	1786	0	0	0
	19(OCC)	14	-16	-868	0	0	0
	20(OCC)	-6	3	892	0	0	0
	21(OCC)	36	125	9	0	0	0
	22(OCC)	-117	-416	509	0	0	0
	23(OCC)	98	348	-560	0	0	0
	24(OCC)	-1	-2	10	0	0	0
	25(OCC)	-0	-0	5	0	0	0
	MAX	-397/L15	-2323/L3	2855/L4			
1560		TYPE=Rigid +Y; Rigid X w/gap;					
	3(HYD)	-325	-1775	2	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	-6438	-7363	-2008	0	0	0
	6(OPE)	-4796	-6731	-1367	0	0	0
	8(OPE)	-4696	-6733	-1318	0	0	0
	10(SUS)	-225	-1224	-0	0	0	0
	11(SUS)	-223	-1213	-0	0	0	0
	12(OPE)	-2428	-6569	-442	0	0	0
	13(OPE)	-7230	-6888	-2360	0	0	0
	14(OPE)	-4656	-6168	-1244	0	0	0
	15(OPE)	-4635	-6774	-644	0	0	0
	16(OPE)	-5103	-6696	-2028	0	0	0
	18(OPE)	-4805	-6730	-1372	0	0	0
	19(OCC)	2368	162	925	0	0	0
	20(OCC)	-2434	-158	-993	0	0	0
	21(OCC)	140	563	124	0	0	0
	22(OCC)	161	-43	724	0	0	0
	23(OCC)	-308	34	-661	0	0	0
	24(OCC)	-24	1	-12	0	0	0
	25(OCC)	-9	0	-5	0	0	0
	MAX	-7230/L13	-7363/L4	-2360/L13			
1660		TYPE=Rigid ANC;					
	3(HYD)	246	-1067	-18	113	-47	-405
	4(OPE)	571	119	-276	415	-533	1065
	6(OPE)	459	-136	-279	337	-294	653
	8(OPE)	450	-134	-279	337	-280	652
	10(SUS)	171	-792	-12	78	-32	-283
	11(SUS)	169	-786	-12	77	-32	-280
	12(OPE)	880	-165	-307	323	-88	355
	13(OPE)	42	-106	-253	354	-509	955
	14(OPE)	432	-18	-255	330	-319	718
	15(OPE)	346	239	155	899	-795	1194
	16(OPE)	553	-439	-744	-142	256	215
	18(OPE)	459	-137	-279	337	-295	653
	19(OCC)	422	-29	-28	-14	206	-298
	20(OCC)	-416	30	27	17	-215	303
	21(OCC)	-26	119	24	-7	-25	66
	22(OCC)	-113	376	434	562	-501	541
	23(OCC)	94	-303	-465	-479	550	-438
	24(OCC)	2	-0	0	-0	-4	0
	25(OCC)	1	-0	-0	-0	-1	-0
	MAX	880/L12	-1067/L3	-744/L16	899/L15	-795/L15	1194/L15
1700		TYPE=Rigid ANC;					
	3(HYD)	246	-1384	-18	109	-47	-461
	4(OPE)	571	-183	-276	352	-533	934
	6(OPE)	459	-438	-279	273	-294	548
	8(OPE)	450	-436	-279	274	-280	549

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(SUS)	171	-1094	-12	75	-32	-322
	11(SUS)	169	-1088	-12	74	-32	-319
	12(OPE)	959	-467	-307	253	-88	143
	13(OPE)	-36	-408	-253	296	-509	956
	14(OPE)	432	-283	-255	272	-319	620
	15(OPE)	346	-62	233	945	-795	1115
	16(OPE)	553	-741	-823	-323	256	88
	18(OPE)	459	-438	-279	273	-295	548
	19(OCC)	500	-29	-28	-20	206	-405
	20(OCC)	-495	30	27	23	-215	409
	21(OCC)	-26	155	24	-1	-25	72
	22(OCC)	-113	376	513	672	-501	567
	23(OCC)	94	-303	-544	-596	550	-459
	24(OCC)	2	-0	0	-0	-4	-0
	25(OCC)	1	-0	-0	-0	-1	-0
	MAX	959/L12	-1384/L3	-823/L16	945/L15	-795/L15	1115/L15
1780		TYPE=Rigid ANC;					
	3(HYD)	-89	-740	-4	30	41	-4
	4(OPE)	-886	393	367	132	498	-1293
	6(OPE)	-180	-76	292	19	228	-374
	8(OPE)	-180	-76	292	19	228	-374
	10(SUS)	-48	-614	-8	19	18	-3
	11(SUS)	-47	-611	-8	18	18	-3
	12(OPE)	341	114	453	-21	216	-139
	13(OPE)	-749	-287	141	48	262	-640
	14(OPE)	-190	-13	284	18	225	-382
	15(OPE)	-243	-1	607	-78	352	-426
	16(OPE)	-223	-198	-2	92	155	-391
	18(OPE)	-180	-76	292	19	228	-374
	19(OCC)	521	189	160	-40	-12	235
	20(OCC)	-569	-211	-151	29	35	-266
	21(OCC)	-9	62	-8	-1	-3	-8
	22(OCC)	-63	74	314	-97	124	-52
	23(OCC)	-43	-122	-294	73	-73	-17
	24(OCC)	0	0	0	0	0	-0
	25(OCC)	0	0	0	0	0	0
	MAX	-886/L4	-740/L3	607/L15	132/L4	498/L4	-1293/L4
1820		TYPE=Rigid ANC;					
	3(HYD)	89	423	4	-30	-41	-17
	4(OPE)	886	-695	-367	-216	-498	1091
	6(OPE)	180	-226	-292	-86	-228	333
	8(OPE)	180	-226	-292	-86	-228	333
	10(SUS)	48	312	8	-17	-18	-8
	11(SUS)	47	309	8	-16	-18	-8
	12(OPE)	-262	-416	-453	-82	-216	210

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	671	-15	-141	-81	-262	476
	14(OPE)	190	-252	-284	-83	-225	339
	15(OPE)	243	-301	-528	-54	-352	370
	16(OPE)	223	-104	-77	-98	-155	340
	18(OPE)	180	-226	-292	-86	-228	333
	19(OCC)	-442	-189	-160	4	12	-123
	20(OCC)	491	211	151	5	-35	143
	21(OCC)	9	-26	8	2	3	6
	22(OCC)	63	-74	-236	32	-124	37
	23(OCC)	43	122	216	-12	73	7
	24(OCC)	-0	-0	-0	-0	-0	0
	25(OCC)	-0	-0	0	-0	0	-0
	MAX	886/L4	-695/L4	-528/L15	-216/L4	-498/L4	1091/L4
1840		TYPE=Rigid X; Rigid Z w/gap; Rigid Y;					
	3(HYD)	290	-10071	21	0	0	0
	4(OPE)	244	-6883	84	0	0	0
	6(OPE)	459	-7801	451	0	0	0
	8(OPE)	480	-7802	453	0	0	0
	10(SUS)	190	-9485	7	0	0	0
	11(SUS)	188	-9470	7	0	0	0
	12(OPE)	5816	-7796	442	0	0	0
	13(OPE)	-4863	-7806	383	0	0	0
	14(OPE)	303	-6642	261	0	0	0
	15(OPE)	-171	-8416	4553	0	0	0
	16(OPE)	630	-7243	-913	0	0	0
	18(OPE)	457	-7801	451	0	0	0
	19(OCC)	5357	6	-9	0	0	0
	20(OCC)	-5322	-5	-68	0	0	0
	21(OCC)	-156	1159	-190	0	0	0
	22(OCC)	-630	-614	4102	0	0	0
	23(OCC)	171	558	-1364	0	0	0
	24(OCC)	-5	0	-0	0	0	0
	25(OCC)	-2	-0	-0	0	0	0
	MAX	5816/L12	-10071/L3	4553/L15			
1860		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	-0	-7794	3	0	0	0
	4(OPE)	-780	-7795	0	0	0	0
	6(OPE)	-783	-7825	0	0	0	0
	8(OPE)	-782	-7825	0	0	0	0
	10(SUS)	-0	-7658	1	0	0	0
	11(SUS)	-0	-7653	1	0	0	0
	12(OPE)	-775	-7749	0	0	0	0

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	-790	-7903	0	0	0	0
	14(OPE)	-691	-6913	0	0	0	0
	15(OPE)	-474	-7873	3369	0	0	0
	16(OPE)	-536	-7786	-564	0	0	0
	18(OPE)	-783	-7825	0	0	0	0
	19(OCC)	8	77	-0	0	0	0
	20(OCC)	-8	-78	-0	0	0	0
	21(OCC)	91	913	-0	0	0	0
	22(OCC)	309	-47	3368	0	0	0
	23(OCC)	246	39	-565	0	0	0
	24(OCC)	-0	-0	0	0	0	0
	25(OCC)	-0	-0	0	0	0	0
	MAX	-790/L13	-7903/L13	3369/L15			
1880		TYPE=Rigid Y; Rigid Z w/gap;					
	3(HYD)	0	-7790	3	0	0	0
	4(OPE)	-745	-7728	-205	0	0	0
	6(OPE)	-752	-7796	-206	0	0	0
	8(OPE)	-752	-7796	-206	0	0	0
	10(SUS)	0	-7656	1	0	0	0
	11(SUS)	0	-7651	1	0	0	0
	12(OPE)	-746	-7734	-205	0	0	0
	13(OPE)	-758	-7856	-208	0	0	0
	14(OPE)	-664	-6882	-182	0	0	0
	15(OPE)	-541	-7853	569	0	0	0
	16(OPE)	-1322	-7745	-3471	0	0	0
	18(OPE)	-752	-7796	-206	0	0	0
	19(OCC)	6	62	2	0	0	0
	20(OCC)	-6	-60	-2	0	0	0
	21(OCC)	88	913	24	0	0	0
	22(OCC)	211	-57	775	0	0	0
	23(OCC)	-570	51	-3265	0	0	0
	24(OCC)	-0	-0	-0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-1322/L16	-7856/L13	-3471/L16			
1900		TYPE=Rigid X; Rigid Z w/gap; Rigid Y;					
	3(HYD)	163	-10124	11	0	0	0
	4(OPE)	819	-7509	-751	0	0	0
	6(OPE)	1148	-8265	-826	0	0	0
	8(OPE)	1124	-8264	-826	0	0	0
	10(SUS)	125	-9506	3	0	0	0
	11(SUS)	125	-9490	3	0	0	0
	12(OPE)	5880	-8218	-822	0	0	0

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	-3628	-8347	-835	0	0	0
	14(OPE)	1067	-7099	-710	0	0	0
	15(OPE)	1145	-7124	712	0	0	0
	16(OPE)	1281	-9355	-5243	0	0	0
	18(OPE)	1150	-8265	-826	0	0	0
	19(OCC)	4732	47	5	0	0	0
	20(OCC)	-4776	-82	-8	0	0	0
	21(OCC)	-81	1165	117	0	0	0
	22(OCC)	-3	1141	1539	0	0	0
	23(OCC)	134	-1090	-4417	0	0	0
	24(OCC)	6	-0	-0	0	0	0
	25(OCC)	2	-0	-0	0	0	0
	MAX	5880/L12	-10124/L3	-5243/L16			
1985		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	-290	0	0	0	0
	8(OPE)	0	-290	0	0	0	0
	10(SUS)	0	-44	0	0	0	0
	11(SUS)	0	-46	0	0	0	0
	12(OPE)	0	-411	0	0	0	0
	13(OPE)	0	-158	0	0	0	0
	14(OPE)	0	-225	0	0	0	0
	15(OPE)	0	-278	0	0	0	0
	16(OPE)	0	-279	0	0	0	0
	18(OPE)	0	-290	0	0	0	0
	19(OCC)	0	-121	0	0	0	0
	20(OCC)	0	132	0	0	0	0
	21(OCC)	0	66	0	0	0	0
	22(OCC)	0	12	0	0	0	0
	23(OCC)	0	11	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		-411/L12				
2000		TYPE=Rigid +Y; Rigid Z w/gap;					
	3(HYD)	40	-2634	-37	0	0	0
	4(OPE)	-348	-1168	-43	0	0	0
	6(OPE)	-329	-1165	-119	0	0	0
	8(OPE)	-329	-1165	-119	0	0	0
	10(SUS)	29	-1164	-7	0	0	0
	11(SUS)	28	-1135	-7	0	0	0
	12(OPE)	-249	-1134	-232	0	0	0
	13(OPE)	-366	-1221	-20	0	0	0
	14(OPE)	-295	-1039	-100	0	0	0

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	15(OPE)	-293	-1118	358	0	0	0
	16(OPE)	-320	-1264	-692	0	0	0
	18(OPE)	-329	-1165	-119	0	0	0
	19(OCC)	80	32	-113	0	0	0
	20(OCC)	-37	-55	99	0	0	0
	21(OCC)	33	126	19	0	0	0
	22(OCC)	36	48	477	0	0	0
	23(OCC)	9	-99	-573	0	0	0
	24(OCC)	-0	0	0	0	0	0
	25(OCC)	-0	0	0	0	0	0
	MAX	-366/L13	-2634/L3	-692/L16			
2180		TYPE=Rigid +Y; Rigid Z w/gap;					
	3(HYD)	0	-1476	0	0	0	0
	4(OPE)	0	-980	-113	0	0	0
	6(OPE)	0	-1014	-78	0	0	0
	8(OPE)	0	-948	-99	0	0	0
	10(SUS)	0	-1044	0	0	0	0
	11(SUS)	0	-1037	0	0	0	0
	12(OPE)	0	-996	-65	0	0	0
	13(OPE)	0	-961	-150	0	0	0
	14(OPE)	0	-894	-69	0	0	0
	15(OPE)	0	-980	129	0	0	0
	16(OPE)	0	-1025	-386	0	0	0
	18(OPE)	0	-1009	-76	0	0	0
	19(OCC)	0	19	13	0	0	0
	20(OCC)	0	54	-72	0	0	0
	21(OCC)	0	121	9	0	0	0
	22(OCC)	0	34	207	0	0	0
	23(OCC)	0	-11	-308	0	0	0
	24(OCC)	0	7	-34	0	0	0
	25(OCC)	0	5	2	0	0	0
	MAX		-1476/L3	-386/L16			
2190		TYPE=Rigid +Y;					
	3(HYD)	33	-1170	-110	0	0	0
	4(OPE)	-102	-607	-151	0	0	0
	6(OPE)	-94	-564	-141	0	0	0
	8(OPE)	-149	-841	-203	0	0	0
	10(SUS)	24	-830	-78	0	0	0
	11(SUS)	24	-825	-79	0	0	0
	12(OPE)	-19	-507	-151	0	0	0
	13(OPE)	-111	-549	-122	0	0	0
	14(OPE)	-86	-473	-113	0	0	0
	15(OPE)	-198	-755	-110	0	0	0
	16(OPE)	-57	-475	-130	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	18(OPE)	-118	-612	-140	0	0	0
	19(OCC)	75	57	-10	0	0	0
	20(OCC)	-16	15	18	0	0	0
	21(OCC)	8	91	28	0	0	0
	22(OCC)	-104	-191	31	0	0	0
	23(OCC)	37	90	10	0	0	0
	24(OCC)	31	50	-0	0	0	0
	25(OCC)	-24	-47	0	0	0	0
	MAX	-198/L15	-1170/L3	-203/L8			
2220		TYPE=Rigid +Y; Rigid X w/gap;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	-274	0	0	0	0	0
	6(OPE)	-65	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	-1410	0	0	0	0	0
	14(OPE)	-11	0	0	0	0	0
	15(OPE)	-248	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	65	0	0	0	0	0
	20(OCC)	-1345	0	0	0	0	0
	21(OCC)	54	0	0	0	0	0
	22(OCC)	-183	0	0	0	0	0
	23(OCC)	65	0	0	0	0	0
	24(OCC)	65	0	0	0	0	0
	25(OCC)	65	0	0	0	0	0
	MAX	-1410/L13					
2320		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	-2275	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		-2275/L8				
2500		TYPE=Rigid Z w/gap; Rigid X w/gap; Rigid +Y;					
	3(HYD)	-536	-2702	49	0	0	0
	4(OPE)	0	0	37	0	0	0
	6(OPE)	0	0	130	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	-393	-2448	61	0	0	0
	11(SUS)	-395	-2448	60	0	0	0
	12(OPE)	0	0	95	0	0	0
	13(OPE)	0	0	124	0	0	0
	14(OPE)	0	0	16	0	0	0
	15(OPE)	0	0	1366	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	-35	0	0	0
	20(OCC)	0	0	-6	0	0	0
	21(OCC)	0	0	-114	0	0	0
	22(OCC)	0	0	1236	0	0	0
	23(OCC)	0	0	-130	0	0	0
	24(OCC)	0	0	-631	0	0	0
	25(OCC)	0	0	-130	0	0	0
	MAX	-536/L3	-2702/L3	1366/L15			
2600		TYPE=Rigid +Y;					
	3(HYD)	0	-3324	0	0	0	0
	4(OPE)	0	-5522	0	0	0	0
	6(OPE)	0	-5891	0	0	0	0
	8(OPE)	0	-2244	0	0	0	0
	10(SUS)	0	-2380	0	0	0	0
	11(SUS)	0	-2379	0	0	0	0
	12(OPE)	0	-6084	0	0	0	0
	13(OPE)	0	-5840	0	0	0	0
	14(OPE)	0	-4999	0	0	0	0
	15(OPE)	0	-6247	0	0	0	0
	16(OPE)	0	-5255	0	0	0	0
	18(OPE)	0	-4952	0	0	0	0
	19(OCC)	0	-194	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

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	20(OCC)	0	50	0	0	0	0
	21(OCC)	0	892	0	0	0	0
	22(OCC)	0	-356	0	0	0	0
	23(OCC)	0	636	0	0	0	0
	24(OCC)	0	1080	0	0	0	0
	25(OCC)	0	938	0	0	0	0
	MAX		-6247/L15				
2620		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	-444	0	0	0	0
	6(OPE)	0	-170	0	0	0	0
	8(OPE)	0	-1981	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	-251	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	-283	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	170	0	0	0	0
	20(OCC)	0	-80	0	0	0	0
	21(OCC)	0	170	0	0	0	0
	22(OCC)	0	170	0	0	0	0
	23(OCC)	0	-112	0	0	0	0
	24(OCC)	0	170	0	0	0	0
	25(OCC)	0	170	0	0	0	0
	MAX		-1981/L8				
2800		TYPE=Rigid Z; Rigid X; Rigid +Y;					
	3(HYD)	-301	-4694	-41	0	0	0
	4(OPE)	1703	0	2541	0	0	0
	6(OPE)	1889	0	2581	0	0	0
	8(OPE)	-1065	-2301	-285	0	0	0
	10(SUS)	-242	-3849	-22	0	0	0
	11(SUS)	-243	-3844	-22	0	0	0
	12(OPE)	2731	0	2626	0	0	0
	13(OPE)	1077	0	2549	0	0	0
	14(OPE)	1777	0	2519	0	0	0
	15(OPE)	1651	0	3343	0	0	0
	16(OPE)	2195	-348	739	0	0	0
	18(OPE)	3364	0	2328	0	0	0
	19(OCC)	843	0	45	0	0	0
	20(OCC)	-811	0	-33	0	0	0
	21(OCC)	-111	0	-62	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	22(OCC)	-238	0	762	0	0	0
	23(OCC)	307	-348	-1843	0	0	0
	24(OCC)	507	0	-1461	0	0	0
	25(OCC)	1476	0	-254	0	0	0
	MAX	3364/L18	-4694/L3	3343/L15			
3100		TYPE=Rigid +Y;					
	3(HYD)	-0	-256	-77	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	-0	-310	-93	0	0	0
	11(SUS)	-0	-309	-93	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-0/L10	-310/L10	-93/L10			
3120		TYPE=Rigid X;					
	3(HYD)	684	0	0	0	0	0
	4(OPE)	3145	0	0	0	0	0
	6(OPE)	2990	0	0	0	0	0
	8(OPE)	-107	0	0	0	0	0
	10(SUS)	524	0	0	0	0	0
	11(SUS)	525	0	0	0	0	0
	12(OPE)	4599	0	0	0	0	0
	13(OPE)	1854	0	0	0	0	0
	14(OPE)	3015	0	0	0	0	0
	15(OPE)	2759	0	0	0	0	0
	16(OPE)	2846	0	0	0	0	0
	18(OPE)	3300	0	0	0	0	0
	19(OCC)	1609	0	0	0	0	0
	20(OCC)	-1137	0	0	0	0	0
	21(OCC)	25	0	0	0	0	0
	22(OCC)	-231	0	0	0	0	0
	23(OCC)	-144	0	0	0	0	0
	24(OCC)	-777	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	25(OCC)	309	0	0	0	0	0
	MAX	4599/L12					
4140		TYPE=Rigid +Y;					
	3(HYD)	-3	-1860	0	0	0	0
	4(OPE)	-314	-1051	-31	0	0	0
	6(OPE)	-254	-849	13	0	0	0
	8(OPE)	-254	-849	13	0	0	0
	10(SUS)	-3	-774	-5	0	0	0
	11(SUS)	-3	-754	-5	0	0	0
	12(OPE)	-250	-845	43	0	0	0
	13(OPE)	-253	-846	-24	0	0	0
	14(OPE)	-226	-753	8	0	0	0
	15(OPE)	-230	-866	121	0	0	0
	16(OPE)	-233	-818	-77	0	0	0
	18(OPE)	-254	-849	13	0	0	0
	19(OCC)	4	3	30	0	0	0
	20(OCC)	2	3	-38	0	0	0
	21(OCC)	29	96	-5	0	0	0
	22(OCC)	24	-17	108	0	0	0
	23(OCC)	21	31	-90	0	0	0
	24(OCC)	-0	0	-0	0	0	0
	25(OCC)	0	0	-0	0	0	0
	MAX	-314/L4	-1860/L3	121/L15			
4160		TYPE=Rigid +Y; Rigid Z;					
	3(HYD)	-10	-2077	-1	0	0	0
	4(OPE)	-80	-61	204	0	0	0
	6(OPE)	-241	-643	162	0	0	0
	8(OPE)	-241	-643	162	0	0	0
	10(SUS)	-7	-874	0	0	0	0
	11(SUS)	-7	-852	0	0	0	0
	12(OPE)	-272	-645	261	0	0	0
	13(OPE)	-201	-642	29	0	0	0
	14(OPE)	-207	-539	151	0	0	0
	15(OPE)	-341	-639	497	0	0	0
	16(OPE)	-255	-651	-199	0	0	0
	18(OPE)	-241	-643	162	0	0	0
	19(OCC)	-30	-2	99	0	0	0
	20(OCC)	40	1	-133	0	0	0
	21(OCC)	35	104	-11	0	0	0
	22(OCC)	-99	5	335	0	0	0
	23(OCC)	-13	-7	-360	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-341/L15	-2077/L3	497/L15			

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Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
4200		TYPE=Rigid ANC;					
	3(HYD)	12	-516	0	-439	0	30
	4(OPE)	1394	-977	-48	-280	-56	1623
	6(OPE)	945	-502	-64	-179	-75	458
	8(OPE)	945	-502	-64	-179	-75	458
	10(SUS)	8	-318	-0	-180	-0	12
	11(SUS)	8	-314	-0	-175	-0	12
	12(OPE)	1643	-501	-111	-182	-128	458
	13(OPE)	186	-502	-3	-175	-4	458
	14(OPE)	855	-463	-59	-157	-69	456
	15(OPE)	970	-503	-58	-181	-161	460
	16(OPE)	865	-499	-68	-175	14	455
	18(OPE)	945	-502	-64	-179	-75	458
	19(OCC)	697	1	-46	-3	-54	-1
	20(OCC)	-759	-0	61	4	71	0
	21(OCC)	-91	38	5	22	6	-2
	22(OCC)	25	-2	6	-2	-86	2
	23(OCC)	-80	3	-3	4	89	-3
	24(OCC)	0	-0	0	0	0	0
	25(OCC)	0	-0	0	0	0	0
	MAX	1643/L12	-977/L4	-111/L12	-439/L3	-161/L15	1623/L4
4260		TYPE=Rigid ANC;					
	3(HYD)	12	-779	0	-439	0	206
	4(OPE)	1394	-1190	-48	-280	-68	1909
	6(OPE)	945	-715	-64	-179	-91	625
	8(OPE)	945	-715	-64	-179	-91	625
	10(SUS)	8	-531	-0	-180	-0	132
	11(SUS)	8	-526	-0	-175	-0	131
	12(OPE)	1698	-714	-111	-182	-156	624
	13(OPE)	131	-715	-3	-175	-4	625
	14(OPE)	855	-651	-59	-157	-83	608
	15(OPE)	970	-716	-3	-181	-165	627
	16(OPE)	865	-712	-123	-175	-13	621
	18(OPE)	945	-715	-64	-179	-91	625
	19(OCC)	752	1	-46	-3	-65	-1
	20(OCC)	-815	-0	61	4	86	0
	21(OCC)	-91	64	5	22	7	-16
	22(OCC)	25	-2	61	-2	-74	2
	23(OCC)	-80	3	-59	4	77	-4
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	1698/L12	-1190/L4	-123/L16	-439/L3	-165/L15	1909/L4
4320		TYPE=Rigid ANC;					
	3(HYD)	12	-779	0	-439	0	532

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	1394	-1190	-48	-404	-90	-1170
	6(OPE)	945	-715	-64	-346	-120	-1506
	8(OPE)	945	-715	-64	-346	-120	-1506
	10(SUS)	8	-531	-0	-180	-0	355
	11(SUS)	8	-526	-0	-176	-0	352
	12(OPE)	1698	-714	-111	-470	-207	-3463
	13(OPE)	131	-715	-3	-183	-6	613
	14(OPE)	855	-651	-59	-310	-110	-1316
	15(OPE)	970	-716	-3	-189	-166	-1567
	16(OPE)	865	-712	-123	-495	-70	-1302
	18(OPE)	945	-715	-64	-346	-120	-1506
	19(OCC)	752	1	-46	-123	-87	-1957
	20(OCC)	-815	-0	61	163	114	2119
	21(OCC)	-91	64	5	36	10	190
	22(OCC)	25	-2	61	158	-46	-61
	23(OCC)	-80	3	-59	-149	50	204
	24(OCC)	0	0	0	0	0	-0
	25(OCC)	0	0	0	0	0	-0
	MAX	1698/L12	-1190/L4	-123/L16	-495/L16	-207/L12	-3463/L12
4340		TYPE=Rigid +Y;					
	3(HYD)	97	-2755	21	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	-60	-746	216	0	0	0
	8(OPE)	-60	-746	216	0	0	0
	10(SUS)	55	-1583	9	0	0	0
	11(SUS)	54	-1575	9	0	0	0
	12(OPE)	238	-812	51	0	0	0
	13(OPE)	-187	-677	80	0	0	0
	14(OPE)	-54	-557	158	0	0	0
	15(OPE)	-109	-831	224	0	0	0
	16(OPE)	49	-686	-68	0	0	0
	18(OPE)	-60	-746	216	0	0	0
	19(OCC)	298	-66	-164	0	0	0
	20(OCC)	-127	69	-136	0	0	0
	21(OCC)	6	189	-57	0	0	0
	22(OCC)	-49	-85	9	0	0	0
	23(OCC)	109	60	-284	0	0	0
	24(OCC)	-0	-0	0	0	0	0
	25(OCC)	0	0	-0	0	0	0
	MAX	298/L19	-2755/L3	-284/L23			
4360		TYPE=Rigid +Y;					
	3(HYD)	-154	-2490	-3	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(SUS)	-108	-1725	-2	0	0	0
	11(SUS)	-107	-1710	-2	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-154/L3	-2490/L3	-3/L3			
4385		TYPE=Rigid +Y;					
	3(HYD)	-108	-2507	-6	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	-76	-1736	-4	0	0	0
	11(SUS)	-75	-1721	-4	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	-108/L3	-2507/L3	-6/L3			
4480		TYPE=Rigid ANC;					
	3(HYD)	246	-1067	18	-113	47	-405
	4(OPE)	-435	394	-297	-446	-374	1425
	6(OPE)	-301	56	-243	-321	-242	907
	8(OPE)	-295	55	-243	-322	-229	903
	10(SUS)	171	-792	12	-78	32	-283
	11(SUS)	169	-786	12	-77	32	-280
	12(OPE)	373	-34	-221	-290	50	540

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	-979	145	-266	-350	-543	1277
	14(OPE)	-318	179	-228	-331	-263	978
	15(OPE)	-272	29	174	117	-726	863
	16(OPE)	-324	69	-694	-697	294	934
	18(OPE)	-301	55	-243	-321	-243	907
	19(OCC)	674	-89	22	31	292	-367
	20(OCC)	-678	90	-23	-28	-301	370
	21(OCC)	-17	123	15	-10	-21	71
	22(OCC)	29	-27	417	438	-483	-44
	23(OCC)	-23	13	-451	-375	536	27
	24(OCC)	-2	0	-0	0	-3	1
	25(OCC)	-0	-0	-0	0	-1	0
	MAX	-979/L13	-1067/L3	-694/L16	-697/L16	-726/L15	1425/L4
4500		TYPE=Rigid ANC;					
	3(HYD)	246	-1384	18	-109	47	-461
	4(OPE)	-435	92	-297	-514	-374	1525
	6(OPE)	-301	-246	-243	-377	-242	976
	8(OPE)	-295	-247	-243	-377	-229	970
	10(SUS)	171	-1094	12	-75	32	-322
	11(SUS)	169	-1088	12	-74	32	-319
	12(OPE)	452	-335	-221	-341	50	444
	13(OPE)	-1058	-157	-266	-410	-543	1512
	14(OPE)	-318	-87	-228	-383	-263	1051
	15(OPE)	-272	-273	253	167	-726	925
	16(OPE)	-324	-233	-773	-866	294	1009
	18(OPE)	-301	-246	-243	-377	-243	976
	19(OCC)	752	-89	22	36	292	-532
	20(OCC)	-757	90	-23	-34	-301	536
	21(OCC)	-17	159	15	-7	-21	75
	22(OCC)	29	-27	496	544	-483	-51
	23(OCC)	-23	13	-530	-489	536	33
	24(OCC)	-2	0	-0	0	-3	2
	25(OCC)	-0	-0	-0	0	-1	0
	MAX	-1058/L13	-1384/L3	-773/L16	-866/L16	-726/L15	1525/L4
4520		TYPE=Rigid ANC;					
	3(HYD)	50	-723	41	-52	38	83
	4(OPE)	255	685	-478	-99	-106	-612
	6(OPE)	74	-26	-278	-26	-117	-216
	8(OPE)	74	-26	-278	-26	-117	-216
	10(SUS)	21	-603	20	-26	17	39
	11(SUS)	21	-600	19	-25	17	39
	12(OPE)	361	93	-384	-4	-171	-113
	13(OPE)	-176	-159	-147	-56	-34	-296
	14(OPE)	72	41	-278	-22	-116	-221
	15(OPE)	124	-27	22	-145	-16	-168

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OPE)	108	-55	-525	77	-153	-212
	18(OPE)	74	-26	-278	-26	-117	-216
	19(OCC)	287	119	-107	22	-54	103
	20(OCC)	-250	-133	130	-29	83	-79
	21(OCC)	-2	67	-0	4	1	-5
	22(OCC)	50	-1	299	-119	102	48
	23(OCC)	34	-29	-247	103	-35	4
	24(OCC)	-0	0	-0	0	-0	-0
	25(OCC)	-0	0	-0	0	0	-0
	MAX	361/L12	-723/L3	-525/L16	-145/L15	-171/L12	-612/L4
4540		TYPE=Rigid ANC;					
	3(HYD)	-50	406	-41	42	-38	-71
	4(OPE)	-255	-986	478	208	106	671
	6(OPE)	-74	-276	278	90	117	233
	8(OPE)	-74	-276	278	90	117	233
	10(SUS)	-21	301	-20	22	-17	-35
	11(SUS)	-21	299	-19	21	-17	-34
	12(OPE)	-283	-395	384	92	171	189
	13(OPE)	97	-143	147	89	34	262
	14(OPE)	-72	-306	278	86	116	237
	15(OPE)	-124	-275	57	147	16	196
	16(OPE)	-108	-246	447	36	153	237
	18(OPE)	-74	-276	278	90	117	233
	19(OCC)	-209	-119	107	2	54	-44
	20(OCC)	171	133	-130	-1	-83	29
	21(OCC)	2	-31	0	-4	-1	4
	22(OCC)	-50	1	-221	57	-102	-37
	23(OCC)	-34	29	169	-54	35	4
	24(OCC)	0	-0	0	0	0	0
	25(OCC)	0	-0	0	0	0	0
	MAX	-283/L12	-986/L4	478/L4	208/L4	171/L12	671/L4
4670		TYPE=Rigid +Y;					
	3(HYD)	0	-845	0	0	0	0
	4(OPE)	0	-2036	0	0	0	0
	6(OPE)	0	-1373	0	0	0	0
	8(OPE)	0	-1373	0	0	0	0
	10(SUS)	0	-408	0	0	0	0
	11(SUS)	0	-400	0	0	0	0
	12(OPE)	0	-1511	0	0	0	0
	13(OPE)	0	-1261	0	0	0	0
	14(OPE)	0	-1275	0	0	0	0
	15(OPE)	0	-1572	0	0	0	0
	16(OPE)	0	-1231	0	0	0	0
	18(OPE)	0	-1373	0	0	0	0
	19(OCC)	0	-138	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	20(OCC)	0	112	0	0	0	0
	21(OCC)	0	97	0	0	0	0
	22(OCC)	0	-200	0	0	0	0
	23(OCC)	0	142	0	0	0	0
	24(OCC)	0	-0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		-2036/L4				
4680		TYPE=Rigid +Y;					
	3(HYD)	0	-979	0	0	0	0
	4(OPE)	0	-1712	0	0	0	0
	6(OPE)	0	-1004	0	0	0	0
	8(OPE)	0	-1004	0	0	0	0
	10(SUS)	0	-534	0	0	0	0
	11(SUS)	0	-523	0	0	0	0
	12(OPE)	0	-1088	0	0	0	0
	13(OPE)	0	-851	0	0	0	0
	14(OPE)	0	-949	0	0	0	0
	15(OPE)	0	-923	0	0	0	0
	16(OPE)	0	-933	0	0	0	0
	18(OPE)	0	-1004	0	0	0	0
	19(OCC)	0	-84	0	0	0	0
	20(OCC)	0	153	0	0	0	0
	21(OCC)	0	55	0	0	0	0
	22(OCC)	0	81	0	0	0	0
	23(OCC)	0	71	0	0	0	0
	24(OCC)	0	-0	0	0	0	0
	25(OCC)	0	-0	0	0	0	0
	MAX		-1712/L4				
4690		TYPE=Rigid +Y;					
	3(HYD)	0	-949	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	0	-595	0	0	0	0
	11(SUS)	0	-583	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX		-949/L3				
4710		TYPE=Rigid +Y;					
	3(HYD)	292	-992	-58	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(OPE)	0	0	0	0	0	0
	10(SUS)	217	-728	27	0	0	0
	11(SUS)	215	-723	31	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OPE)	0	0	0	0	0	0
	18(OPE)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	22(OCC)	0	0	0	0	0	0
	23(OCC)	0	0	0	0	0	0
	24(OCC)	0	0	0	0	0	0
	25(OCC)	0	0	0	0	0	0
	MAX	292/L3	-992/L3	-58/L3			
5000		TYPE=Rigid +Y;					
	3(HYD)	141	-3523	68	0	0	0
	4(OPE)	-309	-4355	1269	0	0	0
	6(OPE)	-299	-4301	1255	0	0	0
	8(OPE)	688	-2341	-139	0	0	0
	10(SUS)	104	-2146	51	0	0	0
	11(SUS)	104	-2145	51	0	0	0
	12(OPE)	-346	-4331	1252	0	0	0
	13(OPE)	-276	-4308	1263	0	0	0
	14(OPE)	-286	-4009	1168	0	0	0
	15(OPE)	-436	-4048	1133	0	0	0
	16(OPE)	-227	-4363	1289	0	0	0
	18(OPE)	-299	-4338	1267	0	0	0
	19(OCC)	-47	-29	-3	0	0	0
	20(OCC)	23	-6	7	0	0	0
	21(OCC)	13	293	-87	0	0	0
	22(OCC)	-137	253	-122	0	0	0
	23(OCC)	72	-62	34	0	0	0
	24(OCC)	17	-157	52	0	0	0
	25(OCC)	-0	-37	11	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	688/L8	-4363/L16	1289/L16			
5010		TYPE=Rigid +Y; Rigid X;					
	3(HYD)	-38	-16023	41	0	0	0
	4(OPE)	-220	-7803	2341	0	0	0
	6(OPE)	-215	-7802	2341	0	0	0
	8(OPE)	-1157	-8710	-2613	0	0	0
	10(SUS)	-28	-8666	31	0	0	0
	11(SUS)	-28	-8655	31	0	0	0
	12(OPE)	3854	-7846	2354	0	0	0
	13(OPE)	-3847	-7778	2333	0	0	0
	14(OPE)	-375	-6780	2034	0	0	0
	15(OPE)	-275	-7913	2374	0	0	0
	16(OPE)	224	-7753	2326	0	0	0
	18(OPE)	-224	-7830	2349	0	0	0
	19(OCC)	4069	-43	13	0	0	0
	20(OCC)	-3632	25	-7	0	0	0
	21(OCC)	-160	1022	-307	0	0	0
	22(OCC)	-61	-111	33	0	0	0
	23(OCC)	439	49	-15	0	0	0
	24(OCC)	-35	-9	3	0	0	0
	25(OCC)	-9	-28	8	0	0	0
	MAX	4069/L19	-16023/L3	-2613/L8			
5050		TYPE=Rigid +Y;					
	3(HYD)	10	-8441	-2	0	0	0
	4(OPE)	-1130	-4915	947	0	0	0
	6(OPE)	-1130	-4920	949	0	0	0
	8(OPE)	1343	-4535	-218	0	0	0
	10(SUS)	7	-4578	-2	0	0	0
	11(SUS)	7	-4572	-2	0	0	0
	12(OPE)	-804	-4889	1227	0	0	0
	13(OPE)	-1298	-4937	714	0	0	0
	14(OPE)	-959	-4361	890	0	0	0
	15(OPE)	-357	-4873	1418	0	0	0
	16(OPE)	-1443	-4934	330	0	0	0
	18(OPE)	-1125	-4897	945	0	0	0
	19(OCC)	326	31	277	0	0	0
	20(OCC)	-167	-17	-236	0	0	0
	21(OCC)	172	559	-59	0	0	0
	22(OCC)	773	47	468	0	0	0
	23(OCC)	-313	-15	-619	0	0	0
	24(OCC)	9	26	-1	0	0	0
	25(OCC)	5	23	-4	0	0	0
	MAX	-1443/L16	-8441/L3	1418/L15			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
5080		TYPE=Rigid +Y; Rigid X w/gap;					
	3(HYD)	-0	-14564	1	0	0	0
	4(OPE)	-117	-7858	2355	0	0	0
	6(OPE)	-119	-7857	2354	0	0	0
	8(OPE)	-785	-7913	-681	0	0	0
	10(SUS)	-0	-7906	0	0	0	0
	11(SUS)	-0	-7896	0	0	0	0
	12(OPE)	1529	-7863	2349	0	0	0
	13(OPE)	-2474	-7854	2335	0	0	0
	14(OPE)	-100	-6910	2071	0	0	0
	15(OPE)	84	-7864	2358	0	0	0
	16(OPE)	-1125	-7855	1020	0	0	0
	18(OPE)	-119	-7861	2355	0	0	0
	19(OCC)	1648	-5	-5	0	0	0
	20(OCC)	-2355	3	-19	0	0	0
	21(OCC)	19	947	-284	0	0	0
	22(OCC)	204	-7	4	0	0	0
	23(OCC)	-1005	2	-1335	0	0	0
	24(OCC)	-9	-5	1	0	0	0
	25(OCC)	-0	-4	1	0	0	0
	MAX	-2474/L13	-14564/L3	2358/L15			
5090		TYPE=Rigid +Y; Rigid X;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	384	0	0	0	0	0
	6(OPE)	387	0	0	0	0	0
	8(OPE)	201	0	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	12(OPE)	619	0	0	0	0	0
	13(OPE)	499	0	0	0	0	0
	14(OPE)	344	0	0	0	0	0
	15(OPE)	2	0	0	0	0	0
	16(OPE)	1040	0	0	0	0	0
	18(OPE)	386	0	0	0	0	0
	19(OCC)	232	0	0	0	0	0
	20(OCC)	112	0	0	0	0	0
	21(OCC)	-43	0	0	0	0	0
	22(OCC)	-385	0	0	0	0	0
	23(OCC)	653	0	0	0	0	0
	24(OCC)	4	0	0	0	0	0
	25(OCC)	-0	0	0	0	0	0
	MAX	1040/L16					
5110		TYPE=Rigid +Y; Rigid Z					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
		w/gap; Rigid X w/gap;					
	3(HYD)	112	-3994	72	0	0	0
	4(OPE)	-3563	-3905	-9019	0	0	0
	6(OPE)	-3596	-3898	-9194	0	0	0
	8(OPE)	388	-2287	4195	0	0	0
	10(SUS)	80	-2300	55	0	0	0
	11(SUS)	80	-2297	55	0	0	0
	12(OPE)	-2926	-3891	-9583	0	0	0
	13(OPE)	-4234	-3896	-8846	0	0	0
	14(OPE)	-3537	-3622	-8383	0	0	0
	15(OPE)	-3532	-3708	-2763	0	0	0
	16(OPE)	-3755	-4138	-14969	0	0	0
	18(OPE)	-3421	-3916	-8817	0	0	0
	19(OCC)	669	7	-388	0	0	0
	20(OCC)	-639	3	348	0	0	0
	21(OCC)	59	276	811	0	0	0
	22(OCC)	64	190	6431	0	0	0
	23(OCC)	-159	-239	-5775	0	0	0
	24(OCC)	20	-160	-133	0	0	0
	25(OCC)	175	-18	377	0	0	0
	MAX	-4234/L13	-4138/L16	-14969/L16			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP
CASE 10 (SUS) W+P1+H
CASE 11 (SUS) WNC+H
CASE 26 (OCC) L26=L19+L10
CASE 27 (OCC) L27=L20+L10
CASE 28 (OCC) L28=L21+L10
CASE 29 (OCC) L29=L22+L10
CASE 30 (OCC) L30=L23+L10
CASE 31 (OCC) L31=L24+L10
CASE 32 (OCC) L32=L25+L10
CASE 33 (EXP) L33=L4-L10
CASE 34 (EXP) L34=L6-L10
CASE 35 (EXP) L35=L4-L6
CASE 36 (EXP) L36=L8-L10
CASE 37 (EXP) L37=L4-L8
CASE 38 (EXP) L38=L6-L8

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 3 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 3 (HYD) WW+HP			
Ratio (%):	38.9	@Node	2000
Code Stress:	66978.2	Allowable Stress:	172368.9
Axial Stress:	38450.5	@Node	1920
Bending Stress:	46793.2	@Node	5010
Torsion Stress:	9806.5	@Node	5059
Hoop Stress:	78278.3	@Node	1929
Max Stress Intensity:	84189.9	@Node	2000

CODE STRESS CHECK PASSED : LOADCASE 10 (SUS) W+P1+H

Highest Stresses: (KPa) LOADCASE 10 (SUS) W+P1+H			
Ratio (%):	61.4	@Node	5010
Code Stress:	79437.3	Allowable Stress:	129365.3
Axial Stress:	25635.2	@Node	4649
Bending Stress:	67350.9	@Node	5010
Torsion Stress:	14114.6	@Node	5059
Hoop Stress:	52185.5	@Node	1929
Max Stress Intensity:	79447.7	@Node	5010

CODE STRESS CHECK PASSED : LOADCASE 11 (SUS) WNC+H

Highest Stresses: (KPa) LOADCASE 11 (SUS) WNC+H			
Ratio (%):	52.0	@Node	5010
Code Stress:	67291.7	Allowable Stress:	129365.3
Axial Stress:	2321.6	@Node	660
Bending Stress:	67266.2	@Node	5010
Torsion Stress:	14096.8	@Node	5059

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Hoop Stress:                  0.0       @Node     58
Max Stress Intensity:       67291.7     @Node   5010

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L19+L10

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L19+L10
Ratio (%):                    68.7       @Node   5010
Code Stress:                118171.7     Allowable Stress:     172055.9
Axial Stress:                25640.5     @Node   4670
Bending Stress:             105934.1     @Node   5010
Torsion Stress:              18863.2     @Node    280
Hoop Stress:                 52185.5     @Node   1929
Max Stress Intensity:       118185.8     @Node   5010

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L20+L10

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L20+L10
Ratio (%):                    65.4       @Node   5010
Code Stress:                112508.6     Allowable Stress:     172055.9
Axial Stress:                26011.9     @Node   4260
Bending Stress:             102837.5     @Node    280
Torsion Stress:              20485.7     @Node    280
Hoop Stress:                 52185.5     @Node   1929
Max Stress Intensity:       121450.3     @Node    280

 CODE STRESS CHECK PASSED      : LOADCASE 28 (OCC) L28=L21+L10

Highest Stresses: (   KPa    ) LOADCASE 28 (OCC) L28=L21+L10
Ratio (%):                    50.9       @Node   5010
Code Stress:                 87530.3     Allowable Stress:     172055.9
Axial Stress:                25653.1     @Node   4650
Bending Stress:              75244.7     @Node   5010
Torsion Stress:              12420.1     @Node   5059
Hoop Stress:                 52185.5     @Node   1929
Max Stress Intensity:        87551.9     @Node   5010

 CODE STRESS CHECK PASSED      : LOADCASE 29 (OCC) L29=L22+L10

Highest Stresses: (   KPa    ) LOADCASE 29 (OCC) L29=L22+L10
Ratio (%):                    89.8       @Node   5029
Code Stress:                154499.5     Allowable Stress:     172055.9
Axial Stress:                25660.3     @Node   4650
Bending Stress:             188822.4     @Node   5029
Torsion Stress:              16138.3     @Node   2460
Hoop Stress:                 52185.5     @Node   1929
Max Stress Intensity:       201698.7     @Node   5029

 CODE STRESS CHECK PASSED      : LOADCASE 30 (OCC) L30=L23+L10

Highest Stresses: (   KPa    ) LOADCASE 30 (OCC) L30=L23+L10
Ratio (%):                    64.7       @Node   5029
Code Stress:                111314.3     Allowable Stress:     172055.9
Axial Stress:                25687.0     @Node   1920
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Bending Stress:            131703.1       @Node   5029
Torsion Stress:             14300.2       @Node   2200
Hoop Stress:                52185.5       @Node   1929
Max Stress Intensity:      144233.8       @Node   5029

 CODE STRESS CHECK PASSED      : LOADCASE 31 (OCC) L31=L24+L10

Highest Stresses: (   KPa    ) LOADCASE 31 (OCC) L31=L24+L10
Ratio (%):                     46.8       @Node   5010
Code Stress:                80471.1       Allowable Stress:     172055.9
Axial Stress:               25635.2       @Node   4649
Bending Stress:             74043.0       @Node   2280
Torsion Stress:             18504.1       @Node   2460
Hoop Stress:                52185.5       @Node   1929
Max Stress Intensity:       94871.7       @Node   2280

 CODE STRESS CHECK PASSED      : LOADCASE 32 (OCC) L32=L25+L10

Highest Stresses: (   KPa    ) LOADCASE 32 (OCC) L32=L25+L10
Ratio (%):                     46.7       @Node   5010
Code Stress:                80278.2       Allowable Stress:     172055.9
Axial Stress:               25635.2       @Node   4649
Bending Stress:             67760.9       @Node   5010
Torsion Stress:             14112.6       @Node   5059
Hoop Stress:                52185.5       @Node   1929
Max Stress Intensity:       80288.6       @Node   5010

 CODE STRESS CHECK PASSED      : LOADCASE 33 (EXP) L33=L4-L10

Highest Stresses: (   KPa    ) LOADCASE 33 (EXP) L33=L4-L10
Ratio (%):                     41.1       @Node    280
Code Stress:               122809.1       Allowable Stress:     299163.2
Axial Stress:                2190.4       @Node   3140
Bending Stress:            112479.1       @Node   2030
Torsion Stress:             41007.1       @Node    280
Hoop Stress:                    0.0       @Node     58
Max Stress Intensity:      248310.0       @Node    280

 CODE STRESS CHECK PASSED      : LOADCASE 34 (EXP) L34=L6-L10

Highest Stresses: (   KPa    ) LOADCASE 34 (EXP) L34=L6-L10
Ratio (%):                     37.9       @Node   2030
Code Stress:               116895.9       Allowable Stress:     308542.3
Axial Stress:                1764.2       @Node   3140
Bending Stress:            115119.9       @Node   2030
Torsion Stress:             29500.6       @Node    280
Hoop Stress:                    0.0       @Node     58
Max Stress Intensity:      231177.8       @Node   2030

 CODE STRESS CHECK PASSED      : LOADCASE 35 (EXP) L35=L4-L6

Highest Stresses: (   KPa    ) LOADCASE 35 (EXP) L35=L4-L6
Ratio (%):                     13.5       @Node   4098
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
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Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Code Stress:	34706.1	Allowable Stress:	256820.6
Axial Stress:	520.8	@Node	1539
Bending Stress:	34362.1	@Node	4098
Torsion Stress:	11506.5	@Node	280
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	60324.3	@Node	280

CODE STRESS CHECK PASSED : LOADCASE 36 (EXP) L36=L8-L10

Highest Stresses: (KPa) LOADCASE 36 (EXP) L36=L8-L10			
Ratio (%):	31.8	@Node	280
Code Stress:	95167.6	Allowable Stress:	299163.2
Axial Stress:	2211.0	@Node	2700
Bending Stress:	80873.6	@Node	280
Torsion Stress:	30053.7	@Node	280
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	191136.5	@Node	280

CODE STRESS CHECK PASSED : LOADCASE 37 (EXP) L37=L4-L8

Highest Stresses: (KPa) LOADCASE 37 (EXP) L37=L4-L8			
Ratio (%):	39.3	@Node	2030
Code Stress:	121146.0	Allowable Stress:	308542.3
Axial Stress:	2951.2	@Node	2400
Bending Stress:	119695.8	@Node	2030
Torsion Stress:	14297.1	@Node	2400
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	239779.9	@Node	2030

CODE STRESS CHECK PASSED : LOADCASE 38 (EXP) L38=L6-L8

Highest Stresses: (KPa) LOADCASE 38 (EXP) L38=L6-L8			
Ratio (%):	40.1	@Node	2030
Code Stress:	123802.8	Allowable Stress:	308542.3
Axial Stress:	3096.0	@Node	2400
Bending Stress:	122336.1	@Node	2030
Torsion Stress:	16022.7	@Node	3000
Hoop Stress:	0.0	@Node	58
Max Stress Intensity:	245091.1	@Node	2030

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
HANGER REPORT ((TABLE DATA FROM DESIGN RUNS)) 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

HANGER REPORT
(TABLE DATA FROM DESIGN RUNS)

NODE	NUM RQD	FIG. NO.	SIZE	VERTICAL MOVEMENT (mm.)	HOT LOAD (N.)	THEORETICAL INSTALLED LOAD (N.)	ACTUAL INSTALLED LOAD (N.)	SPRING RATE (N./cm.)	HORIZONTAL MOVEMENT (mm.)
160	1		2931	-0.120	2647.	2639.	0.	667.	0.000

LISEGA LOAD VARIATION = 0%

** VARIABLE SUPPORT SPRING DESIGNED ..... SHORT RANGE
MINIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 1668.083
MAXIMUM ALLOWED SINGLE SPRING LOAD ..... (N.) 5004.250
RECOMMENDED INSTALLATION CLEARANCE ..... (mm.) 203.200

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HGR) CASE NOT ACTIVE
2 (HGR) CASE NOT ACTIVE
3 (HYD) WW+HP
4 (OPE) W+D1+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+D1+T2+P1+H
7 (Alt-SUS) W+P1+H
8 (OPE) W+D1+T3+P1+H
9 (Alt-SUS) W+P1+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+D1+T2+P1+H+U1
13 (OPE) W+D1+T2+P1+H-U1
14 (OPE) W+D1+T2+P1+H+U2
15 (OPE) W+D1+T2+P1+H+U3
16 (OPE) W+D1+T2+P1+H-U3
17 (OPE) W+D1+T2+P1+H+F1
18 (OPE) W+D1+T2+P1+H+F2
19 (OCC) L19=L12-L6
20 (OCC) L20=L13-L6
21 (OCC) L21=L14-L6
22 (OCC) L22=L15-L6
23 (OCC) L23=L16-L6
24 (OCC) L24=L17-L6
25 (OCC) L25=L18-L6
26 (OCC) L26=L19+L10
27 (OCC) L27=L20+L10
28 (OCC) L28=L21+L10
29 (OCC) L29=L22+L10
30 (OCC) L30=L23+L10
31 (OCC) L31=L24+L10
32 (OCC) L32=L25+L10
33 (EXP) L33=L4-L10
34 (EXP) L34=L6-L10
35 (EXP) L35=L4-L6
36 (EXP) L36=L8-L10
37 (EXP) L37=L4-L8
38 (EXP) L38=L6-L8

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 4 (OPE) W+D1+T1+P1+H
CASE 6 (OPE) W+D1+T2+P1+H
CASE 8 (OPE) W+D1+T3+P1+H
CASE 10 (SUS) W+P1+H
CASE 11 (SUS) WNC+H

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
780		Absolute Method								
	Limits	11201	11201	8400		6720	4480	5820		
	4(OPE)	2466	-546	207	0.220	-114	-2058	17	0.459	
	6(OPE)	2246	-368	22	0.201	-381	-1804	-63	0.403	
	8(OPE)	2246	-369	22	0.201	-381	-1804	-63	0.403	
	10(SUS)	1859	-33	27	0.166	-37	-1171	-20	0.261	
	11(SUS)	1853	-33	27	0.165	-37	-1165	-20	0.260	
1230		Absolute Method								
	Limits	8500	8500	6500		6000	2000	5000		
	4(OPE)	2556	15	2593	0.399	-0	-0	10	0.002	
	6(OPE)	1758	-153	1842	0.283	0	-0	10	0.002	
	8(OPE)	1793	-147	1880	0.289	0	-0	10	0.002	
	10(SUS)	-44	-558	-89	0.066	0	0	10	0.002	
	11(SUS)	-44	-554	-90	0.065	0	0	10	0.002	
4500		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	-92	-297	435	0.109	374	1525	514	0.935	
	6(OPE)	246	-243	301	0.075	242	976	377	0.599	
	8(OPE)	247	-243	295	0.074	229	970	377	0.595	

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
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NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
	10(SUS)	1094	12	-171	0.217	-32	-322	75	0.197	
	11(SUS)	1088	12	-169	0.216	-32	-319	74	0.196	
4520		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	-685	-478	-255	0.136	106	-612	99	0.376	
	6(OPE)	26	-278	-74	0.055	117	-216	26	0.133	
	8(OPE)	26	-278	-74	0.055	117	-216	26	0.133	
	10(SUS)	603	20	-21	0.120	-17	39	26	0.024	
	11(SUS)	600	19	-21	0.119	-17	39	25	0.024	
1700		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	183	-276	-571	0.143	533	934	-352	0.573	
	6(OPE)	438	-279	-459	0.115	294	548	-273	0.336	
	8(OPE)	436	-279	-450	0.113	280	549	-274	0.337	
	10(SUS)	1094	-12	-171	0.217	32	-322	-75	0.197	
	11(SUS)	1088	-12	-169	0.216	32	-319	-74	0.196	
1780		Absolute Method								
	Limits	5030	5030	4000		3050	1630	2140		
	4(OPE)	-393	367	886	0.221	-498	-1293	-132	0.793	
	6(OPE)	76	292	180	0.058	-228	-374	-19	0.229	
	8(OPE)	76	292	180	0.058	-228	-374	-19	0.229	
	10(SUS)	614	-8	48	0.122	-18	-3	-19	0.009	
	11(SUS)	611	-8	47	0.121	-18	-3	-18	0.009	

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 19, 2024 Time: 15:11
Job:: BNK-GCS-CN-037-D03
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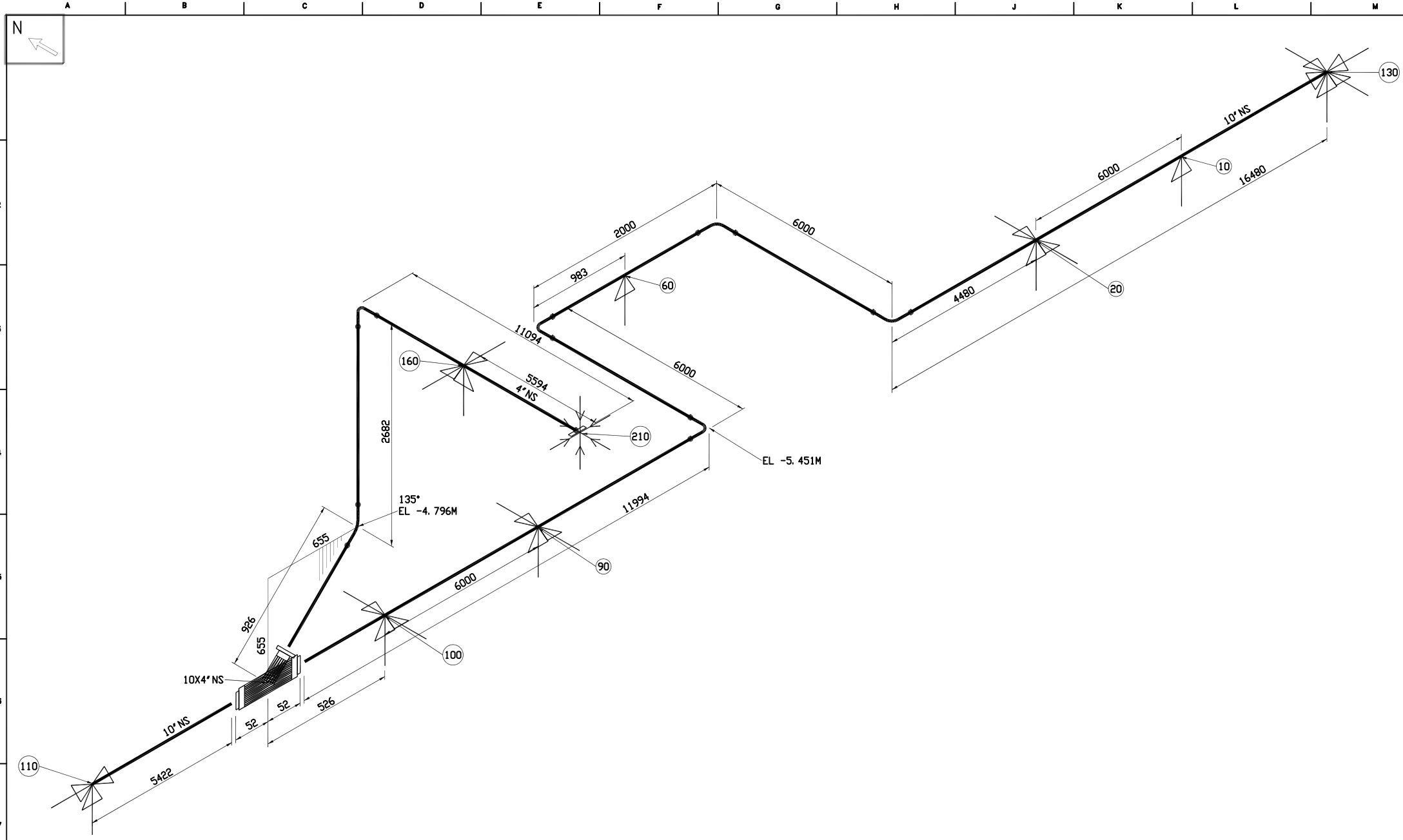
NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
4260		Absolute Method								
	Limits	8400	8400	6300		3780	2520	3280		
	4(OPE)	1394	-1190	-48	0.166	-280	-68	1909	0.582	
	6(OPE)	945	-715	-64	0.113	-179	-91	625	0.190	
	8(OPE)	945	-715	-64	0.113	-179	-91	625	0.190	
	10(SUS)	8	-531	-0	0.063	-180	-0	132	0.048	
	11(SUS)	8	-526	-0	0.063	-175	-0	131	0.046	
25		Absolute Method								
	Limits	8500	8500	6500		6000	2000	5000		
	4(OPE)	452	-1254	196	0.148	-0	-0	-18	0.004	
	6(OPE)	928	-2162	840	0.254	-0	-0	-18	0.004	
	8(OPE)	928	-2162	840	0.254	0	-0	-18	0.004	
	10(SUS)	50	-865	-40	0.102	0	-0	-18	0.004	
	11(SUS)	50	-860	-40	0.101	0	-0	-18	0.004	

BNK-GCS-CN-0045

1. FL-112-0028-AN07-4"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

1 OF 1

REV.	CHANGE	DATE
		15 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15+L8
21 (OCC) L21=L16+L8
22 (OCC) L22=L17+L8
23 (OCC) L23=L18+L8
24 (OCC) L24=L19+L8
25 (EXP) L25=L2-L8
26 (EXP) L26=L4-L8
27 (EXP) L27=L2-L4
28 (EXP) L28=L6-L8
29 (EXP) L29=L2-L6
30 (EXP) L30=L4-L6

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Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

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PIPE DATA

From 10 To 20 DZ= 6,000.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
GENERAL
T1= 270 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,483,936 KPa
EH2= 187,335,024 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0001362 kg./cu.cm.
RESTRAINTS
Node 20 +Y Mu = .30
Node 20 X
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 20 To 30 DZ= 4,480.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 29
Angle/Node @2= .00 28

From 30 To 40 DX= -6,000.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 39
Angle/Node @2= .00 38

From 40 To 50 DZ= 517.000 mm.

From 50 To 60 DZ= 500.000 mm.
RESTRAINTS
Node 60 +Y Mu = .30

From 60 To 70 DZ= 983.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 69
Angle/Node @2= .00 68

INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  70  To  80  DX= 6,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 79
    Angle/Node @2= .00 78
 ----------------------------------------------------------------------------
 From  80  To  90 DZ= 5,520.000 mm.
 RESTRAINTS
    Node  90  +Y   Mu = .30
    Node  90  X   Gap= 3.000 mm.
 ----------------------------------------------------------------------------
 From  90  To  100 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  100  +Y   Mu = .30
    Node  100  X
 ----------------------------------------------------------------------------
 From  100  To  105 DZ= 526.000 mm.
 SIF's & TEE's
    Node  105   Welding Tee
 ----------------------------------------------------------------------------
 From  105  To  110 DZ= 5,474.000 mm.
 RESTRAINTS
    Node  110  +Y   Mu = .30
    Node  110  Z   Gap= 3.000 mm.   Mu = .30
 ----------------------------------------------------------------------------
 From  10  To  120 DZ= -3,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  10  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  120  To  130 DZ= -3,000.000 mm.
 RESTRAINTS
    Node  130  +Y   Mu = .30
    Node  130  Z   Gap= 3.000 mm.
    Node  130  X   Gap= 3.000 mm.
 ----------------------------------------------------------------------------
 From  105  To  140 DY= 655.000 mm.  DZ= -655.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 8.560 mm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 139
```

INPUT LISTING
```
    Angle/Node @2= .00 138
 ------------------------------------------------------------------------------
 From  140  To  150 DY= 2,682.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 149
    Angle/Node @2= .00 148
 ------------------------------------------------------------------------------
 From  150  To  160  DX= 5,500.000 mm.
 RESTRAINTS
    Node  160  +Y   Mu = .30
    Node  160  Z   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  160  To  200  DX= 5,515.000 mm.
 ------------------------------------------------------------------------------
 From  200  To  210  DX= 79.375 mm.
 RIGID  Weight= 71.17 N.
 RESTRAINTS
    Node  210  ANC
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 MATERIAL Changes:
    10              20              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
    10             120              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
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 ALLOWABLE STRESS Changes
    10              20              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 129,638 KPa
                                    Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
    10             120              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 129,638 KPa
                                    Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
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 BEND ELEMENTS
    20              30              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 29
                                    Angle/Node @2= .00 28
    30              40              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 39
                                    Angle/Node @2= .00 38
```

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```
    60              70              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 69
                                    Angle/Node @2= .00 68
    70              80              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 79
                                    Angle/Node @2= .00 78
   105             140              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 45.000   Angle/Node @1= 22.50
                                   139   Angle/Node @2= .00 138
   140             150              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   149   Angle/Node @2= .00 148
```

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RIGIDS

```
  200             210           RIGID  Weight= 71.17 N.
```

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SIF's & TEE's

```
  100             105              Node  105   Welding Tee
```

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
20	+Y				.30	.000	1.000	.000
20	X					1.000	.000	.000
60	+Y				.30	.000	1.000	.000
90	+Y				.30	.000	1.000	.000
90	X			3.00		1.000	.000	.000
100	+Y				.30	.000	1.000	.000
100	X					1.000	.000	.000
110	+Y				.30	.000	1.000	.000
110	Z			3.00	.30	.000	.000	1.000
10	+Y				.30	.000	1.000	.000
130	+Y				.30	.000	1.000	.000
130	Z			3.00		.000	.000	1.000
130	X			3.00		1.000	.000	.000
160	+Y				.30	.000	1.000	.000
160	Z			3.00	.30	.000	.000	1.000
210	ANC					.000	.000	.000

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UNIFORM LOAD Changes

```
   10              20             Vector1 in G-s
                                  X1 Dir = .26 g's  Y1 Dir = .00 g's
                                  Z1 Dir = .00 g's
                                  Vector2 in G-s
                                  X2 Dir = .00 g's  Y2 Dir = .12 g's
```

INPUT LISTING

```
                                  Z2 Dir = .00 g's
                                  Vector3 in G-s
                                  X3 Dir = .00 g's  Y3 Dir = .00 g's
                                  Z3 Dir = .26 g's
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 INPUT UNITS USED...

 UNITS=    SI (m NOM/SCH INPUT= ON
       LENGTH             inches        x     25.400   =   mm.
       FORCE              pounds        x      4.448   =    N.
       MASS(dynamics)     pounds        x      0.454   =   Kg.
       MOMENTS(INPUT)     inch-pounds   x      0.113   =    N.m.
       MOMENTS(OUTPUT)    inch-pounds   x      0.113   =    N.m.
       STRESS             lbs./sq.in.   x      6.895   =      KPa
       TEMP. SCALE        degrees F.    x      0.556   =   C
       PRESSURE           psig          x      6.895   =      KPa
       ELASTIC MODULUS    lbs./sq.in.   x      6.895   =      KPa
       PIPE DENSITY       lbs./cu.in.   x      0.028   =   kg./cu.cm.
       INSULATION DENS.   lbs./cu.in.   x      0.028   =   kg./cu.cm.
       FLUID DENSITY      lbs./cu.in.   x      0.028   =   kg./cu.cm.
       TRANSL. STIF       lbs./in.      x      1.751   =   N./cm.
       ROTATIONAL STIF    in.lb./deg.   x      0.113   =    N.m./deg
       UNIFORM LOAD       lb./in.       x      1.751   =   N./cm.
       G LOAD             g's           x      1.000   =   g's
       WIND LOAD          lbs./sq.in.   x      6.895   =      KPa
       ELEVATION          inches        x      0.025   =    m.
       COMPOUND LENGTH    inches        x     25.400   =   mm.
       DIAMETER           inches        x     25.400   =   mm.
       WALL THICKNESS     inches        x     25.400   =   mm.
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 SETUP FILE PARAMETERS
 ------------------------------------------------------------------------------
  CONNECT GEOMETRY THRU CNODES =    YES
  MIN ALLOWED BEND ANGLE =            5.00000
  MAX ALLOWED BEND ANGLE =            95.0000
  BEND LENGTH ATTACHMENT PERCENT =    1.00000
  MIN ANGLE TO ADJACENT BEND PT =     5.00000
  LOOP CLOSURE TOLERANCE =            25.4000     mm.
  THERMAL BOWING HORZ TOLERANCE =    0.100000E-03
  AUTO NODE NUMBER INCREMENT=         10.0000
  Z AXIS UP=                         NO
  USE PRESSURE STIFFENING =          DEFAULT
  ALPHA TOLERANCE =                   0.500000E-01
  RESLD-FORCE =                       NO
  HGR DEF RESWGT STIF =               0.175127E+13 N./cm.
  DECOMP SNG TOL =                    0.100000E+11
  BEND AXIAL SHAPE =                 YES
  FRICT STIF =                        0.175127E+07 N./cm.
  FRICT NORM FORCE VAR =              0.150000
  FRICT ANGLE VAR =                   15.0000
  FRICT SLIDE MULT =                  1.00000
  ROD TOLERANCE =                     1.00000
  ROD INC =                           2.00000
  INCORE NUMERICAL CHECK =           NO
```

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```
  OUTCORE NUMERICAL CHECK =          NO
  DEFAULT TRANS RESTRAINT STIFF=     0.175127E+13    N./cm.
  DEFAULT ROT RESTRAINT STIFF=       0.112985E+12  N.m./deg
  IGNORE SPRING HANGER STIFFNESS =   NO
  MISSING MASS ZPA =                EXTRACTED
  MIN WALL MILL TOLERANCE =           12.5000
  WRC-107 VERSION =                 MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =           LAST VALUE
  DEFAULT AMBIENT TEMPERATURE=        21.1111       C
  BOURDON PRESSURE=                 NONE
  COEFFICIENT OF FRICTION (MU) =         0.000000
  INCLUDE SPRG STIF IN HGR OPE =    NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =            B31.1(POST1980)
  USE WRC329                        NO
  NO REDUCED SIF FOR RFT AND WLT    NO
  B31.1 REDUCED Z FIX =             YES
  CLASS 1 BRANCH FLEX               NO
  ALL STRESS CASES CORRODED =       NO
  ADD TORSION IN SL STRESS =        DEFAULT
  ADD F/A IN STRESS =               DEFAULT
  OCCASIONAL LOAD FACTOR =               0.000000
  DEFAULT CODE =                    B31.3
  B31.3 SUS CASE SIF FACTOR =            0.000000
  ALLOW USERS BEND SIF =            NO
  USE SCHNEIDER                     NO
  YIELD CRITERION STRESS =          MAX 3D SHEAR
  USE PD/4T                          NO
  BASE HOOP STRESS ON ? =            ID
  EN13480 USE IN OUTPLANE SIFS=      NO
  LIBERAL EXPANSION ALLOWABLE=      YES
  B31.3 SEC 319.2.3C SAXIAL=        Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178      YES
  IGNORE B31.1/B31.3 Wc FACTOR=     YES
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152730
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
```

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```
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
    Uniform Load Option ........    1.000

    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
```

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COORDINATE REPORT

NODE	X (mm.)	Y (mm.)	Z (mm.)
10	-7700.080	-5451.008	-28675.781
20	-7700.080	-5451.008	-22675.781
30	-7700.080	-5451.008	-18195.781
40	-13700.080	-5451.008	-18195.781
50	-13700.080	-5451.008	-17678.781
60	-13700.080	-5451.008	-17178.781
70	-13700.080	-5451.008	-16195.781
80	-7700.080	-5451.008	-16195.781
90	-7700.080	-5451.008	-10675.781
100	-7700.080	-5451.008	-4675.781
105	-7700.080	-5451.008	-4149.781
110	-7700.080	-5451.008	1324.219
10	-7700.080	-5451.008	-28675.781
120	-7700.080	-5451.008	-31675.781
130	-7700.080	-5451.008	-34675.781
105	-7700.080	-5451.008	-4149.781
140	-7700.080	-4796.008	-4804.781
150	-7700.080	-2114.008	-4804.781
160	-2200.080	-2114.008	-4804.781
200	3314.920	-2114.008	-4804.781
210	3394.295	-2114.008	-4804.781

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15+L8
21 (OCC) L21=L16+L8
22 (OCC) L22=L17+L8
23 (OCC) L23=L18+L8
24 (OCC) L24=L19+L8
25 (EXP) L25=L2-L8
26 (EXP) L26=L4-L8
27 (EXP) L27=L2-L4
28 (EXP) L28=L6-L8
29 (EXP) L29=L2-L6
30 (EXP) L30=L4-L6

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1-U2
CASE 14 (OPE) W+T2+P1+U3
CASE 15 (OCC) L15=L10-L4
CASE 16 (OCC) L16=L11-L4
CASE 17 (OCC) L17=L12-L4
CASE 18 (OCC) L18=L13-L4
CASE 19 (OCC) L19=L14-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid +Y;					
	1(HYD)	0	-2823	-0	0	0	0
	2(OPE)	177	-1501	414	0	0	0
	4(OPE)	177	-1501	414	0	0	0
	6(OPE)	180	-1537	-425	0	0	0
	8(SUS)	0	-1532	-0	0	0	0
	9(SUS)	0	-1530	-0	0	0	0
	10(OPE)	144	-1501	427	0	0	0
	11(OPE)	170	-1501	417	0	0	0
	12(OPE)	159	-1317	362	0	0	0
	13(OPE)	195	-1684	466	0	0	0
	14(OPE)	177	-1499	413	0	0	0
	15(OCC)	-33	-0	13	0	0	0
	16(OCC)	-7	0	3	0	0	0
	17(OCC)	-18	184	-52	0	0	0
	18(OCC)	17	-184	52	0	0	0
	19(OCC)	-0	2	-1	0	0	0
	MAX	195/L13	-2823/L1	466/L13			
20		TYPE=Rigid X; Rigid +Y;					
	1(HYD)	-0	-15278	-0	0	0	0
	2(OPE)	-152	-8187	2456	0	0	0
	4(OPE)	-158	-8186	2456	0	0	0
	6(OPE)	-1048	-8309	-2493	0	0	0
	8(SUS)	-0	-8291	-0	0	0	0
	9(SUS)	-0	-8281	-0	0	0	0
	10(OPE)	3805	-8187	2456	0	0	0
	11(OPE)	-3621	-8185	2455	0	0	0

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Licensed To:: SPLM: Edit company name in <system>\company.txt

RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	-252	-7192	2157	0	0	0
	13(OPE)	-63	-9180	2754	0	0	0
	14(OPE)	-704	-8190	2457	0	0	0
	15(OCC)	3962	-1	0	0	0	0
	16(OCC)	-3463	1	-0	0	0	0
	17(OCC)	-95	994	-298	0	0	0
	18(OCC)	95	-994	298	0	0	0
	19(OCC)	-546	-4	1	0	0	0
	MAX	3962/L15	-15278/L1	2754/L13			
60		TYPE=Rigid +Y;					
	1(HYD)	0	-8555	0	0	0	0
	2(OPE)	-1578	-5298	-190	0	0	0
	4(OPE)	-1580	-5303	-189	0	0	0
	6(OPE)	1357	-4535	-89	0	0	0
	8(SUS)	0	-4645	0	0	0	0
	9(SUS)	0	-4640	0	0	0	0
	10(OPE)	-1587	-5297	81	0	0	0
	11(OPE)	-1584	-5309	-171	0	0	0
	12(OPE)	-1412	-4740	-167	0	0	0
	13(OPE)	-1747	-5865	-212	0	0	0
	14(OPE)	-1588	-5304	97	0	0	0
	15(OCC)	-7	6	271	0	0	0
	16(OCC)	-4	-6	19	0	0	0
	17(OCC)	167	562	22	0	0	0
	18(OCC)	-167	-562	-23	0	0	0
	19(OCC)	-9	-1	286	0	0	0
	MAX	-1747/L13	-8555/L1	286/L19			
90		TYPE=Rigid X w/gap; Rigid +Y;					
	1(HYD)	-2	-15998	-1	0	0	0
	2(OPE)	-409	-7596	-2271	0	0	0
	4(OPE)	-431	-7587	-2268	0	0	0
	6(OPE)	-509	-8856	2607	0	0	0
	8(SUS)	-0	-8676	1	0	0	0
	9(SUS)	-0	-8665	1	0	0	0
	10(OPE)	599	-7598	-2272	0	0	0
	11(OPE)	-3180	-7577	-2265	0	0	0
	12(OPE)	-568	-6553	-1959	0	0	0
	13(OPE)	-292	-8620	-2577	0	0	0
	14(OPE)	-62	-7533	-2259	0	0	0
	15(OCC)	1029	-11	-3	0	0	0
	16(OCC)	-2749	10	3	0	0	0
	17(OCC)	-138	1033	309	0	0	0
	18(OCC)	138	-1033	-309	0	0	0
	19(OCC)	368	54	9	0	0	0

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Job:: BNK-GCS-CN-045-D03
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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	-3180/L11	-15998/L1	2607/L6			
100		TYPE=Rigid X; Rigid +Y;					
	1(HYD)	-543	-3929	-2	0	0	0
	2(OPE)	-1439	-4081	-1224	0	0	0
	4(OPE)	-1430	-4090	-1227	0	0	0
	6(OPE)	14	-2214	664	0	0	0
	8(SUS)	-323	-2502	1	0	0	0
	9(SUS)	-323	-2500	1	0	0	0
	10(OPE)	872	-4087	-1226	0	0	0
	11(OPE)	-1646	-4099	-1230	0	0	0
	12(OPE)	-1270	-3719	-1116	0	0	0
	13(OPE)	-1589	-4461	-1338	0	0	0
	14(OPE)	-1061	-4068	-1220	0	0	0
	15(OCC)	2301	3	1	0	0	0
	16(OCC)	-217	-9	-3	0	0	0
	17(OCC)	160	371	111	0	0	0
	18(OCC)	-159	-371	-111	0	0	0
	19(OCC)	369	21	6	0	0	0
	MAX	2301/L15	-4461/L13	-1338/L13			
110		TYPE=Rigid Z w/gap; Rigid +Y;					
	1(HYD)	10	-3427	-1	0	0	0
	2(OPE)	203	-1787	8951	0	0	0
	4(OPE)	199	-1786	9002	0	0	0
	6(OPE)	57	-1875	-4147	0	0	0
	8(SUS)	5	-1857	1	0	0	0
	9(SUS)	5	-1854	1	0	0	0
	10(OPE)	92	-1785	9688	0	0	0
	11(OPE)	-539	-1785	8915	0	0	0
	12(OPE)	186	-1565	8530	0	0	0
	13(OPE)	212	-2008	9421	0	0	0
	14(OPE)	12	-1860	13118	0	0	0
	15(OCC)	-107	2	686	0	0	0
	16(OCC)	-738	2	-87	0	0	0
	17(OCC)	-13	221	-472	0	0	0
	18(OCC)	13	-221	419	0	0	0
	19(OCC)	-187	-73	4116	0	0	0
	MAX	-738/L16	-3427/L1	13118/L14			
130		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	1(HYD)	-0	-3336	-0	0	0	0

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Licensed To:: SPLM: Edit company name in <system>\company.txt

RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	680	-1816	-8386	0	0	0
	4(OPE)	688	-1816	-8433	0	0	0
	6(OPE)	-12	-1810	3922	0	0	0
	8(SUS)	-0	-1810	-0	0	0	0
	9(SUS)	-0	-1808	-0	0	0	0
	10(OPE)	1039	-1816	-9023	0	0	0
	11(OPE)	223	-1816	-7882	0	0	0
	12(OPE)	714	-1598	-8043	0	0	0
	13(OPE)	663	-2033	-8823	0	0	0
	14(OPE)	689	-1816	-4966	0	0	0
	15(OCC)	351	0	-590	0	0	0
	16(OCC)	-465	-0	551	0	0	0
	17(OCC)	26	217	390	0	0	0
	18(OCC)	-25	-217	-390	0	0	0
	19(OCC)	1	-0	3467	0	0	0
	MAX	1039/L10	-3336/L1	-9023/L10			
160		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	335	-1653	11	0	0	0
	2(OPE)	-76	13	-258	0	0	0
	4(OPE)	-77	13	-262	0	0	0
	6(OPE)	453	-1512	10	0	0	0
	8(SUS)	199	-1255	-2	0	0	0
	9(SUS)	199	-1255	-2	0	0	0
	10(OPE)	-74	13	-252	0	0	0
	11(OPE)	-77	12	-259	0	0	0
	12(OPE)	-75	20	-259	0	0	0
	13(OPE)	-79	7	-265	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OCC)	3	-0	10	0	0	0
	16(OCC)	1	-1	3	0	0	0
	17(OCC)	2	6	3	0	0	0
	18(OCC)	-2	-7	-3	0	0	0
	19(OCC)	77	-13	262	0	0	0
	MAX	453/L6	-1653/L1	-265/L13			
210		TYPE=Rigid ANC;					
	1(HYD)	200	-866	-7	7	-14	779
	2(OPE)	2748	-965	88	51	8	1000
	4(OPE)	2766	-962	90	52	12	986
	6(OPE)	-543	-583	-4	0	-4	430
	8(SUS)	119	-660	0	-0	0	578
	9(SUS)	119	-660	0	-0	0	578
	10(OPE)	3498	-960	89	48	10	977
	11(OPE)	2036	-971	90	51	12	1014
	12(OPE)	2678	-797	89	53	11	666

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Job:: BNK-GCS-CN-045-D03
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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	2853	-1126	91	52	14	1306
	14(OPE)	2693	-960	326	137	427	977
	15(OCC)	732	2	-1	-4	-3	-8
	16(OCC)	-730	-9	-0	-1	-1	29
	17(OCC)	-88	164	-1	1	-2	-320
	18(OCC)	87	-164	1	-1	2	320
	19(OCC)	-73	2	236	85	414	-9
	MAX	3498/L10	-1126/L13	326/L14	137/L14	427/L14	1306/L13

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OCC) L15=L10-L4
16 (OCC) L16=L11-L4
17 (OCC) L17=L12-L4
18 (OCC) L18=L13-L4
19 (OCC) L19=L14-L4
20 (OCC) L20=L15+L8
21 (OCC) L21=L16+L8
22 (OCC) L22=L17+L8
23 (OCC) L23=L18+L8
24 (OCC) L24=L19+L8
25 (EXP) L25=L2-L8
26 (EXP) L26=L4-L8
27 (EXP) L27=L2-L4
28 (EXP) L28=L6-L8
29 (EXP) L29=L2-L6
30 (EXP) L30=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 14:36
Job:: BNK-GCS-CN-045-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 20 (OCC) L20=L15+L8
CASE 21 (OCC) L21=L16+L8
CASE 22 (OCC) L22=L17+L8
CASE 23 (OCC) L23=L18+L8
CASE 24 (OCC) L24=L19+L8
CASE 25 (EXP) L25=L2-L8
CASE 26 (EXP) L26=L4-L8
CASE 27 (EXP) L27=L2-L4
CASE 28 (EXP) L28=L6-L8
CASE 29 (EXP) L29=L2-L6
CASE 30 (EXP) L30=L4-L6

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	23.0	@Node	90
Code Stress:	55586.1	Allowable Stress:	241316.5
Axial Stress:	5959.9	@Node	110
Bending Stress:	49572.5	@Node	90
Torsion Stress:	6121.3	@Node	70
Hoop Stress:	12353.7	@Node	20
Max Stress Intensity:	55586.2	@Node	90

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	64.5	@Node	90
Code Stress:	83443.5	Allowable Stress:	129365.3
Axial Stress:	12074.0	@Node	105
Bending Stress:	79225.2	@Node	105
Torsion Stress:	8807.7	@Node	70
Hoop Stress:	24443.4	@Node	20
Max Stress Intensity:	87299.7	@Node	105

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	55.1	@Node	90
Code Stress:	71292.7	Allowable Stress:	129365.3
Axial Stress:	1246.9	@Node	140
Bending Stress:	79158.3	@Node	105
Torsion Stress:	8796.5	@Node	70
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	81038.9	@Node	105

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
 CODE STRESS CHECK PASSED      : LOADCASE 20 (OCC) L20=L15+L8

Highest Stresses: (   KPa    ) LOADCASE 20 (OCC) L20=L15+L8
Ratio (%):                66.0       @Node     20
Code Stress:           113510.9       Allowable Stress:     172055.9
Axial Stress:           12266.3       @Node     70
Bending Stress:        101225.1       @Node     20
Torsion Stress:          8815.1       @Node     70
Hoop Stress:            24443.4       @Node     20
Max Stress Intensity:  113510.9       @Node     20

 CODE STRESS CHECK PASSED      : LOADCASE 21 (OCC) L21=L16+L8

Highest Stresses: (   KPa    ) LOADCASE 21 (OCC) L21=L16+L8
Ratio (%):                61.9       @Node     90
Code Stress:           106496.4       Allowable Stress:     172055.9
Axial Stress:           12581.0       @Node     29
Bending Stress:         94224.1       @Node     90
Torsion Stress:          8798.5       @Node     70
Hoop Stress:            24443.4       @Node     20
Max Stress Intensity:  106496.4       @Node     90

 CODE STRESS CHECK PASSED      : LOADCASE 22 (OCC) L22=L17+L8

Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L17+L8
Ratio (%):                53.6       @Node     90
Code Stress:            92171.8       Allowable Stress:     172055.9
Axial Stress:           12243.9       @Node    105
Bending Stress:         93113.4       @Node    105
Torsion Stress:          7757.4       @Node     70
Hoop Stress:            24443.4       @Node     20
Max Stress Intensity:  101439.7       @Node    105

 CODE STRESS CHECK PASSED      : LOADCASE 23 (OCC) L23=L18+L8

Highest Stresses: (   KPa    ) LOADCASE 23 (OCC) L23=L18+L8
Ratio (%):                53.6       @Node     90
Code Stress:            92174.4       Allowable Stress:     172055.9
Axial Stress:           12062.0       @Node     68
Bending Stress:         93112.3       @Node    105
Torsion Stress:          9857.9       @Node     70
Hoop Stress:            24443.4       @Node     20
Max Stress Intensity:  101438.6       @Node    105

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L19+L8

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L19+L8
Ratio (%):                61.4       @Node    105
Code Stress:           105619.7       Allowable Stress:     172055.9
Axial Stress:           13324.0       @Node    130
Bending Stress:        131656.3       @Node    105
Torsion Stress:          8830.5       @Node     70
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Hoop Stress:                24443.4       @Node     20
Max Stress Intensity:      140006.3       @Node    105

 CODE STRESS CHECK PASSED      : LOADCASE 25 (EXP) L25=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 25 (EXP) L25=L2-L8
Ratio (%):                    46.7       @Node    105
Code Stress:               112693.3       Allowable Stress:     241441.5
Axial Stress:                1165.0       @Node    110
Bending Stress:            108376.6       @Node    105
Torsion Stress:             14178.5       @Node    138
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      315706.0       @Node    105

 CODE STRESS CHECK PASSED      : LOADCASE 26 (EXP) L26=L4-L8

Highest Stresses: (   KPa    ) LOADCASE 26 (EXP) L26=L4-L8
Ratio (%):                    47.1       @Node    105
Code Stress:               113546.9       Allowable Stress:     241100.3
Axial Stress:                1171.6       @Node    110
Bending Stress:            109189.7       @Node    105
Torsion Stress:             14304.2       @Node    138
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      318093.2       @Node    105

 CODE STRESS CHECK PASSED      : LOADCASE 27 (EXP) L27=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 27 (EXP) L27=L2-L4
Ratio (%):                     0.4       @Node    105
Code Stress:                 864.4       Allowable Stress:     230779.3
Axial Stress:                  6.6       @Node    110
Bending Stress:              964.9       @Node     40
Torsion Stress:              125.7       @Node    138
Hoop Stress:                   0.0       @Node     20
Max Stress Intensity:       2576.3       @Node     40

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L6-L8

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L6-L8
Ratio (%):                     8.1       @Node    105
Code Stress:                20335.6       Allowable Stress:     251762.5
Axial Stress:                 539.5       @Node    110
Bending Stress:             19771.7       @Node    105
Torsion Stress:              2123.1       @Node    138
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:       57130.9       @Node    105

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L2-L6

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L2-L6
Ratio (%):                    55.1       @Node    105
Code Stress:               132943.8       Allowable Stress:     241441.5
Axial Stress:                1704.5       @Node    110
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

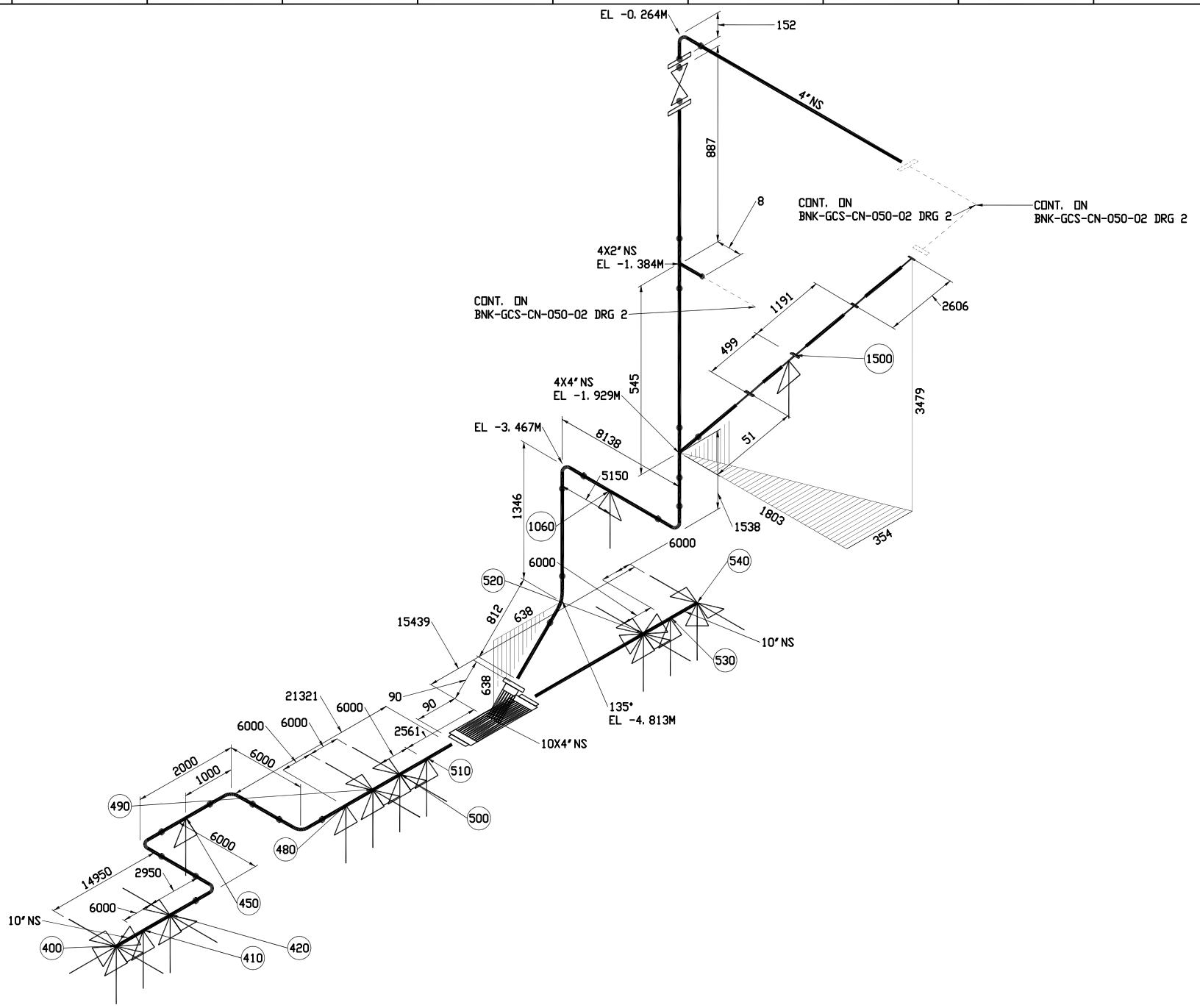
```
Bending Stress:            128077.8       @Node    105
Torsion Stress:             16301.7       @Node    138
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      372605.8       @Node    105

 CODE STRESS CHECK PASSED      : LOADCASE 30 (EXP) L30=L4-L6

Highest Stresses: (   KPa    ) LOADCASE 30 (EXP) L30=L4-L6
Ratio (%):                   55.5       @Node    105
Code Stress:               133795.3       Allowable Stress:     241100.3
Axial Stress:                1711.0       @Node    110
Bending Stress:            128888.9       @Node    105
Torsion Stress:             16427.4       @Node    138
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      374987.0       @Node    105
```

BNK-GCS-CN-050

1. GAS-111-0029A-CN05-2"-PT
2. FL-112-0013A-AN07-4"-PT
3. FL-112-0012A-AN07-2"-PT



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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 2

REV.	CHANGE	DATE
		15 MAY 2024

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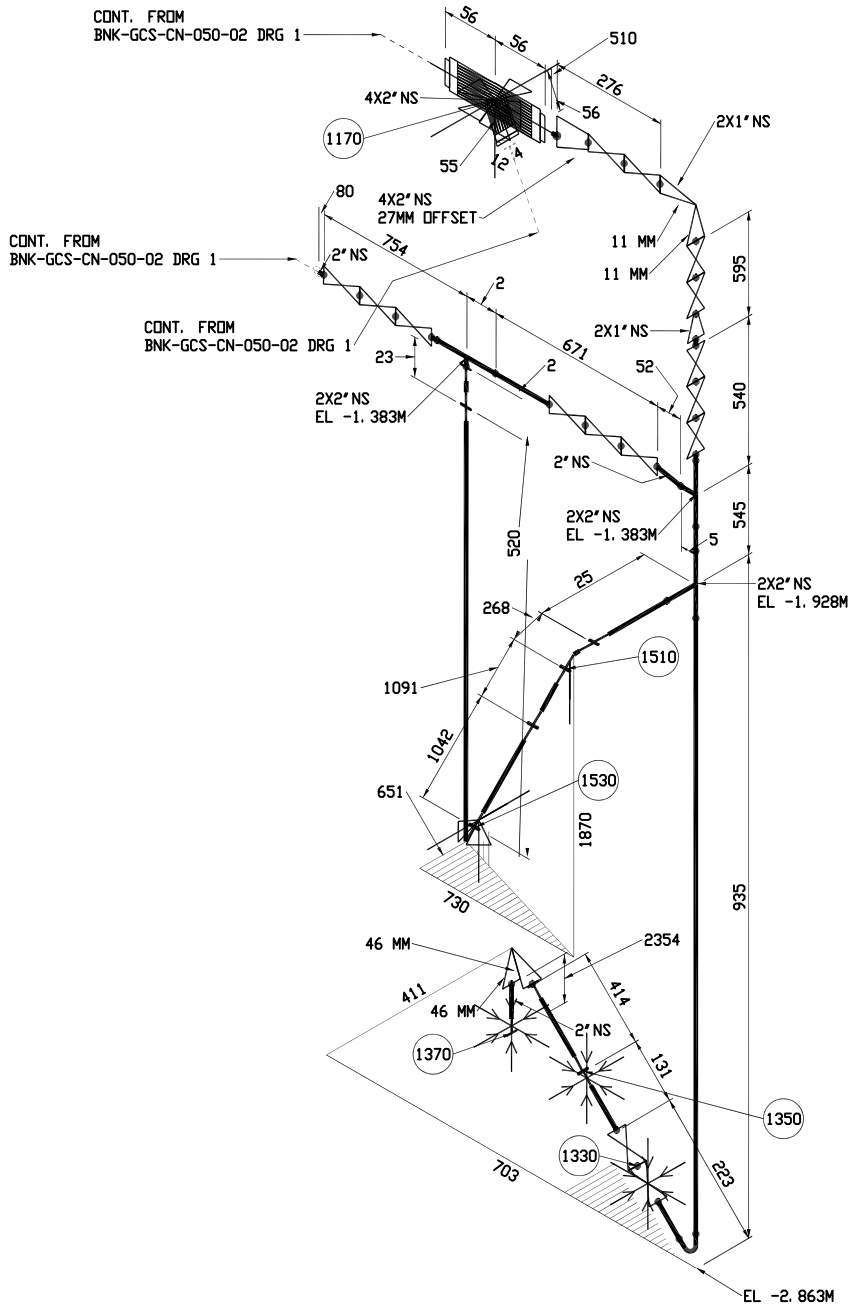

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 2 OF 2

REV.	CHANGE	DATE
		15 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

INPUT LISTING

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 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: APR 28, 2024 Time: 10:51
Job:: BNK-GCS-CN-050-02
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
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PIPE DATA

From 400 To 410 DZ= -6,000.000 mm.
PIPE
Dia= 273.050 mm. Wall= 9.271 mm. Cor= 6.0000 mm.
GENERAL
T1= 270 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,483,936 KPa
EH2= 187,335,024 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RESTRAINTS
Node 410 +Y Mu = .30
Node 400 +Y
Node 400 X Gap= 3.000 mm.
Node 400 Z Gap= 3.000 mm.
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 410 To 420 DZ= -6,000.000 mm.
RESTRAINTS
Node 420 +Y Mu = .30
Node 420 X Gap= 3.000 mm.

From 420 To 430 DZ= -2,950.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 429
Angle/Node @2= .00 428

From 430 To 440 DX= -6,000.000 mm. DZ= .000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 439
Angle/Node @2= .00 438

From 440 To 450 DZ= -1,000.000 mm.
RESTRAINTS
Node 450 +Y Mu = .30

INPUT LISTING

```
 ------------------------------------------------------------------------------
 From  450  To  460 DZ= -1,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 459
    Angle/Node @2= .00 458
 ------------------------------------------------------------------------------
 From  460  To  470  DX= 6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 469
    Angle/Node @2= .00 468
 ------------------------------------------------------------------------------
 From  470  To  480 DZ= -850.000 mm.
 RESTRAINTS
    Node  480  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  480  To  490  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  490  +Y   Mu = .30
    Node  490  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  490  To  500  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  500  +Y
    Node  500  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  500  To  510 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 600.0137 KPa   PHyd= 900.0205 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 187,483,936 KPa   EH2= 187,335,024 KPa
    EH3= 205,934,864 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
    Insul Den= .0001362 kg./cu.cm.
 RESTRAINTS
    Node  510  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  510  To  515 DZ= -2,561.000 mm.
 SIF's & TEE's
    Node  515   Welding Tee
 ------------------------------------------------------------------------------
 From  515  To  520 DZ= -3,439.000 mm.
 RESTRAINTS
    Node  520  +Y   Mu = .30
    Node  520  X
    Node  520  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  520  To  530 DZ= -6,000.000 mm.
 RESTRAINTS
```

INPUT LISTING
```
    Node  530  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  530  To  540 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  540  +Y   Mu = .30
    Node  540  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  515  To  1040 DY= 638.000 mm.  DZ= -637.000 mm.
 PIPE
    Dia= 114.300 mm.   Wall= 8.560 mm.
    Insul Thk= .000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 44.955   Angle/Node @1= 22.48 1039
    Angle/Node @2= .00 1038
 ---------------------------------------------------------------------------
 From  1040  To  1050 DY= 1,346.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1049
    Angle/Node @2= .00 1048
 ---------------------------------------------------------------------------
 From  1050  To  1060  DX= 5,150.000 mm.
 RESTRAINTS
    Node  1060  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  1060  To  1070  DX= 2,988.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1069
    Angle/Node @2= .00 1068
 ---------------------------------------------------------------------------
 From  1070  To  1080 DY= 1,538.000 mm.
 ---------------------------------------------------------------------------
 From  1080  To  1090  DX= 50.800 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  1090   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  1080  To  1100 DY= 545.000 mm.
 SIF's & TEE's
    Node  1100   Welding Tee
 ---------------------------------------------------------------------------
 From  1100  To  1110 DY= 570.000 mm.
 ---------------------------------------------------------------------------
 From  1110  To  1120 DY= 79.375 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
 From  1120  To  1130 DY= 238.000 mm.
 RIGID  Weight= 644.99 N.
 ---------------------------------------------------------------------------
 From  1130  To  1140 DY= 79.375 mm.
 RIGID  Weight= 71.17 N.
 ---------------------------------------------------------------------------
```

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```
 From  1140  To  1150 DY= 153.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1149
 ------------------------------------------------------------------------------
 From  1150  To  1160  DX= 153.000 mm.
 ------------------------------------------------------------------------------
 From  1160  To  1170  DX= 566.000 mm.
 RESTRAINTS
    Node  1170  +Y   Cnode  1171   Mu = .30
    Node  1170  X   Cnode  1171   Gap= 3.000 mm.
    Node  1170  Z   Cnode  1171   Gap= 3.000 mm.   Mu = .30
 ------------------------------------------------------------------------------
 From  1170  To  1180  DX= 566.000 mm.
 ------------------------------------------------------------------------------
 From  1180  To  1190  DX= 102.000 mm.  DY= 27.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 8.738 mm.
 ------------------------------------------------------------------------------
 From  1190  To  1200  DX= 66.675 mm.  DY= .000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  1200  To  1210  DX= 118.500 mm.  DY= .000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Fluid Den= .0000057 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 88.96 N.
 FORCES & MOMENTS
    Node  1210   FX1= 1,500.07 N.   FY1= 1,500.07 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1210  To  1220 DY= -110.000 mm.
 PIPE
    Dia= 33.401 mm.   Wall= 6.350 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  1220  To  1230 DY= -65.088 mm.
 RIGID  Weight= 22.24 N.
 ------------------------------------------------------------------------------
 From  1230  To  1240 DY= -197.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 5.537 mm.
 ------------------------------------------------------------------------------
 From  1240  To  1250 DY= -234.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  1250  To  1260 DY= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1260  To  1270 DY= -187.000 mm.
 RIGID  Weight= 258.00 N.
 ---------------------------------------------------------------------------
 From  1270  To  1280 DY= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1280  To  1285 DY= -207.000 mm.
 ---------------------------------------------------------------------------
 From  1285  To  1290 DY= -545.000 mm.
 ---------------------------------------------------------------------------
 From  1290  To  1300 DZ= 25.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  1300   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  1290  To  1310 DY= -935.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1309
    Angle/Node @2= .00 1308
 ---------------------------------------------------------------------------
 From  1310  To  1320  DX= -66.474 mm.  DZ= -38.862 mm.
 ---------------------------------------------------------------------------
 From  1320  To  1330  DX= -63.042 mm.  DZ= -36.855 mm.
 RIGID  Weight= 44.48 N.
 RESTRAINTS
    Node  1330  ANC   Cnode  1331
 ---------------------------------------------------------------------------
 From  1331  To  1340  DX= -63.042 mm.  DZ= -36.855 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1340  To  1350  DX= -113.092 mm.  DZ= -66.115 mm.
 RESTRAINTS
    Node  1350  ANC   Cnode  1351
 EQUIPMENT LIMITS
    Nozzle Node = 1350
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 2,800.14 N.   FB= 2,800.14 N.
    FC= 2,100.10 N.   MA= 420.02 N.m.   MB= 280.01 N.m.   MC= 360.02 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1351  To  1360  DX= -397.117 mm.  DZ= -232.160 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1360  To  1370 DY= -2,400.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  1370  ANC
 ---------------------------------------------------------------------------
 From  1351  To  1500  DX= -717.199 mm.  DY= 934.388 mm.  DZ= 177.836 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1351  To  1531  DX= -423.900 mm.  DY= 934.600 mm.  DZ= 178.695 mm.
```

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```
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1351  To  1171  DX= -547.525 mm.  DY= 2,599.138 mm.  DZ= 178.695 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1351  To  1511  DX= 305.650 mm.  DY= 935.000 mm.  DZ= 472.094 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1285  To  1390  DX= -57.000 mm.
 ---------------------------------------------------------------------------
 From  1390  To  1400  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1400  To  1410  DX= -187.000 mm.
 RIGID  Weight= 258.00 N.
 ---------------------------------------------------------------------------
 From  1410  To  1420  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1420  To  1430  DX= -339.500 mm.
 ---------------------------------------------------------------------------
 From  1430  To  1520 DY= -25.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  1520   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  1430  To  1440  DX= -339.500 mm.
 ---------------------------------------------------------------------------
 From  1440  To  1450  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1450  To  1460  DX= -275.000 mm.
 RIGID  Weight= 458.17 N.
 ---------------------------------------------------------------------------
 From  1460  To  1470  DX= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ---------------------------------------------------------------------------
 From  1470  To  1100  DX= -88.425 mm.  DY= -.612 mm.  DZ= .000 mm.
 ---------------------------------------------------------------------------
 From  1090  To  1500  DX= 500.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  1500  +Y   Cnode  1501   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
```

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```
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  1300  To  1510 DZ= 268.000 mm.
 PIPE
    Dia= 48.260 mm.   Wall= 3.683 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  1510  +Y   Cnode  1511
 ---------------------------------------------------------------------------
 From  1520  To  1530 DY= -520.000 mm.
 RESTRAINTS
    Node  1530  +Y   Cnode  1531   Mu = .30
    Node  1530  Z   Cnode  1531   Gap= 3.000 mm.
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 MATERIAL Changes:
   400             410             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   500             510             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  1090            1500             Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
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 JOBNAME: D:\BINAK PRO\NATIVE CAESAR FILE\NATIVE CEASAR FILE-D03\BNK-GCS-CN-050-

 ALLOWABLE STRESS Changes
   400             410             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 129,638 KPa
                                   Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
   500             510             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 129,638 KPa
                                   Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
   520             530             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 129,638 KPa
                                   Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
  1200            1210             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 137,895 KPa
                                   Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
```

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```
  1090            1500              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
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 BEND ELEMENTS
   420             430              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   429   Angle/Node @2= .00 428
   430             440              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   439   Angle/Node @2= .00 438
   450             460              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   459   Angle/Node @2= .00 458
   460             470              Radius= 381.000 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   469   Angle/Node @2= .00 468
   515            1040              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 44.955   Angle/Node @1= 22.48
                                   1039   Angle/Node @2= .00 1038
  1040            1050              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   1049   Angle/Node @2= .00 1048
  1060            1070              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   1069   Angle/Node @2= .00 1068
  1140            1150              Radius= 152.400 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   1149
  1290            1310              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00
                                   1309   Angle/Node @2= .00 1308
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 RIGIDS
  1080            1090          RIGID  Weight= .00 N.
  1110            1120          RIGID  Weight= 71.17 N.
  1120            1130          RIGID  Weight= 644.99 N.
  1130            1140          RIGID  Weight= 71.17 N.
  1190            1200          RIGID  Weight= 31.14 N.
  1200            1210          RIGID  Weight= 88.96 N.
  1210            1220          RIGID  Weight= 44.48 N.
  1220            1230          RIGID  Weight= 22.24 N.
  1250            1260          RIGID  Weight= 44.48 N.
  1260            1270          RIGID  Weight= 258.00 N.
  1270            1280          RIGID  Weight= 44.48 N.
  1290            1300          RIGID  Weight= .00 N.
```

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```
  1320            1330           RIGID  Weight= 44.48 N.
  1331            1340           RIGID  Weight= 44.48 N.
  1351            1360           RIGID  Weight= .00 N.
  1360            1370           RIGID  Weight= .00 N.
  1351            1500           RIGID  Weight= .00 N.
  1351            1531           RIGID  Weight= .00 N.
  1351            1171           RIGID  Weight= .00 N.
  1351            1511           RIGID  Weight= .00 N.
  1390            1400           RIGID  Weight= 44.48 N.
  1400            1410           RIGID  Weight= 258.00 N.
  1410            1420           RIGID  Weight= 44.48 N.
  1430            1520           RIGID  Weight= .00 N.
  1440            1450           RIGID  Weight= 44.48 N.
  1450            1460           RIGID  Weight= 458.17 N.
  1460            1470           RIGID  Weight= 31.14 N.
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SIF's & TEE's

```
   510             515             Node  515   Welding Tee
  1080            1090             Node  1090   Unreinforced Tee
  1080            1100             Node  1100   Welding Tee
  1290            1300             Node  1300   Unreinforced Tee
  1430            1520             Node  1520   Unreinforced Tee
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REDUCERS

```
  1180            1190            Diam2= 60.325 mm.   Wall2= 8.738 mm.
  1230            1240            Diam2= 60.325 mm.   Wall2= 5.537 mm.
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```

RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
410	+Y				.30	.000	1.000	.000
400	+Y					.000	1.000	.000
400	X			3.00		1.000	.000	.000
400	Z			3.00		.000	.000	1.000
420	+Y				.30	.000	1.000	.000
420	X			3.00		1.000	.000	.000
450	+Y				.30	.000	1.000	.000
480	+Y				.30	.000	1.000	.000
490	+Y				.30	.000	1.000	.000
490	X			3.00		1.000	.000	.000
500	+Y					.000	1.000	.000
500	X			3.00		1.000	.000	.000
510	+Y				.30	.000	1.000	.000
520	+Y				.30	.000	1.000	.000
520	X					1.000	.000	.000
520	Z			3.00		.000	.000	1.000
530	+Y				.30	.000	1.000	.000
540	+Y				.30	.000	1.000	.000

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INPUT LISTING

```
     540   X                              3.00              1.000   .000   .000
    1060   +Y                                         .30    .000  1.000   .000
    1170   +Y      1171                               .30    .000  1.000   .000
    1170   X       1171                   3.00              1.000   .000   .000
    1170   Z       1171                   3.00        .30    .000   .000  1.000
    1330   ANC     1331                                      .000   .000   .000
    1350   ANC     1351                                      .000   .000   .000
    1370   ANC                                               .000   .000   .000
    1500   +Y      1501                               .30    .000  1.000   .000
    1510   +Y      1511                                      .000  1.000   .000
    1530   +Y      1531                               .30    .000  1.000   .000
    1530   Z       1531                   3.00              .000   .000  1.000
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 EQUIPMENT LIMITS
  1340           1350             Nozzle Node = 1350


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 2,800.14 N.   FB= 2,800.14 N.
    FC= 2,100.10 N.   MA= 420.02 N.m.   MB= 280.01 N.m.   MC= 360.02 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
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 FORCES AND MOMENTS
  1200           1210             Node  1210   FX1= 1,500.07 N.
                                  FY1= 1,500.07 N.
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 UNIFORM LOAD Changes
   400            410            Vector1 in G-s
                                 X1 Dir = .26 g's  Y1 Dir = .00 g's
                                 Z1 Dir = .00 g's
                                 Vector2 in G-s
                                 X2 Dir = .00 g's  Y2 Dir = .12 g's
                                 Z2 Dir = .00 g's
                                 Vector3 in G-s
                                 X3 Dir = .00 g's  Y3 Dir = .00 g's
                                 Z3 Dir = .26 g's
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 INPUT UNITS USED...

 UNITS=    SI (m NOM/SCH INPUT= ON
       LENGTH             inches        x     25.400   =   mm.
       FORCE              pounds        x      4.448   =    N.
       MASS(dynamics)     pounds        x      0.454   =   Kg.
       MOMENTS(INPUT)     inch-pounds   x      0.113   =    N.m.
       MOMENTS(OUTPUT)    inch-pounds   x      0.113   =    N.m.
       STRESS             lbs./sq.in.   x      6.895   =      KPa
```

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INPUT LISTING

TEMP. SCALE	degrees F.	x	0.556	= C
PRESSURE	psig	x	6.895	= KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	= KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	= kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	= kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	= kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	= N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	= N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	= N./cm.
G LOAD	g's	x	1.000	= g's
WIND LOAD	lbs./sq.in.	x	6.895	= KPa
ELEVATION	inches	x	0.025	= m.
COMPOUND LENGTH	inches	x	25.400	= mm.
DIAMETER	inches	x	25.400	= mm.
WALL THICKNESS	inches	x	25.400	= mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS =	NO
MISSING MASS ZPA =	EXTRACTED
MIN WALL MILL TOLERANCE =	12.5000
WRC-107 VERSION =	MAR 79 1B1/2B1
WRC-107 INTERPOLATION =	LAST VALUE
DEFAULT AMBIENT TEMPERATURE=	21.1111 C
BOURDON PRESSURE=	NONE
COEFFICIENT OF FRICTION (MU) =	0.000000
INCLUDE SPRG STIF IN HGR OPE =	NO
INCLUDE INSULATION IN HYDROTEST =	NO
REDUCED INTERSECTION =	B31.1(POST1980)
USE WRC329	NO

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INPUT LISTING

```
  NO REDUCED SIF FOR RFT AND WLT    NO
  B31.1 REDUCED Z FIX =             YES
  CLASS 1 BRANCH FLEX               NO
  ALL STRESS CASES CORRODED =       NO
  ADD TORSION IN SL STRESS =        DEFAULT
  ADD F/A IN STRESS =               DEFAULT
  OCCASIONAL LOAD FACTOR =               0.000000
  DEFAULT CODE =                    B31.3
  B31.3 SUS CASE SIF FACTOR =            0.000000
  ALLOW USERS BEND SIF =            NO
  USE SCHNEIDER                     NO
  YIELD CRITERION STRESS =          MAX 3D SHEAR
  USE PD/4T                          NO
  BASE HOOP STRESS ON ? =            ID
  EN13480 USE IN OUTPLANE SIFS=      NO
  LIBERAL EXPANSION ALLOWABLE=      YES
  B31.3 SEC 319.2.3C SAXIAL=        Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178      YES
  IGNORE B31.1/B31.3 Wc FACTOR=     YES
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152730
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
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```

EXECUTION CONTROL PARAMETERS

```
   Rigid/ExpJt Print Flag .....    1.000
   Bourdon Option .............     .000
   Loop Closure Flag ..........    2.000
   Thermal Bowing Delta Temp ..     .000 C
   Liberal Allowable Flag .....    1.000
   Uniform Load Option ........    1.000

   Ambient Temperature ........   20.997 C
   Plastic (FRP) Alpha ........   21.600
   Plastic (FRP) GMOD/EMODa ...     .250
   Plastic (FRP) Laminate Type.    3.000
   Eqn Optimizer ..............     .000
   Node Selection .............     .000
   Eqn Ordering ...............     .000
   Collins ....................     .000
   Degree Determination .......     .000
   User Eqn Control ...........     .000
```

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INPUT LISTING
North Direction ..... -X
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COORDINATE REPORT

NODE	X (mm.)	Y (mm.)	Z (mm.)
400	-7700.080	-5451.008	-59075.781
410	-7700.080	-5451.008	-65075.781
420	-7700.080	-5451.008	-71075.781
430	-7700.080	-5451.008	-74025.781
440	-13700.080	-5451.008	-74025.781
450	-13700.080	-5451.008	-75025.781
460	-13700.080	-5451.008	-76025.781
470	-7700.080	-5451.008	-76025.781
480	-7700.080	-5451.008	-76875.781
490	-7700.080	-5451.008	-82875.781
500	-7700.080	-5451.008	-88875.781
510	-7700.080	-5451.008	-94875.781
515	-7700.080	-5451.008	-97436.781
520	-7700.080	-5451.008	-100875.781
530	-7700.080	-5451.008	-106875.781
540	-7700.080	-5451.008	-112875.781
515	-7700.080	-5451.008	-97436.781
1040	-7700.080	-4813.008	-98073.781
1050	-7700.080	-3467.008	-98073.781
1060	-2550.080	-3467.008	-98073.781
1070	437.920	-3467.008	-98073.781
1080	437.920	-1929.008	-98073.781
1090	488.720	-1929.008	-98073.781
1080	437.920	-1929.008	-98073.781
1100	437.920	-1384.008	-98073.781
1110	437.920	-814.008	-98073.781
1120	437.920	-734.633	-98073.781
1130	437.920	-496.633	-98073.781
1140	437.920	-417.258	-98073.781
1150	437.920	-264.258	-98073.781
1160	590.920	-264.258	-98073.781
1170	1156.920	-264.258	-98073.781
1180	1722.920	-264.258	-98073.781
1190	1824.920	-237.258	-98073.781
1200	1891.595	-237.258	-98073.781
1210	2010.095	-237.258	-98073.781
1220	2010.095	-347.258	-98073.781
1230	2010.095	-412.346	-98073.781
1240	2010.095	-609.346	-98073.781
1250	2010.095	-843.346	-98073.781
1260	2010.095	-916.371	-98073.781
1270	2010.095	-1103.371	-98073.781
1280	2010.095	-1176.396	-98073.781
1285	2010.095	-1383.396	-98073.781
1290	2010.095	-1928.396	-98073.781
1300	2010.095	-1928.396	-98048.383
1290	2010.095	-1928.396	-98073.781
1310	2010.095	-2863.396	-98073.781
1320	1943.621	-2863.396	-98112.641
1330	1880.579	-2863.396	-98149.500

INPUT LISTING

1340	1817.537	-2863.396	-98186.359
1350	1704.445	-2863.396	-98252.477
1360	1307.328	-2863.396	-98484.641
1370	1307.328	-5263.396	-98484.641
1350	1704.445	-2863.396	-98252.477
1500	987.246	-1929.008	-98074.641
1350	1704.445	-2863.396	-98252.477
1530	1280.545	-1928.796	-98073.781
1350	1704.445	-2863.396	-98252.477
1170	1156.920	-264.258	-98073.781
1350	1704.445	-2863.396	-98252.477
1510	2010.095	-1928.396	-97780.383
1285	2010.095	-1383.396	-98073.781
1390	1953.095	-1383.396	-98073.781
1400	1880.070	-1383.396	-98073.781
1410	1693.070	-1383.396	-98073.781
1420	1620.045	-1383.396	-98073.781
1430	1280.545	-1383.396	-98073.781
1520	1280.545	-1408.796	-98073.781
1430	1280.545	-1383.396	-98073.781
1440	941.045	-1383.396	-98073.781
1450	868.020	-1383.396	-98073.781
1460	593.020	-1383.396	-98073.781
1470	526.345	-1383.396	-98073.781
1100	437.920	-1384.008	-98073.781
1090	488.720	-1929.008	-98073.781
1500	988.720	-1929.008	-98073.781
1300	2010.095	-1928.396	-98048.383
1510	2010.095	-1928.396	-97780.383
1520	1280.545	-1408.796	-98073.781
1530	1280.545	-1928.796	-98073.781

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1-U2
CASE 14 (OPE) W+T2+P1+U3
CASE 15 (OPE) W+T2+P1+F1
CASE 16 (OCC) L16=L10-L4
CASE 17 (OCC) L17=L11-L4
CASE 18 (OCC) L18=L12-L4
CASE 19 (OCC) L19=L13-L4
CASE 20 (OCC) L20=L14-L4
CASE 21 (OCC) L21=L15-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
400		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	0	-2921	0	0	0	0
	2(OPE)	912	-1601	8820	0	0	0
	4(OPE)	924	-1602	8874	0	0	0
	6(OPE)	0	-1583	-3534	0	0	0
	8(SUS)	0	-1585	0	0	0	0
	9(SUS)	0	-1583	0	0	0	0
	10(OPE)	1589	-1601	9092	0	0	0
	11(OPE)	474	-1602	8460	0	0	0
	12(OPE)	957	-1411	8554	0	0	0
	13(OPE)	892	-1792	9195	0	0	0
	14(OPE)	960	-1602	11902	0	0	0
	15(OPE)	924	-1601	8876	0	0	0
	16(OCC)	665	1	218	0	0	0
	17(OCC)	-450	-1	-414	0	0	0
	18(OCC)	33	190	-320	0	0	0
	19(OCC)	-32	-190	321	0	0	0
	20(OCC)	36	-0	3028	0	0	0
	21(OCC)	-0	1	2	0	0	0
	MAX	1589/L10	-2921/L1	11902/L14			
410		TYPE=Rigid +Y;					
	1(HYD)	-0	-5331	-0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	353	-2796	-761	0	0	0
	4(OPE)	354	-2794	-760	0	0	0
	6(OPE)	-126	-2908	863	0	0	0
	8(SUS)	0	-2893	0	0	0	0
	9(SUS)	0	-2889	0	0	0	0
	10(OPE)	487	-2800	-685	0	0	0
	11(OPE)	378	-2789	-747	0	0	0
	12(OPE)	317	-2447	-662	0	0	0
	13(OPE)	389	-3142	-858	0	0	0
	14(OPE)	366	-2793	-754	0	0	0
	15(OPE)	354	-2798	-761	0	0	0
	16(OCC)	133	-6	75	0	0	0
	17(OCC)	24	5	13	0	0	0
	18(OCC)	-37	348	98	0	0	0
	19(OCC)	35	-348	-99	0	0	0
	20(OCC)	12	1	6	0	0	0
	21(OCC)	0	-3	-1	0	0	0
	MAX	487/L10	-5331/L1	863/L6			
420		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-10831	-0	0	0	0
	2(OPE)	-1154	-5973	-1786	0	0	0
	4(OPE)	-1174	-5974	-1786	0	0	0
	6(OPE)	-430	-5863	1706	0	0	0
	8(SUS)	-0	-5878	0	0	0	0
	9(SUS)	-0	-5871	0	0	0	0
	10(OPE)	1579	-5969	-1785	0	0	0
	11(OPE)	-5007	-5979	-1788	0	0	0
	12(OPE)	-1245	-5269	-1575	0	0	0
	13(OPE)	-1102	-6679	-1997	0	0	0
	14(OPE)	-734	-5975	-1787	0	0	0
	15(OPE)	-1174	-5971	-1785	0	0	0
	16(OCC)	2752	6	2	0	0	0
	17(OCC)	-3833	-5	-2	0	0	0
	18(OCC)	-71	705	211	0	0	0
	19(OCC)	71	-705	-211	0	0	0
	20(OCC)	440	-1	-0	0	0	0
	21(OCC)	-0	3	1	0	0	0
	MAX	-5007/L11	-10831/L1	-1997/L13			
450		TYPE=Rigid +Y;					
	1(HYD)	-0	-8306	0	0	0	0
	2(OPE)	-1393	-4967	528	0	0	0
	4(OPE)	-1395	-4974	531	0	0	0
	6(OPE)	1317	-4436	-187	0	0	0
	8(SUS)	0	-4509	-0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(SUS)	0	-4503	-0	0	0	0
	10(OPE)	-1341	-4946	635	0	0	0
	11(OPE)	-1349	-4999	655	0	0	0
	12(OPE)	-1240	-4435	482	0	0	0
	13(OPE)	-1550	-5513	577	0	0	0
	14(OPE)	-1323	-4979	694	0	0	0
	15(OPE)	-1390	-4957	529	0	0	0
	16(OCC)	54	28	104	0	0	0
	17(OCC)	46	-25	125	0	0	0
	18(OCC)	155	539	-48	0	0	0
	19(OCC)	-155	-539	46	0	0	0
	20(OCC)	72	-6	164	0	0	0
	21(OCC)	5	16	-2	0	0	0
	MAX	-1550/L13	-8306/L1	694/L14			
480		TYPE=Rigid +Y;					
	1(HYD)	1	-7395	0	0	0	0
	2(OPE)	-193	-3422	1008	0	0	0
	4(OPE)	-193	-3413	1006	0	0	0
	6(OPE)	-233	-4104	-1209	0	0	0
	8(SUS)	-1	-4010	0	0	0	0
	9(SUS)	-1	-4005	0	0	0	0
	10(OPE)	-101	-3449	1030	0	0	0
	11(OPE)	-276	-3381	976	0	0	0
	12(OPE)	-170	-2930	862	0	0	0
	13(OPE)	-214	-3897	1149	0	0	0
	14(OPE)	-231	-3406	995	0	0	0
	15(OPE)	-194	-3434	1012	0	0	0
	16(OCC)	92	-36	24	0	0	0
	17(OCC)	-83	32	-29	0	0	0
	18(OCC)	23	484	-143	0	0	0
	19(OCC)	-21	-484	144	0	0	0
	20(OCC)	-39	7	-10	0	0	0
	21(OCC)	-1	-21	6	0	0	0
	MAX	-276/L11	-7395/L1	-1209/L6			
490		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-1	-6844	0	0	0	0
	2(OPE)	750	-3891	1166	0	0	0
	4(OPE)	750	-3892	1166	0	0	0
	6(OPE)	-365	-3698	-1047	0	0	0
	8(SUS)	1	-3723	0	0	0	0
	9(SUS)	1	-3719	0	0	0	0
	10(OPE)	3591	-3883	1163	0	0	0
	11(OPE)	-1335	-3900	1168	0	0	0
	12(OPE)	600	-3446	1032	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	893	-4338	1299	0	0	0
	14(OPE)	41	-3895	1168	0	0	0
	15(OPE)	743	-3889	1165	0	0	0
	16(OCC)	2841	9	-3	0	0	0
	17(OCC)	-2084	-8	2	0	0	0
	18(OCC)	-149	446	-134	0	0	0
	19(OCC)	144	-446	134	0	0	0
	20(OCC)	-708	-3	2	0	0	0
	21(OCC)	-6	3	-1	0	0	0
	MAX	3591/L10	-6844/L1	1299/L13			
500		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-6284	0	0	0	0
	2(OPE)	49	-3238	0	0	0	0
	4(OPE)	57	-3243	0	0	0	0
	6(OPE)	0	-3394	0	0	0	0
	8(SUS)	0	-3376	0	0	0	0
	9(SUS)	0	-3372	0	0	0	0
	10(OPE)	495	-3246	0	0	0	0
	11(OPE)	-238	-3240	0	0	0	0
	12(OPE)	113	-2837	0	0	0	0
	13(OPE)	3	-3649	0	0	0	0
	14(OPE)	169	-3236	0	0	0	0
	15(OPE)	71	-3235	0	0	0	0
	16(OCC)	438	-3	0	0	0	0
	17(OCC)	-295	2	0	0	0	0
	18(OCC)	56	406	0	0	0	0
	19(OCC)	-54	-406	0	0	0	0
	20(OCC)	112	6	0	0	0	0
	21(OCC)	14	7	0	0	0	0
	MAX	495/L10	-6284/L1				
510		TYPE=Rigid +Y;					
	1(HYD)	9	-7358	1	0	0	0
	2(OPE)	-117	-4597	1374	0	0	0
	4(OPE)	-116	-4573	1367	0	0	0
	6(OPE)	43	-4087	-1225	0	0	0
	8(SUS)	-12	-4149	1	0	0	0
	9(SUS)	-12	-4144	1	0	0	0
	10(OPE)	-18	-4564	1369	0	0	0
	11(OPE)	-378	-4572	1319	0	0	0
	12(OPE)	-107	-4079	1219	0	0	0
	13(OPE)	-125	-5067	1515	0	0	0
	14(OPE)	-116	-4688	1402	0	0	0
	15(OPE)	-114	-4613	1379	0	0	0
	16(OCC)	98	9	2	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OCC)	-262	1	-48	0	0	0
	18(OCC)	9	493	-148	0	0	0
	19(OCC)	-8	-494	148	0	0	0
	20(OCC)	0	-115	35	0	0	0
	21(OCC)	2	-41	12	0	0	0
	MAX	-378/L11	-7358/L1	1515/L13			
520		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	1(HYD)	23	-7076	1	0	0	0
	2(OPE)	-2403	-4517	-8802	0	0	0
	4(OPE)	-2419	-4492	-8849	0	0	0
	6(OPE)	378	-3956	3020	0	0	0
	8(SUS)	-10	-4002	1	0	0	0
	9(SUS)	-10	-3997	1	0	0	0
	10(OPE)	-153	-4493	-9331	0	0	0
	11(OPE)	-5145	-4499	-8527	0	0	0
	12(OPE)	-2439	-4013	-8555	0	0	0
	13(OPE)	-2400	-4971	-9140	0	0	0
	14(OPE)	-2414	-4372	-1868	0	0	0
	15(OPE)	-2370	-4529	-8846	0	0	0
	16(OCC)	2266	-1	-482	0	0	0
	17(OCC)	-2726	-7	322	0	0	0
	18(OCC)	-20	479	294	0	0	0
	19(OCC)	20	-479	-291	0	0	0
	20(OCC)	5	121	6981	0	0	0
	21(OCC)	49	-37	3	0	0	0
	MAX	-5145/L11	-7076/L1	-9331/L10			
530		TYPE=Rigid +Y;					
	1(HYD)	-4	-7251	1	0	0	0
	2(OPE)	126	-3803	-1134	0	0	0
	4(OPE)	126	-3808	-1135	0	0	0
	6(OPE)	-31	-3913	1173	0	0	0
	8(SUS)	2	-3903	0	0	0	0
	9(SUS)	2	-3898	0	0	0	0
	10(OPE)	171	-3808	-1130	0	0	0
	11(OPE)	-20	-3807	-1142	0	0	0
	12(OPE)	112	-3339	-995	0	0	0
	13(OPE)	141	-4276	-1275	0	0	0
	14(OPE)	127	-3825	-1141	0	0	0
	15(OPE)	125	-3800	-1133	0	0	0
	16(OCC)	44	-0	6	0	0	0
	17(OCC)	-147	1	-6	0	0	0
	18(OCC)	-15	469	140	0	0	0
	19(OCC)	14	-469	-140	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	20(OCC)	0	-17	-5	0	0	0
	21(OCC)	-2	7	2	0	0	0
	MAX	171/L10	-7251/L1	-1275/L13			
540		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	1	-2603	0	0	0	0
	2(OPE)	160	-1435	-429	0	0	0
	4(OPE)	161	-1434	-429	0	0	0
	6(OPE)	-7	-1417	425	0	0	0
	8(SUS)	-0	-1418	0	0	0	0
	9(SUS)	-0	-1416	0	0	0	0
	10(OPE)	754	-1434	-429	0	0	0
	11(OPE)	-396	-1434	-429	0	0	0
	12(OPE)	160	-1264	-378	0	0	0
	13(OPE)	162	-1604	-480	0	0	0
	14(OPE)	160	-1431	-428	0	0	0
	15(OPE)	158	-1435	-429	0	0	0
	16(OCC)	593	0	0	0	0	0
	17(OCC)	-557	-0	-0	0	0	0
	18(OCC)	-1	170	51	0	0	0
	19(OCC)	1	-170	-51	0	0	0
	20(OCC)	-1	3	1	0	0	0
	21(OCC)	-3	-1	-0	0	0	0
	MAX	754/L10	-2603/L1	-480/L13			
1060		TYPE=Rigid +Y;					
	1(HYD)	-158	-1700	5	0	0	0
	2(OPE)	-196	-821	149	0	0	0
	4(OPE)	-251	-978	151	0	0	0
	6(OPE)	128	-1207	55	0	0	0
	8(SUS)	-83	-1286	8	0	0	0
	9(SUS)	-83	-1285	8	0	0	0
	10(OPE)	-79	-873	250	0	0	0
	11(OPE)	-294	-1056	117	0	0	0
	12(OPE)	-202	-808	133	0	0	0
	13(OPE)	-302	-1149	167	0	0	0
	14(OPE)	-145	-979	256	0	0	0
	15(OPE)	-78	-494	126	0	0	0
	16(OCC)	172	105	98	0	0	0
	17(OCC)	-43	-78	-34	0	0	0
	18(OCC)	49	170	-18	0	0	0
	19(OCC)	-50	-171	15	0	0	0
	20(OCC)	107	-1	104	0	0	0
	21(OCC)	173	484	-26	0	0	0
	MAX	-302/L13	-1700/L1	256/L14			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1170		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	-132	-1273	-28	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	330	-5393	-58	0	0	0
	8(SUS)	-109	-1100	-23	0	0	0
	9(SUS)	-109	-1099	-23	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	330/L6	-5393/L6	-58/L6			
1330		TYPE=Rigid ANC;					
	1(HYD)	-44	-308	12	18	-5	-2
	2(OPE)	-364	257	20	5	-26	208
	4(OPE)	-472	303	21	4	-33	257
	6(OPE)	209	1306	21	-64	11	48
	8(SUS)	-40	-311	11	18	-4	-4
	9(SUS)	-40	-311	11	18	-4	-4
	10(OPE)	-453	152	26	24	-35	239
	11(OPE)	-488	401	15	-11	-30	265
	12(OPE)	-463	428	21	-5	-31	263
	13(OPE)	-480	178	20	12	-34	251
	14(OPE)	-446	676	177	73	-57	282
	15(OPE)	-417	621	26	-14	-30	237
	16(OCC)	18	-151	5	20	-3	-18
	17(OCC)	-16	97	-6	-15	2	9
	18(OCC)	9	125	0	-9	1	6
	19(OCC)	-9	-125	-0	8	-1	-6
	20(OCC)	26	373	156	69	-24	25
	21(OCC)	55	318	5	-18	3	-20
	MAX	-488/L11	1306/L6	177/L14	73/L14	-57/L14	282/L14
1350		TYPE=Rigid ANC;					

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	1(HYD)	-44	-365	12	54	-11	-63
	2(OPE)	-364	203	20	-17	-67	246
	4(OPE)	-472	249	21	-23	-85	303
	6(OPE)	209	1251	21	-195	28	271
	8(SUS)	-40	-365	11	54	-10	-66
	9(SUS)	-40	-365	11	54	-10	-66
	10(OPE)	-439	98	26	12	-86	259
	11(OPE)	-502	346	15	-49	-84	329
	12(OPE)	-463	381	21	-45	-83	332
	13(OPE)	-480	118	20	-2	-87	274
	14(OPE)	-446	622	191	8	-136	394
	15(OPE)	-417	567	26	-74	-77	339
	16(OCC)	32	-151	5	35	-1	-44
	17(OCC)	-30	97	-6	-25	1	26
	18(OCC)	9	132	0	-22	2	29
	19(OCC)	-9	-132	-0	22	-2	-29
	20(OCC)	26	373	170	31	-51	91
	21(OCC)	55	318	5	-51	8	36
	MAX	-502/L11	1251/L6	191/L14	-195/L6	-136/L14	394/L14
1370		TYPE=Rigid ANC;					
	1(HYD)	131	-3960	-9	1540	19	536
	2(OPE)	3233	-3176	-100	1025	1136	-7268
	4(OPE)	3303	-3060	-101	977	1167	-7638
	6(OPE)	-573	-3672	-24	1391	-242	2276
	8(SUS)	103	-3503	-10	1362	11	438
	9(SUS)	103	-3502	-10	1362	11	438
	10(OPE)	4408	-3172	-156	908	1506	-11338
	11(OPE)	2045	-2978	-62	1023	750	-3555
	12(OPE)	3268	-2651	-91	838	1170	-7617
	13(OPE)	3339	-3469	-110	1119	1165	-7660
	14(OPE)	3231	-3055	977	4925	1605	-7507
	15(OPE)	4577	-1980	-86	576	1677	-12441
	16(OCC)	1105	-112	-54	-69	340	-3701
	17(OCC)	-1258	82	39	46	-417	4083
	18(OCC)	-35	409	10	-139	3	20
	19(OCC)	36	-409	-9	142	-1	-23
	20(OCC)	-72	5	1079	3948	439	131
	21(OCC)	1274	1080	15	-401	510	-4804
	MAX	4577/L15	-3960/L1	1079/L20	4925/L14	1677/L15	-12441/L15
1500		TYPE=Rigid +Y;					
	1(HYD)	0	0	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	8(SUS)	0	0	0	0	0	0
	9(SUS)	0	0	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
1510		TYPE=Rigid +Y;					
	1(HYD)	0	-91	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	0	-89	0	0	0	0
	9(SUS)	0	-89	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	-423	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	-423	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX		-423/L14				
1530		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-47	-848	3	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	142	-748	-12	0	0	0
	8(SUS)	-40	-773	2	0	0	0
	9(SUS)	-40	-773	2	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	142/L6	-848/L1	-12/L6			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 22 (OCC) L22=L16+L8
CASE 23 (OCC) L23=L17+L8
CASE 24 (OCC) L24=L18+L8
CASE 25 (OCC) L25=L19+L8
CASE 26 (OCC) L26=L20+L8
CASE 27 (OCC) L27=L21+L8
CASE 28 (EXP) L28=L2-L8
CASE 29 (EXP) L29=L4-L8
CASE 30 (EXP) L30=L2-L4
CASE 31 (EXP) L31=L6-L8
CASE 32 (EXP) L32=L2-L6
CASE 33 (EXP) L33=L4-L6

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	12.1	@Node	420
Code Stress:	29140.1	Allowable Stress:	241316.5
Axial Stress:	6761.7	@Node	1240
Bending Stress:	28094.4	@Node	1090
Torsion Stress:	1855.1	@Node	439
Hoop Stress:	14676.3	@Node	1240
Max Stress Intensity:	29140.1	@Node	420

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	35.1	@Node	420
Code Stress:	45444.6	Allowable Stress:	129365.3
Axial Stress:	12073.8	@Node	520
Bending Stress:	37057.9	@Node	515
Torsion Stress:	2667.8	@Node	439
Hoop Stress:	24443.4	@Node	410
Max Stress Intensity:	45444.7	@Node	420

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	25.8	@Node	420
Code Stress:	33328.9	Allowable Stress:	129365.3
Axial Stress:	1497.8	@Node	1530
Bending Stress:	37036.2	@Node	515
Torsion Stress:	2664.4	@Node	439
Hoop Stress:	0.0	@Node	410

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Max Stress Intensity:       37965.4       @Node    515

 CODE STRESS CHECK PASSED      : LOADCASE 22 (OCC) L22=L16+L8

Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L16+L8
Ratio (%):                    34.6       @Node    420
Code Stress:                59480.7       Allowable Stress:     172055.9
Axial Stress:               12344.5       @Node   1100
Bending Stress:             54457.1       @Node    515
Torsion Stress:              2920.5       @Node   1038
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       61683.1       @Node    515

 CODE STRESS CHECK PASSED      : LOADCASE 23 (OCC) L23=L17+L8

Highest Stresses: (   KPa    ) LOADCASE 23 (OCC) L23=L17+L8
Ratio (%):                    44.3       @Node    420
Code Stress:                76153.3       Allowable Stress:     172055.9
Axial Stress:               12778.6       @Node    430
Bending Stress:             63954.6       @Node    420
Torsion Stress:              2747.3       @Node   1038
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       76153.3       @Node    420

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L18+L8

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L18+L8
Ratio (%):                    28.9       @Node    420
Code Stress:                49640.6       Allowable Stress:     172055.9
Axial Stress:               12249.1       @Node    520
Bending Stress:             42093.3       @Node    515
Torsion Stress:              2344.5       @Node    439
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       49640.6       @Node    420

 CODE STRESS CHECK PASSED      : LOADCASE 25 (OCC) L25=L19+L8

Highest Stresses: (   KPa    ) LOADCASE 25 (OCC) L25=L19+L8
Ratio (%):                    28.8       @Node    420
Code Stress:                49636.4       Allowable Stress:     172055.9
Axial Stress:               12068.7       @Node    428
Bending Stress:             42057.0       @Node    515
Torsion Stress:              2991.3       @Node    439
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       49636.4       @Node    420

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L20+L8

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L20+L8
Ratio (%):                    37.8       @Node    515
Code Stress:                65001.9       Allowable Stress:     172055.9
Axial Stress:               13921.6       @Node    520
Bending Stress:             78256.3       @Node    515
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Torsion Stress:              6699.5       @Node   1350
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       85821.5       @Node    515

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L21+L8

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L21+L8
Ratio (%):                     56.2       @Node   1230
Code Stress:               103011.6       Allowable Stress:     183400.5
Axial Stress:               13611.6       @Node   1240
Bending Stress:             95927.3       @Node   1230
Torsion Stress:              2697.1       @Node    439
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:      103011.2       @Node   1230

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L2-L8
Ratio (%):                     40.3       @Node    459
Code Stress:               126139.1       Allowable Stress:     312998.4
Axial Stress:                2298.1       @Node   1500
Bending Stress:            127561.5       @Node    458
Torsion Stress:              4030.5       @Node   1310
Hoop Stress:                    0.0       @Node    410
Max Stress Intensity:      340760.4       @Node    458

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L4-L8

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L4-L8
Ratio (%):                     40.7       @Node    459
Code Stress:               127273.7       Allowable Stress:     312657.1
Axial Stress:                2422.2       @Node   1500
Bending Stress:            128710.2       @Node    458
Torsion Stress:              5002.8       @Node   1310
Hoop Stress:                    0.0       @Node    410
Max Stress Intensity:      343827.8       @Node    458

 CODE STRESS CHECK PASSED      : LOADCASE 30 (EXP) L30=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 30 (EXP) L30=L2-L4
Ratio (%):                      5.7       @Node   1285
Code Stress:                18312.9       Allowable Stress:     323785.0
Axial Stress:                 408.3       @Node   1100
Bending Stress:             18169.8       @Node   1285
Torsion Stress:               972.3       @Node   1310
Hoop Stress:                    0.0       @Node    410
Max Stress Intensity:       34368.8       @Node   1285

 CODE STRESS CHECK PASSED      : LOADCASE 31 (EXP) L31=L6-L8

Highest Stresses: (   KPa    ) LOADCASE 31 (EXP) L31=L6-L8
Ratio (%):                     20.2       @Node   1230
Code Stress:                66008.9       Allowable Stress:     327074.7
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Axial Stress:	3066.5	@Node	1230
Bending Stress:	62940.7	@Node	1230
Torsion Stress:	1861.0	@Node	1350
Hoop Stress:	0.0	@Node	410
Max Stress Intensity:	95925.9	@Node	1230

CODE STRESS CHECK PASSED : LOADCASE 32 (EXP) L32=L2-L6

Highest Stresses: (KPa) LOADCASE 32 (EXP) L32=L2-L6			
Ratio (%):	45.8	@Node	459
Code Stress:	143290.0	Allowable Stress:	312998.4
Axial Stress:	3372.9	@Node	1500
Bending Stress:	144289.4	@Node	458
Torsion Stress:	5891.4	@Node	1310
Hoop Stress:	0.0	@Node	410
Max Stress Intensity:	385534.4	@Node	458

CODE STRESS CHECK PASSED : LOADCASE 33 (EXP) L33=L4-L6

Highest Stresses: (KPa) LOADCASE 33 (EXP) L33=L4-L6			
Ratio (%):	46.2	@Node	459
Code Stress:	144424.7	Allowable Stress:	312657.1
Axial Stress:	3497.1	@Node	1500
Bending Stress:	145438.1	@Node	458
Torsion Stress:	6863.7	@Node	1310
Hoop Stress:	0.0	@Node	410
Max Stress Intensity:	388601.8	@Node	458

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: APR 28, 2024 Time: 10:51
Job:: BNK-GCS-CN-050-02
Licensed To:: SPLM: Edit company name in <system>\company.txt

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: APR 28, 2024 Time: 10:51
Job:: BNK-GCS-CN-050-02
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

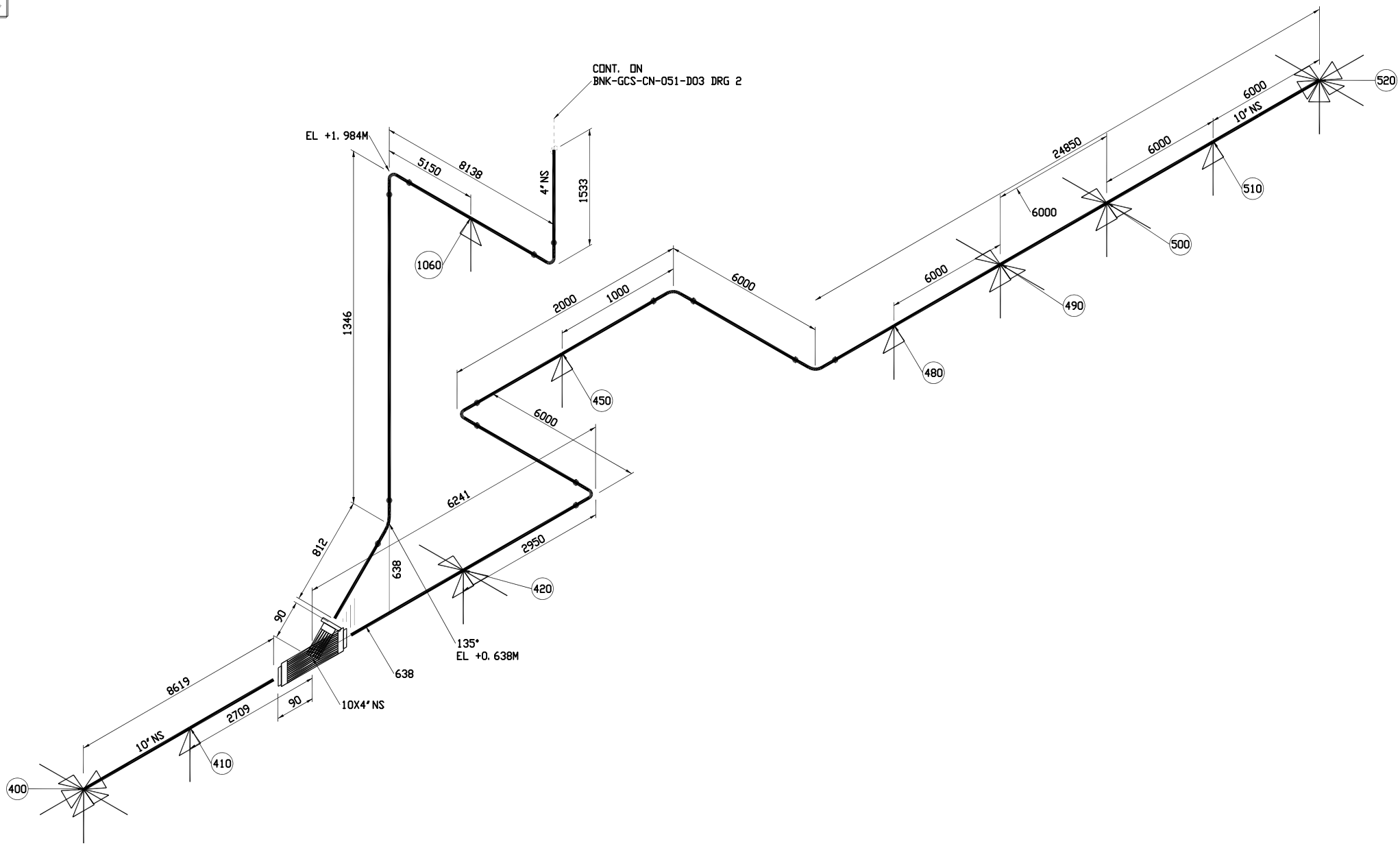
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
1350		Absolute Method								
	Limits	2800	2800	2100		420	280	360		
	2(OPE)	304	203	-200	0.109	-110	-67	-221	0.615	
	4(OPE)	397	249	-256	0.142	-133	-85	-273	0.759	
	6(OPE)	-191	1251	87	0.447	31	28	-332	0.923	
	8(SUS)	29	-365	-30	0.130	-13	-10	84	0.234	
	9(SUS)	29	-365	-30	0.130	-13	-10	84	0.234	

BNK-GCS-CN-051

1. GAS-111-0029B-CN05-2"-PT
2. FL-112-0013B-AN07-4"-PT
3. FL-112-0012B-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 3

REV.	CHANGE	DATE
		15 MAY 2024

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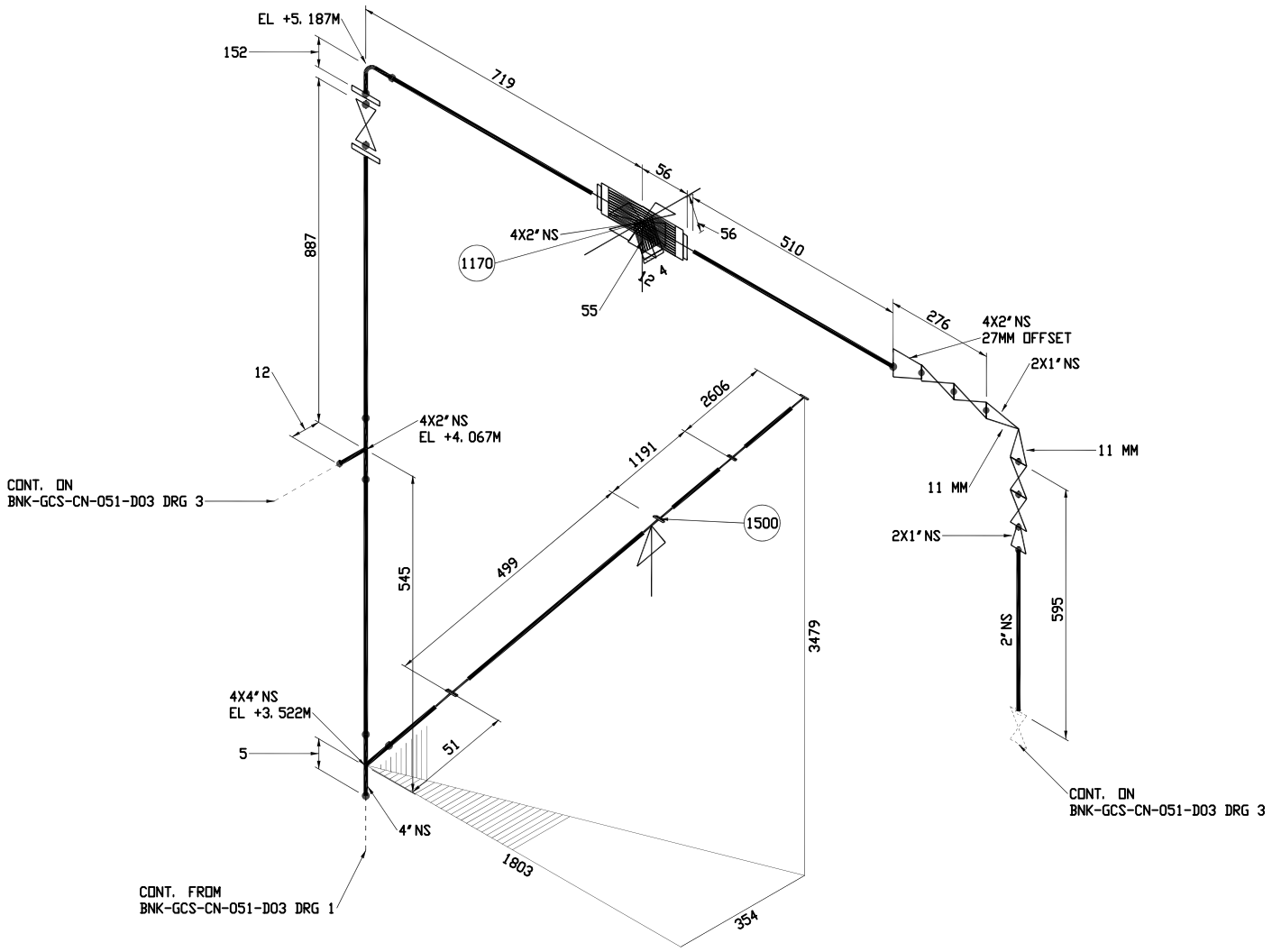

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INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

2 OF 3

REV.	CHANGE	DATE
		15 MAY 2024

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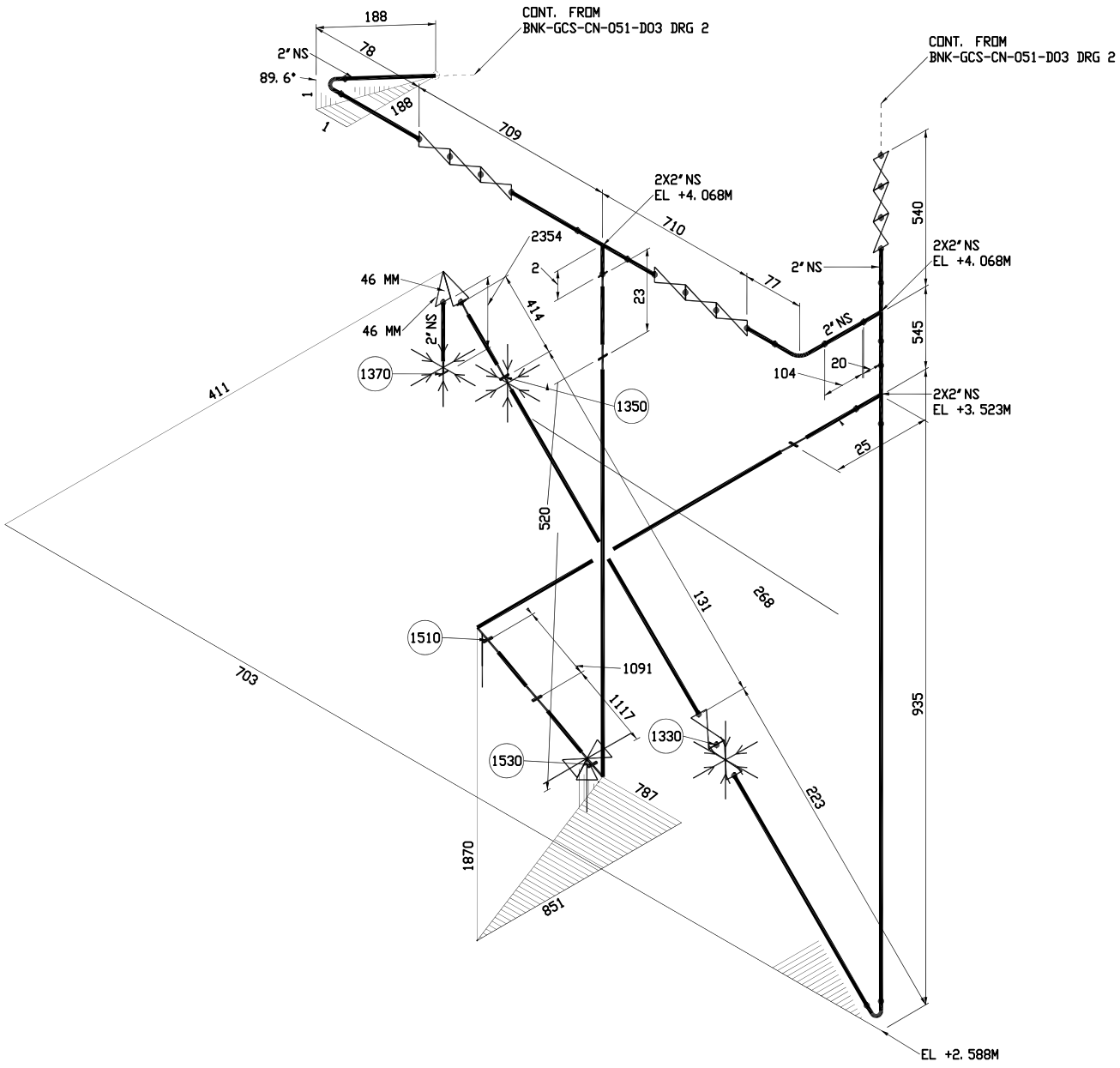

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 3 OF 3

REV.	CHANGE	DATE
		15 MAY 2024

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CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 15:46
Job:: BNK-GCS-CN-051-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 15:46
Job:: BNK-GCS-CN-051-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 15:46
Job:: BNK-GCS-CN-051-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 15,2024 15:46:34

PIPE DATA

From 415 To 1040 DY= 638.000 mm. DZ= -637.000 mm.
PIPE
Dia= 114.300 mm. Wall= 8.560 mm. Cor= 6.0000 mm.
GENERAL
T1= 270 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,483,936 KPa
EH2= 187,335,024 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0001362 kg./cu.cm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 44.955 Angle/Node @1= 22.48 1039
Angle/Node @2= .00 1038
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 1040 To 1050 DY= 1,346.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1049
Angle/Node @2= .00 1048

From 1050 To 1060 DX= 5,150.000 mm.
RESTRAINTS
Node 1060 +Y Mu = .30

From 1060 To 1070 DX= 2,988.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1069
Angle/Node @2= .00 1068

From 1070 To 1080 DY= 1,538.000 mm.

From 1080 To 1090 DX= 50.800 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 1090 Unreinforced Tee

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 15:46
Job:: BNK-GCS-CN-051-D03
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INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  1080  To  1100 DY= 545.000 mm.
 SIF's & TEE's
    Node  1100   Welding Tee
 ----------------------------------------------------------------------------
 From  1100  To  1110 DY= 570.000 mm.
 ----------------------------------------------------------------------------
 From  1110  To  1120 DY= 79.375 mm.
 RIGID  Weight= 71.17 N.
 ----------------------------------------------------------------------------
 From  1120  To  1130 DY= 238.000 mm.
 RIGID  Weight= 644.99 N.
 ----------------------------------------------------------------------------
 From  1130  To  1140 DY= 79.375 mm.
 RIGID  Weight= 71.17 N.
 ----------------------------------------------------------------------------
 From  1140  To  1150 DY= 153.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1149
 ----------------------------------------------------------------------------
 From  1150  To  1160  DX= 153.000 mm.
 ----------------------------------------------------------------------------
 From  1160  To  1170  DX= 566.000 mm.
 RESTRAINTS
    Node  1170  +Y   Cnode  1171   Mu = .30
    Node  1170  X   Cnode  1171   Gap= 3.000 mm.
    Node  1170  Z   Cnode  1171   Gap= 3.000 mm.   Mu = .30
 ----------------------------------------------------------------------------
 From  1170  To  1180  DX= 566.000 mm.
 ----------------------------------------------------------------------------
 From  1180  To  1190  DX= 102.000 mm.  DY= 27.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 8.738 mm.
 ----------------------------------------------------------------------------
 From  1190  To  1200  DX= 66.675 mm.  DY= .000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ----------------------------------------------------------------------------
 From  1200  To  1210  DX= 118.500 mm.  DY= .000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Fluid Den= .0000057 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 88.96 N.
 FORCES & MOMENTS
    Node  1210   FX1= 1,500.07 N.   FY1= 1,500.07 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  1210  To  1220 DY= -110.000 mm.
```

INPUT LISTING

```
 PIPE
    Dia= 33.401 mm.   Wall= 6.350 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  1220  To  1230 DY= -65.088 mm.
 RIGID  Weight= 22.24 N.
 ------------------------------------------------------------------------------
 From  1230  To  1240 DY= -197.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 5.537 mm.
 ------------------------------------------------------------------------------
 From  1240  To  1250 DY= -234.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  1250  To  1260 DY= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  1260  To  1270 DY= -187.000 mm.
 RIGID  Weight= 258.00 N.
 ------------------------------------------------------------------------------
 From  1270  To  1280 DY= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  1280  To  1285 DY= -207.000 mm.
 ------------------------------------------------------------------------------
 From  1285  To  1290 DY= -545.000 mm.
 ------------------------------------------------------------------------------
 From  1290  To  1300 DZ= 25.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  1300   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  1290  To  1310 DY= -935.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1309
    Angle/Node @2= .00 1308
 ------------------------------------------------------------------------------
 From  1310  To  1320  DX= -66.474 mm.  DZ= -38.862 mm.
 ------------------------------------------------------------------------------
 From  1320  To  1330  DX= -63.042 mm.  DZ= -36.855 mm.
 RIGID  Weight= 44.48 N.
 RESTRAINTS
    Node  1330  ANC   Cnode  1331
 ------------------------------------------------------------------------------
 From  1331  To  1340  DX= -63.042 mm.  DZ= -36.855 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  1340  To  1350  DX= -113.092 mm.  DZ= -66.115 mm.
 RESTRAINTS
    Node  1350  ANC   Cnode  1351
 EQUIPMENT LIMITS
    Nozzle Node = 1350
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 2,800.14 N.   FB= 2,800.14 N.
```

INPUT LISTING
```
    FC= 2,100.10 N.   MA= 420.02 N.m.   MB= 280.01 N.m.   MC= 360.02 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1351  To  1360  DX= -397.117 mm.  DZ= -232.160 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1360  To  1370 DY= -2,400.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  1370  ANC
 ---------------------------------------------------------------------------
 From  1351  To  1500  DX= -717.199 mm.  DY= 934.388 mm.  DZ= 177.836 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1351  To  1531  DX= -480.901 mm.  DY= 934.600 mm.  DZ= 378.688 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1351  To  1171  DX= -547.525 mm.  DY= 2,599.138 mm.  DZ= 178.695 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1351  To  1511  DX= 305.650 mm.  DY= 935.000 mm.  DZ= 472.094 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1285  To  1390  DX= .000 mm.  DZ= 200.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1389
    Angle/Node @2= .00 1388
 ---------------------------------------------------------------------------
 From  1390  To  1395  DX= -77.000 mm.
 ---------------------------------------------------------------------------
 From  1395  To  1400  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1400  To  1410  DX= -187.000 mm.
 RIGID  Weight= 258.00 N.
 ---------------------------------------------------------------------------
 From  1410  To  1420  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1420  To  1430  DX= -376.500 mm.
 ---------------------------------------------------------------------------
 From  1430  To  1520 DY= -25.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  1520   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  1430  To  1440  DX= -294.500 mm.
 ---------------------------------------------------------------------------
 From  1440  To  1450  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1450  To  1460  DX= -275.000 mm.
 RIGID  Weight= 458.17 N.
 ---------------------------------------------------------------------------
 From  1460  To  1470  DX= -66.675 mm.
```

INPUT LISTING

```
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  1470  To  1600  DX= -78.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.165   Angle/Node @1= 45.08 1599
    Angle/Node @2= .00 1598
 ------------------------------------------------------------------------------
 From  1600  To  1100  DX= .576 mm.  DY= -.613 mm.  DZ= -200.000 mm.
 ------------------------------------------------------------------------------
 From  1090  To  1500  DX= 500.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  1500  +Y   Cnode  1501   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1300  To  1510 DZ= 268.000 mm.
 PIPE
    Dia= 48.260 mm.   Wall= 3.683 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  1510  +Y   Cnode  1511
 ------------------------------------------------------------------------------
 From  1520  To  1530 DY= -520.000 mm.
 RESTRAINTS
    Node  1530  +Y   Cnode  1531   Mu = .30
    Node  1530  Z   Cnode  1531   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  400  To  410 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  410  +Y   Mu = .30
    Node  400  +Y   Mu = .30
    Node  400  X   Gap= 3.000 mm.
    Node  400  Z   Gap= 3.000 mm.
```

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INPUT LISTING
```
 UNIFORM LOAD
   Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
   Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
   Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  410  To  415 DZ= -2,709.000 mm.
 SIF's & TEE's
    Node  415   Welding Tee
 ------------------------------------------------------------------------------
 From  415  To  420 DZ= -3,291.000 mm.
 RESTRAINTS
    Node  420  +Y   Mu = .30
    Node  420  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  420  To  430 DZ= -2,950.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 429
    Angle/Node @2= .00 428
 ------------------------------------------------------------------------------
 From  430  To  440  DX= -6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 439
    Angle/Node @2= .00 438
 ------------------------------------------------------------------------------
 From  440  To  450 DZ= -1,000.000 mm.
 RESTRAINTS
    Node  450  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  450  To  460 DZ= -1,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 459
    Angle/Node @2= .00 458
 ------------------------------------------------------------------------------
 From  460  To  470  DX= 6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 469
    Angle/Node @2= .00 468
 ------------------------------------------------------------------------------
 From  470  To  480 DZ= -850.000 mm.
 RESTRAINTS
    Node  480  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  480  To  490  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  490  +Y   Mu = .30
    Node  490  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  490  To  500  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  500  +Y
    Node  500  X   Gap= 3.000 mm.
```

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INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  500  To  510 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 600.0137 KPa   PHyd= 900.0205 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 187,483,936 KPa   EH2= 187,335,024 KPa
    EH3= 205,934,864 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
    Insul Den= .0001362 kg./cu.cm.
 RESTRAINTS
    Node  510  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  510  To  515 DZ= -2,561.000 mm.
 SIF's & TEE's
    Node  515   Welding Tee
 ---------------------------------------------------------------------------
 From  515  To  520 DZ= -3,439.000 mm.
 RESTRAINTS
    Node  520  +Y   Mu = .30
    Node  520  X
    Node  520  Z   Gap= 3.000 mm.
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 MATERIAL Changes:
   415            1040             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
  1090            1500             Mat= (102)A53 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   400             410             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   500             510             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
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 ALLOWABLE STRESS Changes
   415            1040             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 129,638 KPa
                                   Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
  1200            1210             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 137,895 KPa
                                   Sh2= 137,895 KPa   Sh3= 137,895 KPa
```

INPUT LISTING

```
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
  1090            1500            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   400             410            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   500             510            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
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BEND ELEMENTS
   415            1040             Radius= 152.400 mm. (LONG)
                                   Bend Angle= 44.955   Angle/Node @1= 22.48
                                  1039   Angle/Node @2= .00 1038
  1040            1050             Radius= 152.400 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1049   Angle/Node @2= .00 1048
  1060            1070             Radius= 152.400 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1069   Angle/Node @2= .00 1068
  1140            1150             Radius= 152.400 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1149
  1290            1310             Radius= 76.200 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1309   Angle/Node @2= .00 1308
  1285            1390             Radius= 76.200 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  1389   Angle/Node @2= .00 1388
  1470            1600             Radius= 76.200 mm. (LONG)
                                   Bend Angle= 90.165   Angle/Node @1= 45.08
                                  1599   Angle/Node @2= .00 1598
   420             430             Radius= 381.000 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                  429   Angle/Node @2= .00 428
   430             440             Radius= 381.000 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
```

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INPUT LISTING

```
                                439   Angle/Node @2= .00 438
   450             460             Radius= 381.000 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                459   Angle/Node @2= .00 458
   460             470             Radius= 381.000 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                469   Angle/Node @2= .00 468
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RIGIDS
 1080            1090           RIGID  Weight= .00 N.
 1110            1120           RIGID  Weight= 71.17 N.
 1120            1130           RIGID  Weight= 644.99 N.
 1130            1140           RIGID  Weight= 71.17 N.
 1190            1200           RIGID  Weight= 31.14 N.
 1200            1210           RIGID  Weight= 88.96 N.
 1210            1220           RIGID  Weight= 44.48 N.
 1220            1230           RIGID  Weight= 22.24 N.
 1250            1260           RIGID  Weight= 44.48 N.
 1260            1270           RIGID  Weight= 258.00 N.
 1270            1280           RIGID  Weight= 44.48 N.
 1290            1300           RIGID  Weight= .00 N.
 1320            1330           RIGID  Weight= 44.48 N.
 1331            1340           RIGID  Weight= 44.48 N.
 1351            1360           RIGID  Weight= .00 N.
 1360            1370           RIGID  Weight= .00 N.
 1351            1500           RIGID  Weight= .00 N.
 1351            1531           RIGID  Weight= .00 N.
 1351            1171           RIGID  Weight= .00 N.
 1351            1511           RIGID  Weight= .00 N.
 1395            1400           RIGID  Weight= 44.48 N.
 1400            1410           RIGID  Weight= 258.00 N.
 1410            1420           RIGID  Weight= 44.48 N.
 1430            1520           RIGID  Weight= .00 N.
 1440            1450           RIGID  Weight= 44.48 N.
 1450            1460           RIGID  Weight= 458.17 N.
 1460            1470           RIGID  Weight= 31.14 N.
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SIF's & TEE's
 1080            1090             Node  1090   Unreinforced Tee
 1080            1100             Node  1100   Welding Tee
 1290            1300             Node  1300   Unreinforced Tee
 1430            1520             Node  1520   Unreinforced Tee
  410             415             Node  415   Welding Tee
  510             515             Node  515   Welding Tee
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REDUCERS
 1180            1190             Diam2= 60.325 mm.   Wall2= 8.738 mm.
```

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INPUT LISTING
1230 1240 Diam2= 60.325 mm. Wall2= 5.537 mm.
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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
1060	+Y				.30	.000	1.000	.000
1170	+Y	1171			.30	.000	1.000	.000
1170	X	1171		3.00		1.000	.000	.000
1170	Z	1171		3.00	.30	.000	.000	1.000
1330	ANC	1331				.000	.000	.000
1350	ANC	1351				.000	.000	.000
1370	ANC					.000	.000	.000
1500	+Y	1501			.30	.000	1.000	.000
1510	+Y	1511				.000	1.000	.000
1530	+Y	1531			.30	.000	1.000	.000
1530	Z	1531		3.00		.000	.000	1.000
410	+Y				.30	.000	1.000	.000
400	+Y				.30	.000	1.000	.000
400	X			3.00		1.000	.000	.000
400	Z			3.00		.000	.000	1.000
420	+Y				.30	.000	1.000	.000
420	X			3.00		1.000	.000	.000
450	+Y				.30	.000	1.000	.000
480	+Y				.30	.000	1.000	.000
490	+Y				.30	.000	1.000	.000
490	X			3.00		1.000	.000	.000
500	+Y					.000	1.000	.000
500	X			3.00		1.000	.000	.000
510	+Y				.30	.000	1.000	.000
520	+Y				.30	.000	1.000	.000
520	X					1.000	.000	.000
520	Z			3.00		.000	.000	1.000

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EQUIPMENT LIMITS
1340 1350 Nozzle Node = 1350

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,800.14 N. FB= 2,800.14 N.
FC= 2,100.10 N. MA= 420.02 N.m. MB= 280.01 N.m. MC= 360.02 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute
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FORCES AND MOMENTS
1200 1210 Node 1210 FX1= 1,500.07 N.
FY1= 1,500.07 N.
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INPUT LISTING

```
 UNIFORM LOAD Changes
   415            1040            Vector1 in G-s
                                  X1 Dir = .26 g's  Y1 Dir = .00 g's
                                  Z1 Dir = .00 g's
                                  Vector2 in G-s
                                  X2 Dir = .00 g's  Y2 Dir = .12 g's
                                  Z2 Dir = .00 g's
                                  Vector3 in G-s
                                  X3 Dir = .00 g's  Y3 Dir = .00 g's
                                  Z3 Dir = .26 g's
   400             410            Vector1 in G-s
                                  X1 Dir = .26 g's  Y1 Dir = .00 g's
                                  Z1 Dir = .00 g's
                                  Vector2 in G-s
                                  X2 Dir = .00 g's  Y2 Dir = .12 g's
                                  Z2 Dir = .00 g's
                                  Vector3 in G-s
                                  X3 Dir = .00 g's  Y3 Dir = .00 g's
                                  Z3 Dir = .26 g's
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 INPUT UNITS USED...

 UNITS=    SI (m NOM/SCH INPUT= ON
       LENGTH             inches        x     25.400   =   mm.
       FORCE              pounds        x      4.448   =    N.
       MASS(dynamics)     pounds        x      0.454   =   Kg.
       MOMENTS(INPUT)     inch-pounds   x      0.113   =    N.m.
       MOMENTS(OUTPUT)    inch-pounds   x      0.113   =    N.m.
       STRESS             lbs./sq.in.   x      6.895   =      KPa
       TEMP. SCALE        degrees F.    x      0.556   =   C
       PRESSURE           psig          x      6.895   =      KPa
       ELASTIC MODULUS    lbs./sq.in.   x      6.895   =      KPa
       PIPE DENSITY       lbs./cu.in.   x      0.028   =   kg./cu.cm.
       INSULATION DENS.   lbs./cu.in.   x      0.028   =   kg./cu.cm.
       FLUID DENSITY      lbs./cu.in.   x      0.028   =   kg./cu.cm.
       TRANSL. STIF       lbs./in.      x      1.751   =   N./cm.
       ROTATIONAL STIF    in.lb./deg.   x      0.113   =    N.m./deg
       UNIFORM LOAD       lb./in.       x      1.751   =   N./cm.
       G LOAD             g's           x      1.000   =   g's
       WIND LOAD          lbs./sq.in.   x      6.895   =      KPa
       ELEVATION          inches        x      0.025   =    m.
       COMPOUND LENGTH    inches        x     25.400   =   mm.
       DIAMETER           inches        x     25.400   =   mm.
       WALL THICKNESS     inches        x     25.400   =   mm.
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 SETUP FILE PARAMETERS
 ------------------------------------------------------------------------------
  CONNECT GEOMETRY THRU CNODES =    YES
  MIN ALLOWED BEND ANGLE =            5.00000
  MAX ALLOWED BEND ANGLE =            95.0000
  BEND LENGTH ATTACHMENT PERCENT =    1.00000
  MIN ANGLE TO ADJACENT BEND PT =     5.00000
  LOOP CLOSURE TOLERANCE =            25.4000     mm.
```

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```
  THERMAL BOWING HORZ TOLERANCE =    0.100000E-03
  AUTO NODE NUMBER INCREMENT=         10.0000
  Z AXIS UP=                          NO
  USE PRESSURE STIFFENING =          DEFAULT
  ALPHA TOLERANCE =                   0.500000E-01
  RESLD-FORCE =                       NO
  HGR DEF RESWGT STIF =               0.175127E+13 N./cm.
  DECOMP SNG TOL =                    0.100000E+11
  BEND AXIAL SHAPE =                 YES
  FRICT STIF =                        0.175127E+07 N./cm.
  FRICT NORM FORCE VAR =              0.150000
  FRICT ANGLE VAR =                    15.0000
  FRICT SLIDE MULT =                   1.00000
  ROD TOLERANCE =                      1.00000
  ROD INC =                            2.00000
  INCORE NUMERICAL CHECK =            NO
  OUTCORE NUMERICAL CHECK =           NO
  DEFAULT TRANS RESTRAINT STIFF=      0.175127E+13    N./cm.
  DEFAULT ROT RESTRAINT STIFF=        0.112985E+12  N.m./deg
  IGNORE SPRING HANGER STIFFNESS =    NO
  MISSING MASS ZPA =                 EXTRACTED
  MIN WALL MILL TOLERANCE =            12.5000
  WRC-107 VERSION =                  MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =            LAST VALUE
  DEFAULT AMBIENT TEMPERATURE=         21.1111       C
  BOURDON PRESSURE=                  NONE
  COEFFICIENT OF FRICTION (MU) =          0.000000
  INCLUDE SPRG STIF IN HGR OPE =     NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =             B31.1(POST1980)
  USE WRC329                         NO
  NO REDUCED SIF FOR RFT AND WLT     NO
  B31.1 REDUCED Z FIX =              YES
  CLASS 1 BRANCH FLEX                NO
  ALL STRESS CASES CORRODED =        NO
  ADD TORSION IN SL STRESS =         DEFAULT
  ADD F/A IN STRESS =                DEFAULT
  OCCASIONAL LOAD FACTOR =                0.000000
  DEFAULT CODE =                     B31.3
  B31.3 SUS CASE SIF FACTOR =             0.000000
  ALLOW USERS BEND SIF =             NO
  USE SCHNEIDER                      NO
  YIELD CRITERION STRESS =           MAX 3D SHEAR
  USE PD/4T                           NO
  BASE HOOP STRESS ON ? =             ID
  EN13480 USE IN OUTPLANE SIFS=       NO
  LIBERAL EXPANSION ALLOWABLE=       YES
  B31.3 SEC 319.2.3C SAXIAL=         Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=    DEFAULT
  IMPLEMENT B313 APP-P                NO
  IMPLEMENT B313 CODE CASE 178       YES
  IGNORE B31.1/B31.3 Wc FACTOR=      YES
  USE FRP SIF =                      YES
  USE FRP FLEX =                     YES
  BS 7159 Pressure Stiffening=       Design Strain
```

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```
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152730
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
    Uniform Load Option ........    1.000

    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
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 COORDINATE REPORT
          /--------------------(mm.)----------------------/
  NODE           X              Y              Z
   415          .000          .000          .000
  1040          .000       638.000      -637.000
  1050          .000      1984.000      -637.000
  1060      5150.000      1984.000      -637.000
  1070      8138.000      1984.000      -637.000
  1080      8138.000      3522.000      -637.000
  1090      8188.800      3522.000      -637.000
  1080      8138.000      3522.000      -637.000
  1100      8138.000      4067.000      -637.000
  1110      8138.000      4637.000      -637.000
  1120      8138.000      4716.375      -637.000
  1130      8138.000      4954.375      -637.000
  1140      8138.000      5033.750      -637.000
  1150      8138.000      5186.750      -637.000
  1160      8291.000      5186.750      -637.000
  1170      8857.000      5186.750      -637.000
  1180      9423.000      5186.750      -637.000
  1190      9525.000      5213.750      -637.000
  1200      9591.675      5213.750      -637.000
```

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1210	9710.175	5213.750	-637.000
1220	9710.175	5103.750	-637.000
1230	9710.175	5038.663	-637.000
1240	9710.175	4841.663	-637.000
1250	9710.175	4607.663	-637.000
1260	9710.175	4534.638	-637.000
1270	9710.175	4347.638	-637.000
1280	9710.175	4274.613	-637.000
1285	9710.175	4067.613	-637.000
1290	9710.175	3522.613	-637.000
1300	9710.175	3522.613	-611.600
1290	9710.175	3522.613	-637.000
1310	9710.175	2587.613	-637.000
1320	9643.701	2587.613	-675.862
1330	9580.659	2587.613	-712.717
1340	9517.617	2587.613	-749.573
1350	9404.525	2587.613	-815.688
1360	9007.409	2587.613	-1047.848
1370	9007.409	187.613	-1047.848
1350	9404.525	2587.613	-815.688
1500	8687.327	3522.000	-637.852
1350	9404.525	2587.613	-815.688
1530	8923.624	3522.213	-437.000
1350	9404.524	2587.612	-815.695
1170	8857.000	5186.750	-637.000
1350	9404.525	2587.613	-815.688
1510	9710.176	3522.613	-343.594
1285	9710.175	4067.613	-637.000
1390	9710.175	4067.613	-437.000
1395	9633.175	4067.613	-437.000
1400	9560.149	4067.613	-437.000
1410	9373.149	4067.613	-437.000
1420	9300.124	4067.613	-437.000
1430	8923.624	4067.613	-437.000
1520	8923.624	4042.213	-437.000
1430	8923.624	4067.613	-437.000
1440	8629.124	4067.613	-437.000
1450	8556.099	4067.613	-437.000
1460	8281.099	4067.613	-437.000
1470	8214.424	4067.613	-437.000
1600	8136.424	4067.613	-437.000
1600	8137.424	4067.613	-437.000
1100	8138.000	4067.000	-637.000
1090	8188.800	3522.000	-637.000
1500	8688.800	3522.000	-637.000
1300	9710.175	3522.613	-611.600
1510	9710.175	3522.613	-343.600
1520	8923.624	4042.213	-437.000
1530	8923.624	3522.213	-437.000
400	.000	.000	8709.000
410	.000	.000	2709.000
415	.000	.000	.000
420	.000	.000	-3291.000
430	.000	.000	-6241.000
440	-6000.000	.000	-6241.000
450	-6000.000	.000	-7241.000

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460	-6000.000	.000	-8241.000
470	.000	.000	-8241.000
480	.000	.000	-9091.000
490	.000	.000	-15091.000
500	.000	.000	-21091.000
510	.000	.000	-27091.000
515	.000	.000	-29652.000
520	.000	.000	-33091.000

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Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1-U2
CASE 14 (OPE) W+T2+P1+U3
CASE 15 (OPE) W+T2+P1+F1
CASE 16 (OCC) L16=L10-L4
CASE 17 (OCC) L17=L11-L4
CASE 18 (OCC) L18=L12-L4
CASE 19 (OCC) L19=L13-L4
CASE 20 (OCC) L20=L14-L4
CASE 21 (OCC) L21=L15-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
400		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	18	-2803	-1	0	0	0
	2(OPE)	243	-1334	9851	0	0	0
	4(OPE)	242	-1335	9949	0	0	0
	6(OPE)	12	-1523	-3870	0	0	0
	8(SUS)	12	-1498	-1	0	0	0
	9(SUS)	12	-1496	-1	0	0	0
	10(OPE)	814	-1344	9986	0	0	0
	11(OPE)	-203	-1322	9586	0	0	0
	12(OPE)	235	-1154	9538	0	0	0
	13(OPE)	219	-1516	10270	0	0	0
	14(OPE)	244	-1331	13453	0	0	0
	15(OPE)	252	-1333	9880	0	0	0
	16(OCC)	572	-10	37	0	0	0
	17(OCC)	-446	12	-362	0	0	0
	18(OCC)	-7	181	-410	0	0	0
	19(OCC)	-23	-181	321	0	0	0
	20(OCC)	2	4	3505	0	0	0
	21(OCC)	10	2	-69	0	0	0
	MAX	814/L10	-2803/L1	13453/L14			
410		TYPE=Rigid +Y;					
	1(HYD)	-131	-6152	-2	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	178	-4634	-1379	0	0	0
	4(OPE)	175	-4630	-1378	0	0	0
	6(OPE)	110	-3330	993	0	0	0
	8(SUS)	-87	-3504	-1	0	0	0
	9(SUS)	-87	-3500	-1	0	0	0
	10(OPE)	250	-4572	-1349	0	0	0
	11(OPE)	88	-4706	-1409	0	0	0
	12(OPE)	184	-4214	-1251	0	0	0
	13(OPE)	160	-5044	-1505	0	0	0
	14(OPE)	188	-4742	-1410	0	0	0
	15(OPE)	192	-4635	-1377	0	0	0
	16(OCC)	74	58	29	0	0	0
	17(OCC)	-87	-76	-31	0	0	0
	18(OCC)	9	416	127	0	0	0
	19(OCC)	-15	-414	-127	0	0	0
	20(OCC)	13	-113	-32	0	0	0
	21(OCC)	17	-5	1	0	0	0
	MAX	250/L10	-6152/L1	-1505/L13			
420		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-218	-11442	-4	0	0	0
	2(OPE)	-4755	-5485	-1640	0	0	0
	4(OPE)	-4813	-5438	-1626	0	0	0
	6(OPE)	-189	-6497	1940	0	0	0
	8(SUS)	-144	-6334	-3	0	0	0
	9(SUS)	-144	-6327	-3	0	0	0
	10(OPE)	-1278	-5520	-1650	0	0	0
	11(OPE)	-9304	-5341	-1597	0	0	0
	12(OPE)	-4926	-4676	-1398	0	0	0
	13(OPE)	-4709	-6202	-1854	0	0	0
	14(OPE)	-4309	-5321	-1591	0	0	0
	15(OPE)	-4749	-5524	-1652	0	0	0
	16(OCC)	3535	-82	-25	0	0	0
	17(OCC)	-4491	97	29	0	0	0
	18(OCC)	-114	762	228	0	0	0
	19(OCC)	103	-764	-228	0	0	0
	20(OCC)	504	117	35	0	0	0
	21(OCC)	63	-86	-26	0	0	0
	MAX	-9304/L11	-11442/L1	1940/L6			
450		TYPE=Rigid +Y;					
	1(HYD)	98	-8379	5	0	0	0
	2(OPE)	-1485	-5300	567	0	0	0
	4(OPE)	-1490	-5316	569	0	0	0
	6(OPE)	1316	-4416	-152	0	0	0
	8(SUS)	65	-4548	3	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(SUS)	65	-4542	3	0	0	0
	10(OPE)	-1489	-5254	517	0	0	0
	11(OPE)	-1436	-5393	745	0	0	0
	12(OPE)	-1334	-4777	523	0	0	0
	13(OPE)	-1646	-5856	614	0	0	0
	14(OPE)	-1416	-5323	739	0	0	0
	15(OPE)	-1482	-5289	568	0	0	0
	16(OCC)	1	62	-52	0	0	0
	17(OCC)	54	-77	176	0	0	0
	18(OCC)	156	539	-46	0	0	0
	19(OCC)	-156	-540	46	0	0	0
	20(OCC)	74	-6	170	0	0	0
	21(OCC)	8	28	-1	0	0	0
	MAX	-1646/L13	-8379/L1	745/L11			
480		TYPE=Rigid +Y;					
	1(HYD)	-40	-7320	1	0	0	0
	2(OPE)	-177	-4100	1217	0	0	0
	4(OPE)	-176	-4103	1218	0	0	0
	6(OPE)	-175	-3946	-1171	0	0	0
	8(SUS)	-27	-3970	0	0	0	0
	9(SUS)	-27	-3965	0	0	0	0
	10(OPE)	-135	-4092	1220	0	0	0
	11(OPE)	-287	-4117	1201	0	0	0
	12(OPE)	-162	-3628	1076	0	0	0
	13(OPE)	-189	-4579	1360	0	0	0
	14(OPE)	-212	-4106	1213	0	0	0
	15(OPE)	-178	-4097	1216	0	0	0
	16(OCC)	41	11	2	0	0	0
	17(OCC)	-111	-14	-17	0	0	0
	18(OCC)	14	475	-142	0	0	0
	19(OCC)	-13	-475	142	0	0	0
	20(OCC)	-36	-3	-5	0	0	0
	21(OCC)	-2	6	-2	0	0	0
	MAX	-287/L11	-7320/L1	1360/L13			
490		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	4	-6858	0	0	0	0
	2(OPE)	1332	-3517	1054	0	0	0
	4(OPE)	1367	-3513	1052	0	0	0
	6(OPE)	-333	-3756	-1077	0	0	0
	8(SUS)	3	-3720	0	0	0	0
	9(SUS)	3	-3716	0	0	0	0
	10(OPE)	2955	-3530	1057	0	0	0
	11(OPE)	-522	-3492	1046	0	0	0
	12(OPE)	1196	-3065	918	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	1513	-3961	1187	0	0	0
	14(OPE)	272	-3512	1052	0	0	0
	15(OPE)	1317	-3520	1054	0	0	0
	16(OCC)	1588	-17	5	0	0	0
	17(OCC)	-1889	21	-6	0	0	0
	18(OCC)	-171	448	-134	0	0	0
	19(OCC)	147	-448	134	0	0	0
	20(OCC)	-1095	1	-0	0	0	0
	21(OCC)	-50	-7	2	0	0	0
	MAX	2955/L10	-6858/L1	1187/L13			
500		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-6233	0	0	0	0
	2(OPE)	605	-3437	0	0	0	0
	4(OPE)	602	-3438	0	0	0	0
	6(OPE)	0	-3374	0	0	0	0
	8(SUS)	0	-3383	0	0	0	0
	9(SUS)	0	-3379	0	0	0	0
	10(OPE)	1969	-3434	0	0	0	0
	11(OPE)	-324	-3443	0	0	0	0
	12(OPE)	684	-3032	0	0	0	0
	13(OPE)	530	-3844	0	0	0	0
	14(OPE)	1024	-3438	0	0	0	0
	15(OPE)	625	-3436	0	0	0	0
	16(OCC)	1367	4	0	0	0	0
	17(OCC)	-926	-5	0	0	0	0
	18(OCC)	82	406	0	0	0	0
	19(OCC)	-72	-406	0	0	0	0
	20(OCC)	422	-0	0	0	0	0
	21(OCC)	23	2	0	0	0	0
	MAX	1969/L10	-6233/L1				
510		TYPE=Rigid +Y;					
	1(HYD)	-1	-7421	0	0	0	0
	2(OPE)	94	-4014	1201	0	0	0
	4(OPE)	93	-4014	1201	0	0	0
	6(OPE)	-150	-4030	-1199	0	0	0
	8(SUS)	-0	-4027	0	0	0	0
	9(SUS)	-0	-4022	0	0	0	0
	10(OPE)	212	-4015	1186	0	0	0
	11(OPE)	-263	-4012	1175	0	0	0
	12(OPE)	80	-3530	1056	0	0	0
	13(OPE)	105	-4497	1345	0	0	0
	14(OPE)	79	-4014	1202	0	0	0
	15(OPE)	92	-4014	1201	0	0	0
	16(OCC)	119	-1	-15	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OCC)	-356	1	-26	0	0	0
	18(OCC)	-12	483	-144	0	0	0
	19(OCC)	12	-483	145	0	0	0
	20(OCC)	-14	0	1	0	0	0
	21(OCC)	-1	-0	0	0	0	0
	MAX	-356/L17	-7421/L1	1345/L13			
520		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	1(HYD)	0	-2575	0	0	0	0
	2(OPE)	-40	-1400	-10517	0	0	0
	4(OPE)	-40	-1400	-10595	0	0	0
	6(OPE)	82	-1397	4573	0	0	0
	8(SUS)	0	-1398	0	0	0	0
	9(SUS)	0	-1396	0	0	0	0
	10(OPE)	691	-1400	-10845	0	0	0
	11(OPE)	-779	-1400	-10350	0	0	0
	12(OPE)	-40	-1232	-10122	0	0	0
	13(OPE)	-40	-1568	-11056	0	0	0
	14(OPE)	-61	-1400	-5668	0	0	0
	15(OPE)	-41	-1400	-10569	0	0	0
	16(OCC)	730	0	-250	0	0	0
	17(OCC)	-739	-0	245	0	0	0
	18(OCC)	-0	168	473	0	0	0
	19(OCC)	-0	-168	-461	0	0	0
	20(OCC)	-22	-0	4927	0	0	0
	21(OCC)	-1	0	25	0	0	0
	MAX	-779/L11	-2575/L1	-11056/L13			
1060		TYPE=Rigid +Y;					
	1(HYD)	141	-1614	16	0	0	0
	2(OPE)	45	-933	-276	0	0	0
	4(OPE)	44	-1073	-319	0	0	0
	6(OPE)	64	-1196	81	0	0	0
	8(SUS)	75	-1243	14	0	0	0
	9(SUS)	75	-1242	14	0	0	0
	10(OPE)	91	-987	-282	0	0	0
	11(OPE)	-7	-1155	-346	0	0	0
	12(OPE)	37	-915	-272	0	0	0
	13(OPE)	51	-1233	-366	0	0	0
	14(OPE)	77	-1094	-319	0	0	0
	15(OPE)	37	-599	-176	0	0	0
	16(OCC)	47	86	37	0	0	0
	17(OCC)	-51	-82	-27	0	0	0
	18(OCC)	-7	159	47	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OCC)	7	-160	-47	0	0	0
	20(OCC)	33	-20	0	0	0	0
	21(OCC)	-7	474	143	0	0	0
	MAX	141/L1	-1614/L1	-366/L13			
1170		TYPE=Rigid X w/gap; Rigid Z w/gap; Rigid +Y;					
	1(HYD)	-150	-1294	2	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	243	-5202	-22	0	0	0
	8(SUS)	-124	-1106	6	0	0	0
	9(SUS)	-124	-1106	6	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	-9	13	53	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	-9	13	53	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	243/L6	-5202/L6	53/L14			
1330		TYPE=Rigid ANC;					
	1(HYD)	-34	-395	5	20	-2	-12
	2(OPE)	-314	552	69	32	-59	244
	4(OPE)	-420	582	70	33	-76	285
	6(OPE)	192	1033	-13	-63	34	37
	8(SUS)	-31	-390	4	19	-2	-14
	9(SUS)	-31	-390	4	19	-2	-14
	10(OPE)	-398	487	72	38	-79	267
	11(OPE)	-443	697	68	28	-72	306
	12(OPE)	-415	717	75	29	-76	294
	13(OPE)	-426	459	67	37	-76	277
	14(OPE)	-390	1013	244	91	-93	313
	15(OPE)	-410	1167	92	18	-93	296
	16(OCC)	22	-95	2	5	-3	-18
	17(OCC)	-23	115	-2	-5	4	21
	18(OCC)	6	135	5	-3	-0	9
	19(OCC)	-5	-123	-3	4	0	-8
	20(OCC)	31	430	174	58	-18	28

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	21(OCC)	11	585	23	-15	-17	11
	MAX	-443/L11	1167/L15	244/L14	91/L14	-93/L14	313/L14
1350		TYPE=Rigid ANC;					
	1(HYD)	-34	-453	5	64	-6	-89
	2(OPE)	-314	498	69	-21	-103	334
	4(OPE)	-420	528	70	-23	-131	380
	6(OPE)	192	979	-13	-165	56	212
	8(SUS)	-31	-444	4	63	-6	-90
	9(SUS)	-31	-444	4	63	-6	-90
	10(OPE)	-384	433	72	-8	-132	346
	11(OPE)	-457	643	68	-40	-131	422
	12(OPE)	-415	670	75	-41	-132	414
	13(OPE)	-426	398	67	-5	-131	350
	14(OPE)	-390	958	258	-10	-178	485
	15(OPE)	-410	1113	92	-98	-151	494
	16(OCC)	36	-95	2	15	-0	-34
	17(OCC)	-37	115	-2	-17	0	42
	18(OCC)	6	142	5	-18	-1	34
	19(OCC)	-5	-130	-3	18	-0	-30
	20(OCC)	31	430	188	13	-47	104
	21(OCC)	11	585	23	-75	-20	114
	MAX	-457/L11	1113/L15	258/L14	-165/L6	-178/L14	494/L15
1370		TYPE=Rigid ANC;					
	1(HYD)	128	-4028	-16	1760	11	592
	2(OPE)	4186	-3016	-38	1321	1114	-9708
	4(OPE)	4245	-2910	-10	1339	1175	-10030
	6(OPE)	-576	-3705	-34	1578	-232	2301
	8(SUS)	104	-3546	-14	1565	6	466
	9(SUS)	104	-3545	-14	1565	6	466
	10(OPE)	5331	-3023	-35	1336	1588	-13687
	11(OPE)	3233	-2787	10	1329	786	-6555
	12(OPE)	4263	-2487	-38	1091	1140	-10143
	13(OPE)	4230	-3332	5	1560	1192	-9926
	14(OPE)	4248	-2890	1119	5411	1699	-10085
	15(OPE)	5656	-1823	-99	713	1579	-15102
	16(OCC)	1086	-113	-25	-3	412	-3657
	17(OCC)	-1012	123	20	-11	-390	3474
	18(OCC)	18	423	-28	-248	-35	-113
	19(OCC)	-15	-422	15	220	17	104
	20(OCC)	3	20	1129	4072	523	-56
	21(OCC)	1411	1087	-89	-626	404	-5073
	MAX	5656/L15	-4028/L1	1129/L20	5411/L14	1699/L14	-15102/L15

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1500		TYPE=Rigid +Y;					
	1(HYD)	0	0	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	0	0	0	0	0	0
	9(SUS)	0	0	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
1510		TYPE=Rigid +Y;					
	1(HYD)	0	-108	0	0	0	0
	2(OPE)	0	-171	0	0	0	0
	4(OPE)	0	-127	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	0	-105	0	0	0	0
	9(SUS)	0	-105	0	0	0	0
	10(OPE)	0	-171	0	0	0	0
	11(OPE)	0	-81	0	0	0	0
	12(OPE)	0	-114	0	0	0	0
	13(OPE)	0	-151	0	0	0	0
	14(OPE)	0	-587	0	0	0	0
	15(OPE)	0	-174	0	0	0	0
	16(OCC)	0	-44	0	0	0	0
	17(OCC)	0	46	0	0	0	0
	18(OCC)	0	13	0	0	0	0
	19(OCC)	0	-24	0	0	0	0
	20(OCC)	0	-460	0	0	0	0
	21(OCC)	0	-47	0	0	0	0
	MAX		-587/L14				
1530		TYPE=Rigid +Y; Rigid Z w/gap;					
	1(HYD)	-46	-726	-7	0	0	0
	2(OPE)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	0	0	0	0	0	0
	6(OPE)	116	-618	8	0	0	0
	8(SUS)	-39	-668	-8	0	0	0
	9(SUS)	-39	-668	-8	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	116/L6	-726/L1	-8/L9			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS..... 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 22 (OCC) L22=L16+L8
CASE 23 (OCC) L23=L17+L8
CASE 24 (OCC) L24=L18+L8
CASE 25 (OCC) L25=L19+L8
CASE 26 (OCC) L26=L20+L8
CASE 27 (OCC) L27=L21+L8
CASE 28 (EXP) L28=L2-L8
CASE 29 (EXP) L29=L4-L8
CASE 30 (EXP) L30=L2-L4
CASE 31 (EXP) L31=L6-L8
CASE 32 (EXP) L32=L2-L6
CASE 33 (EXP) L33=L4-L6

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	12.2	@Node	420
Code Stress:	29395.6	Allowable Stress:	241316.5
Axial Stress:	6768.4	@Node	1240
Bending Stress:	29546.2	@Node	1090
Torsion Stress:	1768.6	@Node	1388
Hoop Stress:	14676.3	@Node	1240
Max Stress Intensity:	29795.5	@Node	1090

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	35.5	@Node	420
Code Stress:	45955.8	Allowable Stress:	129365.3
Axial Stress:	12088.2	@Node	430
Bending Stress:	38978.9	@Node	415
Torsion Stress:	2943.0	@Node	1388
Hoop Stress:	24443.4	@Node	410
Max Stress Intensity:	46000.4	@Node	415

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	26.2	@Node	420
Code Stress:	33840.6	Allowable Stress:	129365.3
Axial Stress:	1295.2	@Node	1530
Bending Stress:	38956.1	@Node	415
Torsion Stress:	2942.1	@Node	1388
Hoop Stress:	0.0	@Node	1038

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Max Stress Intensity: 39726.1 @Node 415

CODE STRESS CHECK PASSED : LOADCASE 22 (OCC) L22=L16+L8

Highest Stresses: (KPa) LOADCASE 22 (OCC) L22=L16+L8
Ratio (%): 40.5 @Node 420
Code Stress: 69688.5 Allowable Stress: 172055.9
Axial Stress: 12362.6 @Node 1598
Bending Stress: 76381.1 @Node 415
Torsion Stress: 3493.1 @Node 1600
Hoop Stress: 24443.4 @Node 410
Max Stress Intensity: 83572.2 @Node 415

CODE STRESS CHECK PASSED : LOADCASE 23 (OCC) L23=L17+L8

Highest Stresses: (KPa) LOADCASE 23 (OCC) L23=L17+L8
Ratio (%): 48.2 @Node 420
Code Stress: 82970.9 Allowable Stress: 172055.9
Axial Stress: 12888.3 @Node 430
Bending Stress: 85369.7 @Node 415
Torsion Stress: 5153.0 @Node 1388
Hoop Stress: 24443.4 @Node 410
Max Stress Intensity: 92597.3 @Node 415

CODE STRESS CHECK PASSED : LOADCASE 24 (OCC) L24=L18+L8

Highest Stresses: (KPa) LOADCASE 24 (OCC) L24=L18+L8
Ratio (%): 29.3 @Node 420
Code Stress: 50331.7 Allowable Stress: 172055.9
Axial Stress: 12244.0 @Node 515
Bending Stress: 42997.0 @Node 415
Torsion Stress: 3263.9 @Node 1388
Hoop Stress: 24443.4 @Node 410
Max Stress Intensity: 50331.8 @Node 420

CODE STRESS CHECK PASSED : LOADCASE 25 (OCC) L25=L19+L8

Highest Stresses: (KPa) LOADCASE 25 (OCC) L25=L19+L8
Ratio (%): 29.2 @Node 420
Code Stress: 50288.7 Allowable Stress: 172055.9
Axial Stress: 12069.8 @Node 428
Bending Stress: 43067.5 @Node 415
Torsion Stress: 2626.2 @Node 1388
Hoop Stress: 24443.4 @Node 410
Max Stress Intensity: 50288.8 @Node 420

CODE STRESS CHECK PASSED : LOADCASE 26 (OCC) L26=L20+L8

Highest Stresses: (KPa) LOADCASE 26 (OCC) L26=L20+L8
Ratio (%): 40.2 @Node 415
Code Stress: 69100.7 Allowable Stress: 172055.9
Axial Stress: 13850.7 @Node 520
Bending Stress: 83771.8 @Node 415

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Torsion Stress:              5736.9       @Node   1350
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       91354.8       @Node    415

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L21+L8

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L21+L8
Ratio (%):                     58.0       @Node   1230
Code Stress:               106286.8       Allowable Stress:     183400.5
Axial Stress:               13387.7       @Node   1240
Bending Stress:             99274.4       @Node   1230
Torsion Stress:             15970.7       @Node   1600
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:      106357.9       @Node   1230

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L2-L8
Ratio (%):                     60.9       @Node   1090
Code Stress:               190706.4       Allowable Stress:     313156.5
Axial Stress:                2923.3       @Node   1500
Bending Stress:            181767.5       @Node   1090
Torsion Stress:             18926.0       @Node   1600
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:      379049.0       @Node    415

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L4-L8

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L4-L8
Ratio (%):                     57.8       @Node   1090
Code Stress:               180920.7       Allowable Stress:     313156.5
Axial Stress:                3037.6       @Node   1500
Bending Stress:            171653.8       @Node   1090
Torsion Stress:             18358.2       @Node   1600
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:      385734.2       @Node    415

 CODE STRESS CHECK PASSED      : LOADCASE 30 (EXP) L30=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 30 (EXP) L30=L2-L4
Ratio (%):                      5.1       @Node   1230
Code Stress:                16793.0       Allowable Stress:     328432.3
Axial Stress:                 348.9       @Node   1390
Bending Stress:             15825.6       @Node   1230
Torsion Stress:              2488.1       @Node   1230
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:       27155.4       @Node   1285

 CODE STRESS CHECK PASSED      : LOADCASE 31 (EXP) L31=L6-L8

Highest Stresses: (   KPa    ) LOADCASE 31 (EXP) L31=L6-L8
Ratio (%):                     17.3       @Node   1230
Code Stress:                56785.7       Allowable Stress:     328432.3
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Axial Stress:                2891.9       @Node   1230
Bending Stress:             52896.3       @Node   1230
Torsion Stress:              5298.4       @Node   1230
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:       82576.6       @Node   1230

 CODE STRESS CHECK PASSED      : LOADCASE 32 (EXP) L32=L2-L6

Highest Stresses: (   KPa    ) LOADCASE 32 (EXP) L32=L2-L6
Ratio (%):                      53.2       @Node    415
Code Stress:               159529.9       Allowable Stress:     299696.8
Axial Stress:                3913.7       @Node   1500
Bending Stress:            154935.9       @Node    415
Torsion Stress:             18701.1       @Node   1600
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:      448151.9       @Node    415

 CODE STRESS CHECK PASSED      : LOADCASE 33 (EXP) L33=L4-L6

Highest Stresses: (   KPa    ) LOADCASE 33 (EXP) L33=L4-L6
Ratio (%):                      54.1       @Node    415
Code Stress:               161918.3       Allowable Stress:     299355.6
Axial Stress:                4028.0       @Node   1500
Bending Stress:            157188.5       @Node    415
Torsion Stress:             18133.2       @Node   1600
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:      454830.0       @Node    415
```

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Job:: BNK-GCS-CN-051-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS..... 2
Nozzle Check : Multiple..... 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

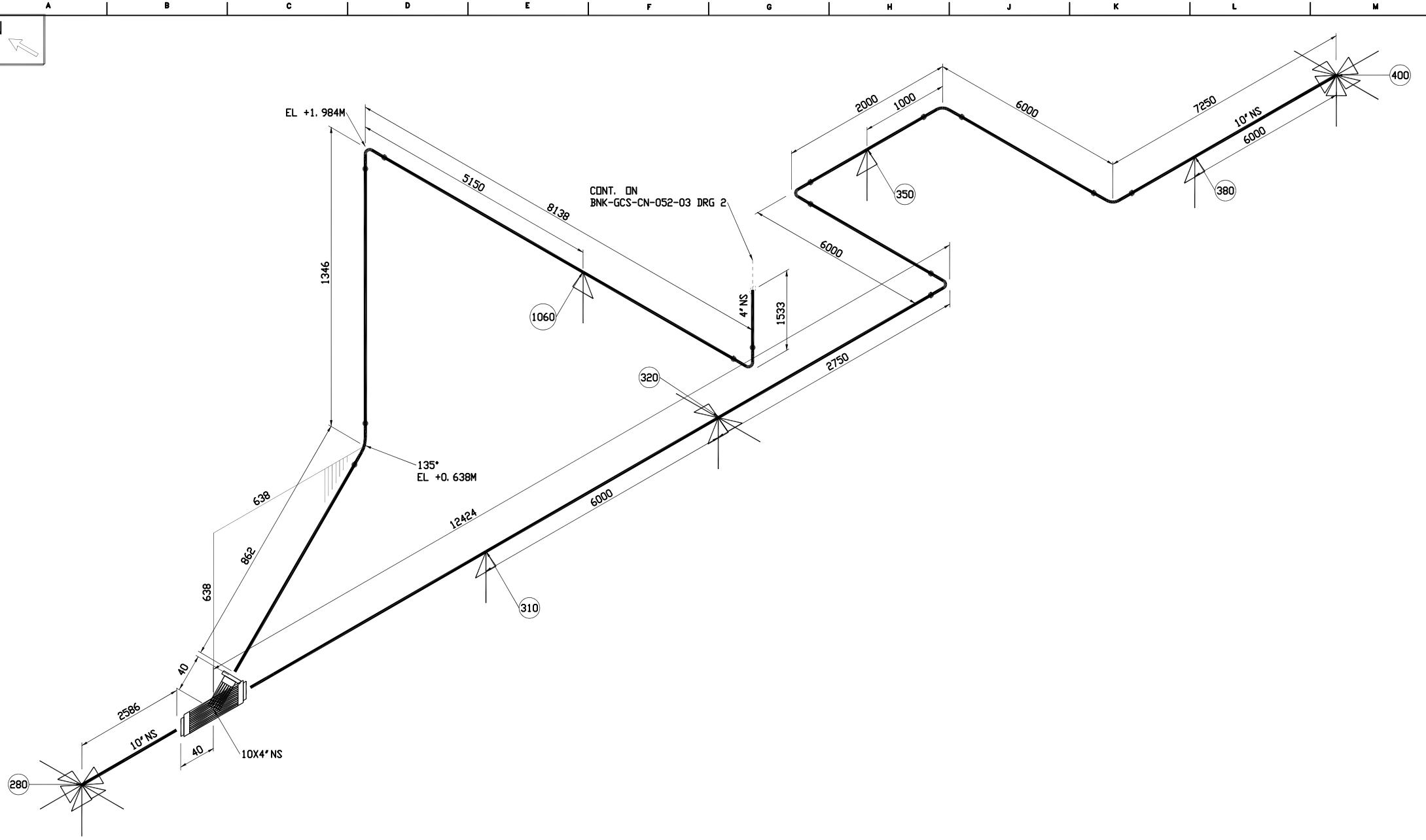
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
1350		Absolute Method								
	Limits	2800	2800	2100		420	280	360		
	2(OPE)	236	498	-218	0.178	-151	-103	-299	0.831	
	4(OPE)	328	528	-272	0.189	-172	-131	-340	0.944	
	6(OPE)	-159	979	108	0.350	36	56	-266	0.740	
	8(SUS)	25	-444	-20	0.159	-9	-6	110	0.304	
	9(SUS)	25	-444	-20	0.159	-9	-6	109	0.304	

BNK-GCS-CN-052

1. GAS-111-0029C-CN05-2"-PT
2. FL-112-0013C-AN07-4"-PT
3. FL-112-0012C-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 3

REV.	CHANGE	DATE
		15 MAY 2024

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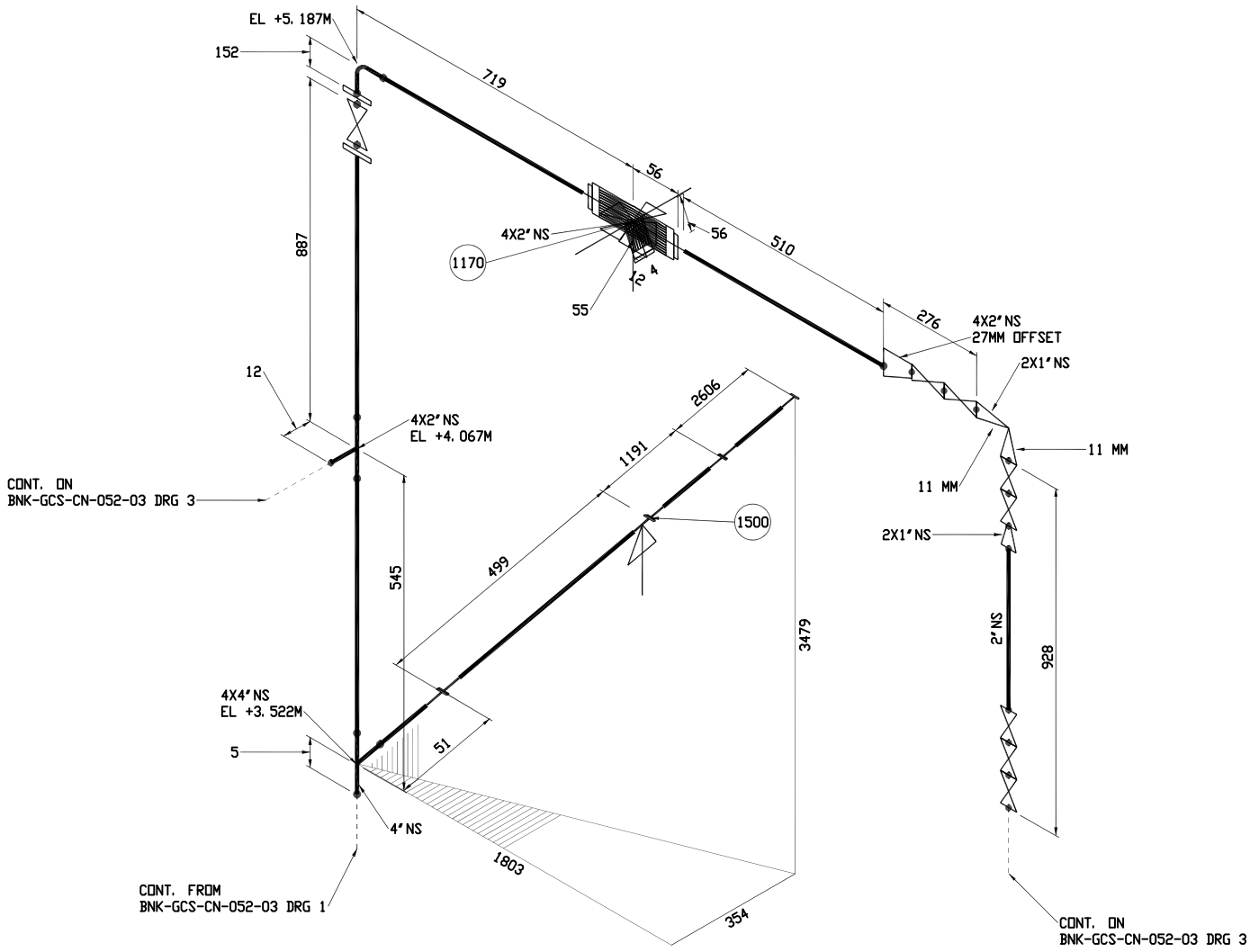

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

2 OF 3

REV.	CHANGE	DATE
		15 MAY 2024

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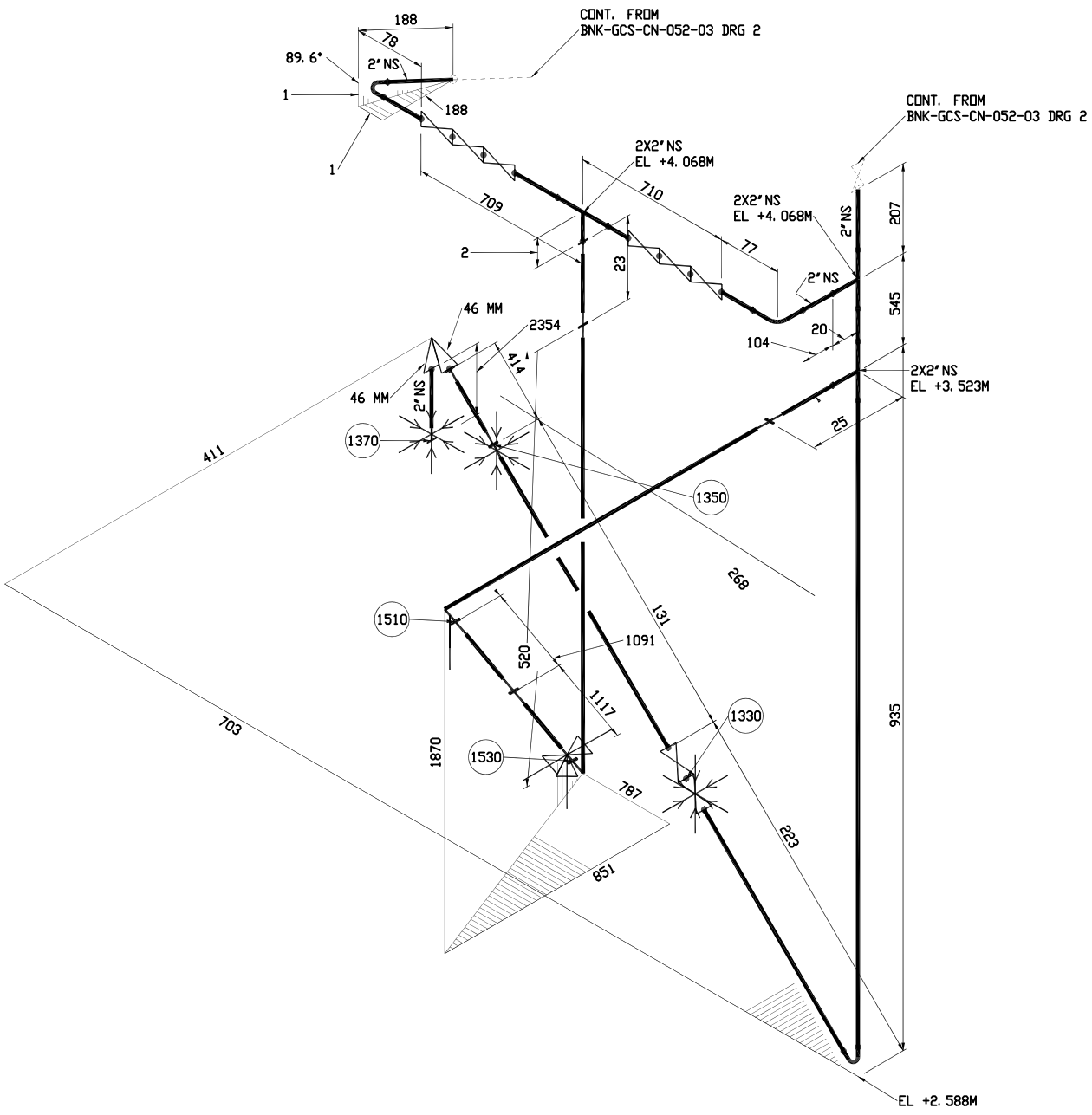

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

3 OF 3

REV.	CHANGE	DATE
		15 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
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5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
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24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
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33 (EXP) L33=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:42
Job:: BNK-GCS-CN-052-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:42
Job:: BNK-GCS-CN-052-D03
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INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 15,2024 16:42:50

PIPE DATA

From 290 To 1040 DY= 638.000 mm. DZ= -637.000 mm.
PIPE
Dia= 114.300 mm. Wall= 8.560 mm. Cor= 6.0000 mm.
GENERAL
T1= 270 C T2= 272 C T3= -28 C P1= 600.0137 KPa PHyd= 900.0205 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 187,483,936 KPa
EH2= 187,335,024 KPa EH3= 205,934,864 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000015 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0001362 kg./cu.cm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 44.955 Angle/Node @1= 22.48 1039
Angle/Node @2= .00 1038
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa

From 1040 To 1050 DY= 1,346.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1049
Angle/Node @2= .00 1048

From 1050 To 1060 DX= 5,150.000 mm.
RESTRAINTS
Node 1060 +Y

From 1060 To 1070 DX= 2,988.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1069
Angle/Node @2= .00 1068

From 1070 To 1080 DY= 1,538.000 mm.

From 1080 To 1090 DX= 50.800 mm.
RIGID Weight= .00 N.
SIF's & TEE's
Node 1090 Unreinforced Tee

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INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  1080  To  1100 DY= 545.000 mm.
 SIF's & TEE's
    Node  1100   Welding Tee
 ----------------------------------------------------------------------------
 From  1100  To  1110 DY= 570.000 mm.
 ----------------------------------------------------------------------------
 From  1110  To  1120 DY= 79.375 mm.
 RIGID  Weight= 71.17 N.
 ----------------------------------------------------------------------------
 From  1120  To  1130 DY= 238.000 mm.
 RIGID  Weight= 644.99 N.
 ----------------------------------------------------------------------------
 From  1130  To  1140 DY= 79.375 mm.
 RIGID  Weight= 71.17 N.
 ----------------------------------------------------------------------------
 From  1140  To  1150 DY= 153.000 mm.
 BEND at "TO" end
    Radius= 152.400 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1149
 ----------------------------------------------------------------------------
 From  1150  To  1160  DX= 153.000 mm.
 ----------------------------------------------------------------------------
 From  1160  To  1170  DX= 566.000 mm.
 RESTRAINTS
    Node  1170  +Y   Cnode  1171   Mu = .30
    Node  1170  X   Cnode  1171   Gap= 3.000 mm.
    Node  1170  Z   Cnode  1171   Gap= 3.000 mm.
 ----------------------------------------------------------------------------
 From  1170  To  1180  DX= 566.000 mm.
 ----------------------------------------------------------------------------
 From  1180  To  1190  DX= 102.000 mm.  DY= 27.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 8.738 mm.
 ----------------------------------------------------------------------------
 From  1190  To  1200  DX= 66.675 mm.  DY= .000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 8.738 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ----------------------------------------------------------------------------
 From  1200  To  1210  DX= 118.500 mm.  DY= .000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.   Cor= 3.0000 mm.
 GENERAL
    T1= 85 C   T2= 37 C   T3= 37 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Fluid Den= .0000057 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 88.96 N.
 FORCES & MOMENTS
    Node  1210   FX1= 1,500.07 N.   FY1= 1,500.07 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ----------------------------------------------------------------------------
 From  1210  To  1220 DY= -110.000 mm.
```

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INPUT LISTING

```
 PIPE
    Dia= 33.401 mm.   Wall= 6.350 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  1220  To  1230 DY= -65.088 mm.
 RIGID  Weight= 22.24 N.
 ------------------------------------------------------------------------------
 From  1230  To  1240 DY= -197.000 mm.
 REDUCER
    Diam2= 60.325 mm.   Wall2= 5.537 mm.
 ------------------------------------------------------------------------------
 From  1240  To  1250 DY= -234.000 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 ------------------------------------------------------------------------------
 From  1250  To  1260 DY= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  1260  To  1270 DY= -187.000 mm.
 RIGID  Weight= 258.00 N.
 ------------------------------------------------------------------------------
 From  1270  To  1280 DY= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  1280  To  1285 DY= -207.000 mm.
 ------------------------------------------------------------------------------
 From  1285  To  1290 DY= -545.000 mm.
 ------------------------------------------------------------------------------
 From  1290  To  1300 DZ= 25.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  1300   Unreinforced Tee
 ------------------------------------------------------------------------------
 From  1290  To  1310 DY= -935.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1309
    Angle/Node @2= .00 1308
 ------------------------------------------------------------------------------
 From  1310  To  1320  DX= -66.474 mm.  DZ= -38.862 mm.
 ------------------------------------------------------------------------------
 From  1320  To  1330  DX= -63.042 mm.  DZ= -36.855 mm.
 RIGID  Weight= 44.48 N.
 RESTRAINTS
    Node  1330  ANC   Cnode  1331
 ------------------------------------------------------------------------------
 From  1331  To  1340  DX= -63.042 mm.  DZ= -36.855 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  1340  To  1350  DX= -113.092 mm.  DZ= -66.115 mm.
 RESTRAINTS
    Node  1350  ANC   Cnode  1351
 EQUIPMENT LIMITS
    Nozzle Node = 1350
    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 2,800.14 N.   FB= 2,800.14 N.
```

INPUT LISTING
```
    FC= 2,100.10 N.   MA= 420.02 N.m.   MB= 280.01 N.m.   MC= 360.02 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
 ---------------------------------------------------------------------------
 From  1351  To  1360  DX= -397.117 mm.  DZ= -232.160 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1360  To  1370 DY= -2,400.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  1370  ANC
 ---------------------------------------------------------------------------
 From  1351  To  1500  DX= -717.199 mm.  DY= 934.388 mm.  DZ= 177.836 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1351  To  1531  DX= -480.901 mm.  DY= 934.600 mm.  DZ= 378.688 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1351  To  1171  DX= -547.525 mm.  DY= 2,599.138 mm.  DZ= 178.695 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1351  To  1511  DX= 305.650 mm.  DY= 935.000 mm.  DZ= 472.094 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  1285  To  1390  DX= .000 mm.  DZ= 200.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1389
    Angle/Node @2= .00 1388
 ---------------------------------------------------------------------------
 From  1390  To  1395  DX= -77.000 mm.
 ---------------------------------------------------------------------------
 From  1395  To  1400  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1400  To  1410  DX= -187.000 mm.
 RIGID  Weight= 258.00 N.
 ---------------------------------------------------------------------------
 From  1410  To  1420  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1420  To  1430  DX= -376.500 mm.
 ---------------------------------------------------------------------------
 From  1430  To  1520 DY= -25.400 mm.
 RIGID  Weight= .00 N.
 SIF's & TEE's
    Node  1520   Unreinforced Tee
 ---------------------------------------------------------------------------
 From  1430  To  1440  DX= -294.500 mm.
 ---------------------------------------------------------------------------
 From  1440  To  1450  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  1450  To  1460  DX= -275.000 mm.
 RIGID  Weight= 458.17 N.
 ---------------------------------------------------------------------------
 From  1460  To  1470  DX= -66.675 mm.
```

INPUT LISTING

```
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  1470  To  1600  DX= -78.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.165   Angle/Node @1= 45.08 1599
    Angle/Node @2= .00 1598
 ------------------------------------------------------------------------------
 From  1600  To  1100  DX= .576 mm.  DY= -.613 mm.  DZ= -200.000 mm.
 ------------------------------------------------------------------------------
 From  1090  To  1500  DX= 500.000 mm.
 PIPE
    Dia= 88.900 mm.   Wall= 5.486 mm.   Cor= .0000 mm.
 GENERAL
    T1= 21 C   T2= 21 C   T3= 21 C   P1= .0000 KPa   PHyd= .0000 KPa
    Mat= (102)A53 Grade B   E= 203,401,232 KPa   EH1= 203,401,232 KPa
    EH2= 203,401,232 KPa   EH3= 203,401,232 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000000 kg./cu.cm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  1500  +Y   Cnode  1501   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  1300  To  1510 DZ= 268.000 mm.
 PIPE
    Dia= 48.260 mm.   Wall= 3.683 mm.
    Insul Thk= .000 mm.
 RESTRAINTS
    Node  1510  +Y   Cnode  1511   Mu = .30
 ------------------------------------------------------------------------------
 From  1520  To  1530 DY= -520.000 mm.
 RESTRAINTS
    Node  1530  +Y   Cnode  1531   Mu = .30
    Node  1530  Z   Cnode  1531   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  280  To  290 DZ= -2,626.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  280  +Y   Mu = .30
    Node  280  X   Gap= 3.000 mm.
    Node  280  Z   Gap= 3.000 mm.   Mu = .30
 UNIFORM LOAD
```

INPUT LISTING
```
   Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
   Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
   Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
 SIF's & TEE's
    Node  290   Welding Tee
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  290  To  300 DZ= -400.000 mm.
 ------------------------------------------------------------------------------
 From  300  To  310 DZ= -3,274.000 mm.
 RESTRAINTS
    Node  310  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  310  To  320 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  320  +Y
    Node  320  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  320  To  330 DZ= -2,750.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 329
    Angle/Node @2= .00 328
 ------------------------------------------------------------------------------
 From  330  To  340  DX= -6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 339
    Angle/Node @2= .00 338
 ------------------------------------------------------------------------------
 From  340  To  350 DZ= -1,000.000 mm.
 RESTRAINTS
    Node  350  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  350  To  360 DZ= -1,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 359
    Angle/Node @2= .00 358
 ------------------------------------------------------------------------------
 From  360  To  370  DX= 6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 369
    Angle/Node @2= .00 368
 ------------------------------------------------------------------------------
 From  370  To  380 DZ= -1,250.000 mm.
 RESTRAINTS
    Node  380  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  380  To  390 DZ= -3,000.000 mm.
 ------------------------------------------------------------------------------
 From  390  To  400 DZ= -3,000.000 mm.
 RESTRAINTS
    Node  400  +Y
    Node  400  X
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:42
Job:: BNK-GCS-CN-052-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
Node 400 Z Gap= 3.000 mm.
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MATERIAL Changes:

290	1040	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
1090	1500	Mat= (102)A53 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.
280	290	Mat= (106)A106 Grade B E= 203,401,232 KPa v = .292 Density= .0078 kg./cu.cm.

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JOBNAME: D:\BINAK PRO\NATIVE CAESAR FILE\NATIVE CEASAR FILE-D03\BNK-GCS-CN-052-

ALLOWABLE STRESS Changes

290	1040	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
1200	1210	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
1090	1500	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa
280	290	B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa Sh1= 129,638 KPa Sh2= 129,365 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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BEND ELEMENTS

290	1040	Radius= 152.400 mm. (LONG) Bend Angle= 44.955 Angle/Node @1= 22.48 1039 Angle/Node @2= .00 1038
1040	1050	Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1049 Angle/Node @2= .00 1048
1060	1070	Radius= 152.400 mm. (LONG)

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INPUT LISTING

```
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                 1069   Angle/Node @2= .00 1068
  1140            1150             Radius= 152.400 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                 1149
  1290            1310             Radius= 76.200 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                 1309   Angle/Node @2= .00 1308
  1285            1390             Radius= 76.200 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                 1389   Angle/Node @2= .00 1388
  1470            1600             Radius= 76.200 mm. (LONG)
                                   Bend Angle= 90.165   Angle/Node @1= 45.08
                                 1599   Angle/Node @2= .00 1598
   320             330             Radius= 381.000 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                 329   Angle/Node @2= .00 328
   330             340             Radius= 381.000 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                 339   Angle/Node @2= .00 338
   350             360             Radius= 381.000 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                 359   Angle/Node @2= .00 358
   360             370             Radius= 381.000 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00
                                 369   Angle/Node @2= .00 368
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RIGIDS
 1080            1090          RIGID  Weight= .00 N.
 1110            1120          RIGID  Weight= 71.17 N.
 1120            1130          RIGID  Weight= 644.99 N.
 1130            1140          RIGID  Weight= 71.17 N.
 1190            1200          RIGID  Weight= 31.14 N.
 1200            1210          RIGID  Weight= 88.96 N.
 1210            1220          RIGID  Weight= 44.48 N.
 1220            1230          RIGID  Weight= 22.24 N.
 1250            1260          RIGID  Weight= 44.48 N.
 1260            1270          RIGID  Weight= 258.00 N.
 1270            1280          RIGID  Weight= 44.48 N.
 1290            1300          RIGID  Weight= .00 N.
 1320            1330          RIGID  Weight= 44.48 N.
 1331            1340          RIGID  Weight= 44.48 N.
 1351            1360          RIGID  Weight= .00 N.
 1360            1370          RIGID  Weight= .00 N.
 1351            1500          RIGID  Weight= .00 N.
 1351            1531          RIGID  Weight= .00 N.
 1351            1171          RIGID  Weight= .00 N.
 1351            1511          RIGID  Weight= .00 N.
 1395            1400          RIGID  Weight= 44.48 N.
 1400            1410          RIGID  Weight= 258.00 N.
 1410            1420          RIGID  Weight= 44.48 N.
 1430            1520          RIGID  Weight= .00 N.
 1440            1450          RIGID  Weight= 44.48 N.
```

INPUT LISTING

```
  1450            1460           RIGID  Weight= 458.17 N.
  1460            1470           RIGID  Weight= 31.14 N.
```


SIF's & TEE's

```
 1080            1090              Node  1090   Unreinforced Tee
 1080            1100              Node  1100   Welding Tee
 1290            1300              Node  1300   Unreinforced Tee
 1430            1520              Node  1520   Unreinforced Tee
  280             290              Node  290   Welding Tee
```


REDUCERS

```
 1180            1190              Diam2= 60.325 mm.   Wall2= 8.738 mm.
 1230            1240              Diam2= 60.325 mm.   Wall2= 5.537 mm.
```


RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
1060	+Y					.000	1.000	.000
1170	+Y	1171			.30	.000	1.000	.000
1170	X	1171		3.00		1.000	.000	.000
1170	Z	1171		3.00		.000	.000	1.000
1330	ANC	1331				.000	.000	.000
1350	ANC	1351				.000	.000	.000
1370	ANC					.000	.000	.000
1500	+Y	1501			.30	.000	1.000	.000
1510	+Y	1511			.30	.000	1.000	.000
1530	+Y	1531			.30	.000	1.000	.000
1530	Z	1531		3.00		.000	.000	1.000
280	+Y				.30	.000	1.000	.000
280	X			3.00		1.000	.000	.000
280	Z			3.00	.30	.000	.000	1.000
310	+Y				.30	.000	1.000	.000
320	+Y					.000	1.000	.000
320	X			3.00		1.000	.000	.000
350	+Y				.30	.000	1.000	.000
380	+Y				.30	.000	1.000	.000
400	+Y					.000	1.000	.000
400	X					1.000	.000	.000
400	Z			3.00		.000	.000	1.000

EQUIPMENT LIMITS

```
 1340            1350              Nozzle Node = 1350

   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 2,800.14 N.   FB= 2,800.14 N.
```

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INPUT LISTING
FC= 2,100.10 N. MA= 420.02 N.m. MB= 280.01 N.m. MC= 360.02 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute
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FORCES AND MOMENTS

1200	1210	Node 1210 FX1= 1,500.07 N. FY1= 1,500.07 N.

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UNIFORM LOAD Changes

290	1040	Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
280	290	Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's

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INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x 25.400	=	mm.
FORCE	pounds	x 4.448	=	N.
MASS(dynamics)	pounds	x 0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x 0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x 0.113	=	N.m.
STRESS	lbs./sq.in.	x 6.895	=	KPa
TEMP. SCALE	degrees F.	x 0.556	=	C
PRESSURE	psig	x 6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x 6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x 0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x 0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x 0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x 1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x 0.113	=	N.m./deg
UNIFORM LOAD	lb./in.	x 1.751	=	N./cm.
G LOAD	g's	x 1.000	=	g's
WIND LOAD	lbs./sq.in.	x 6.895	=	KPa
ELEVATION	inches	x 0.025	=	m.

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INPUT LISTING

```
       COMPOUND LENGTH    inches        x     25.400   =   mm.
       DIAMETER           inches        x     25.400   =   mm.
       WALL THICKNESS     inches        x     25.400   =   mm.
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 SETUP FILE PARAMETERS
 ------------------------------------------------------------------------------
  CONNECT GEOMETRY THRU CNODES =    YES
  MIN ALLOWED BEND ANGLE =            5.00000
  MAX ALLOWED BEND ANGLE =            95.0000
  BEND LENGTH ATTACHMENT PERCENT =    1.00000
  MIN ANGLE TO ADJACENT BEND PT =     5.00000
  LOOP CLOSURE TOLERANCE =            25.4000     mm.
  THERMAL BOWING HORZ TOLERANCE =    0.100000E-03
  AUTO NODE NUMBER INCREMENT=         10.0000
  Z AXIS UP=                         NO
  USE PRESSURE STIFFENING =         DEFAULT
  ALPHA TOLERANCE =                   0.500000E-01
  RESLD-FORCE =                       NO
  HGR DEF RESWGT STIF =               0.175127E+13 N./cm.
  DECOMP SNG TOL =                    0.100000E+11
  BEND AXIAL SHAPE =                 YES
  FRICT STIF =                        0.175127E+07 N./cm.
  FRICT NORM FORCE VAR =              0.150000
  FRICT ANGLE VAR =                   15.0000
  FRICT SLIDE MULT =                  1.00000
  ROD TOLERANCE =                     1.00000
  ROD INC =                           2.00000
  INCORE NUMERICAL CHECK =           NO
  OUTCORE NUMERICAL CHECK =          NO
  DEFAULT TRANS RESTRAINT STIFF=      0.175127E+13    N./cm.
  DEFAULT ROT RESTRAINT STIFF=        0.112985E+12  N.m./deg
  IGNORE SPRING HANGER STIFFNESS =   NO
  MISSING MASS ZPA =                 EXTRACTED
  MIN WALL MILL TOLERANCE =           12.5000
  WRC-107 VERSION =                  MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =            LAST VALUE
  DEFAULT AMBIENT TEMPERATURE=        21.1111       C
  BOURDON PRESSURE=                  NONE
  COEFFICIENT OF FRICTION (MU) =          0.000000
  INCLUDE SPRG STIF IN HGR OPE =     NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =             B31.1(POST1980)
  USE WRC329                         NO
  NO REDUCED SIF FOR RFT AND WLT     NO
  B31.1 REDUCED Z FIX =              YES
  CLASS 1 BRANCH FLEX                NO
  ALL STRESS CASES CORRODED =        NO
  ADD TORSION IN SL STRESS =         DEFAULT
  ADD F/A IN STRESS =                DEFAULT
  OCCASIONAL LOAD FACTOR =                0.000000
  DEFAULT CODE =                     B31.3
  B31.3 SUS CASE SIF FACTOR =             0.000000
  ALLOW USERS BEND SIF =             NO
  USE SCHNEIDER                      NO
  YIELD CRITERION STRESS =           MAX 3D SHEAR
```

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INPUT LISTING

```
  USE PD/4T                          NO
  BASE HOOP STRESS ON ? =            ID
  EN13480 USE IN OUTPLANE SIFS=      NO
  LIBERAL EXPANSION ALLOWABLE=      YES
  B31.3 SEC 319.2.3C SAXIAL=        Default
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178      YES
  IGNORE B31.1/B31.3 Wc FACTOR=     YES
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152730
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
    Uniform Load Option ........    1.000

    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
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 COORDINATE REPORT
          /--------------------(mm.)----------------------/
  NODE           X              Y              Z
   290          .000          .000          .000
  1040          .000       638.000      -637.000
  1050          .000      1984.000      -637.000
  1060      5150.000      1984.000      -637.000
  1070      8138.000      1984.000      -637.000
  1080      8138.000      3522.000      -637.000
```

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INPUT LISTING

1090	8188.800	3522.000	-637.000
1080	8138.000	3522.000	-637.000
1100	8138.000	4067.000	-637.000
1110	8138.000	4637.000	-637.000
1120	8138.000	4716.375	-637.000
1130	8138.000	4954.375	-637.000
1140	8138.000	5033.750	-637.000
1150	8138.000	5186.750	-637.000
1160	8291.000	5186.750	-637.000
1170	8857.000	5186.750	-637.000
1180	9423.000	5186.750	-637.000
1190	9525.000	5213.750	-637.000
1200	9591.675	5213.750	-637.000
1210	9710.175	5213.750	-637.000
1220	9710.175	5103.750	-637.000
1230	9710.175	5038.663	-637.000
1240	9710.175	4841.663	-637.000
1250	9710.175	4607.663	-637.000
1260	9710.175	4534.638	-637.000
1270	9710.175	4347.638	-637.000
1280	9710.175	4274.613	-637.000
1285	9710.175	4067.613	-637.000
1290	9710.175	3522.613	-637.000
1300	9710.175	3522.613	-611.600
1290	9710.175	3522.613	-637.000
1310	9710.175	2587.613	-637.000
1320	9643.701	2587.613	-675.862
1330	9580.659	2587.613	-712.717
1340	9517.617	2587.613	-749.573
1350	9404.525	2587.613	-815.688
1360	9007.409	2587.613	-1047.848
1370	9007.409	187.613	-1047.848
1350	9404.525	2587.613	-815.688
1500	8687.327	3522.000	-637.852
1350	9404.525	2587.613	-815.688
1530	8923.624	3522.213	-437.000
1350	9404.524	2587.612	-815.695
1170	8857.000	5186.750	-637.000
1350	9404.525	2587.613	-815.688
1510	9710.176	3522.613	-343.594
1285	9710.175	4067.613	-637.000
1390	9710.175	4067.613	-437.000
1395	9633.175	4067.613	-437.000
1400	9560.149	4067.613	-437.000
1410	9373.149	4067.613	-437.000
1420	9300.124	4067.613	-437.000
1430	8923.624	4067.613	-437.000
1520	8923.624	4042.213	-437.000
1430	8923.624	4067.613	-437.000
1440	8629.124	4067.613	-437.000
1450	8556.099	4067.613	-437.000
1460	8281.099	4067.613	-437.000
1470	8214.424	4067.613	-437.000
1600	8136.424	4067.613	-437.000
1600	8137.424	4067.613	-437.000
1100	8138.000	4067.000	-637.000

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INPUT LISTING

1090	8188.800	3522.000	-637.000
1500	8688.800	3522.000	-637.000
1300	9710.175	3522.613	-611.600
1510	9710.175	3522.613	-343.600
1520	8923.624	4042.213	-437.000
1530	8923.624	3522.213	-437.000
280	.000	.000	2626.000
290	.000	.000	.000
300	.000	.000	-400.000
310	.000	.000	-3674.000
320	.000	.000	-9674.000
330	.000	.000	-12424.000
340	-6000.000	.000	-12424.000
350	-6000.000	.000	-13424.000
360	-6000.000	.000	-14424.000
370	.000	.000	-14424.000
380	.000	.000	-15674.000
390	.000	.000	-18674.000
400	.000	.000	-21674.000

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1-U2
CASE 14 (OPE) W+T2+P1+U3
CASE 15 (OPE) W+T2+P1+F1
CASE 16 (OCC) L16=L10-L4
CASE 17 (OCC) L17=L11-L4
CASE 18 (OCC) L18=L12-L4
CASE 19 (OCC) L19=L13-L4
CASE 20 (OCC) L20=L14-L4
CASE 21 (OCC) L21=L15-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
280		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(HYD)	-60	-3518	3	0	0	0
	2(OPE)	-1764	-2280	5454	0	0	0
	4(OPE)	-1785	-2265	5476	0	0	0
	6(OPE)	602	-1994	-1702	0	0	0
	8(SUS)	-48	-2016	2	0	0	0
	9(SUS)	-48	-2014	2	0	0	0
	10(OPE)	-1632	-2283	6115	0	0	0
	11(OPE)	-2309	-2260	5239	0	0	0
	12(OPE)	-1803	-2023	5472	0	0	0
	13(OPE)	-1834	-2507	5703	0	0	0
	14(OPE)	-2499	-2381	9028	0	0	0
	15(OPE)	-1748	-2293	5502	0	0	0
	16(OCC)	153	-18	639	0	0	0
	17(OCC)	-524	6	-238	0	0	0
	18(OCC)	-18	242	-5	0	0	0
	19(OCC)	-50	-242	227	0	0	0
	20(OCC)	-714	-116	3552	0	0	0
	21(OCC)	36	-28	25	0	0	0
	MAX	-2499/L14	-3518/L1	9028/L14			
310		TYPE=Rigid +Y;					
	1(HYD)	-87	-6688	2	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	2(OPE)	-175	-4680	-1393	0	0	0
	4(OPE)	-176	-4662	-1388	0	0	0
	6(OPE)	-185	-3697	1094	0	0	0
	8(SUS)	-69	-3815	1	0	0	0
	9(SUS)	-69	-3810	1	0	0	0
	10(OPE)	153	-4705	-1403	0	0	0
	11(OPE)	-222	-4685	-1388	0	0	0
	12(OPE)	-158	-4204	-1251	0	0	0
	13(OPE)	-203	-5117	-1522	0	0	0
	14(OPE)	-125	-4572	-1366	0	0	0
	15(OPE)	-162	-4695	-1399	0	0	0
	16(OCC)	329	-43	-16	0	0	0
	17(OCC)	-46	-23	-0	0	0	0
	18(OCC)	17	458	136	0	0	0
	19(OCC)	-27	-455	-134	0	0	0
	20(OCC)	51	90	22	0	0	0
	21(OCC)	14	-33	-12	0	0	0
	MAX	329/L16	-6688/L1	-1522/L13			
320		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-10264	0	0	0	0
	2(OPE)	-824	-4627	0	0	0	0
	4(OPE)	-862	-4613	0	0	0	0
	6(OPE)	0	-5677	0	0	0	0
	8(SUS)	0	-5538	0	0	0	0
	9(SUS)	0	-5530	0	0	0	0
	10(OPE)	2473	-4587	0	0	0	0
	11(OPE)	-4717	-4569	0	0	0	0
	12(OPE)	-911	-3950	0	0	0	0
	13(OPE)	-588	-5279	0	0	0	0
	14(OPE)	-257	-4588	0	0	0	0
	15(OPE)	-840	-4636	0	0	0	0
	16(OCC)	3334	26	0	0	0	0
	17(OCC)	-3856	44	0	0	0	0
	18(OCC)	-49	663	0	0	0	0
	19(OCC)	274	-666	0	0	0	0
	20(OCC)	605	25	0	0	0	0
	21(OCC)	22	-23	0	0	0	0
	MAX	-4717/L11	-10264/L1				
350		TYPE=Rigid +Y;					
	1(HYD)	13	-8365	3	0	0	0
	2(OPE)	-1465	-5080	-421	0	0	0
	4(OPE)	-1469	-5092	-421	0	0	0
	6(OPE)	1337	-4457	-22	0	0	0
	8(SUS)	10	-4541	2	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(SUS)	10	-4536	2	0	0	0
	10(OPE)	-1404	-5105	-613	0	0	0
	11(OPE)	-1524	-5120	-194	0	0	0
	12(OPE)	-1313	-4546	-368	0	0	0
	13(OPE)	-1623	-5636	-475	0	0	0
	14(OPE)	-1528	-5116	-140	0	0	0
	15(OPE)	-1463	-5072	-418	0	0	0
	16(OCC)	65	-13	-192	0	0	0
	17(OCC)	-55	-28	226	0	0	0
	18(OCC)	155	546	52	0	0	0
	19(OCC)	-154	-544	-54	0	0	0
	20(OCC)	-60	-24	280	0	0	0
	21(OCC)	5	20	3	0	0	0
	MAX	-1623/L13	-8365/L1	-613/L10			
380		TYPE=Rigid +Y;					
	1(HYD)	-4	-8621	0	0	0	0
	2(OPE)	-596	-4757	1297	0	0	0
	4(OPE)	-596	-4759	1297	0	0	0
	6(OPE)	-1341	-4668	-404	0	0	0
	8(SUS)	-3	-4680	0	0	0	0
	9(SUS)	-3	-4674	0	0	0	0
	10(OPE)	36	-4761	1428	0	0	0
	11(OPE)	-844	-4763	1153	0	0	0
	12(OPE)	-534	-4197	1140	0	0	0
	13(OPE)	-641	-5320	1462	0	0	0
	14(OPE)	-739	-4762	1223	0	0	0
	15(OPE)	-599	-4756	1295	0	0	0
	16(OCC)	632	-2	130	0	0	0
	17(OCC)	-248	-4	-145	0	0	0
	18(OCC)	61	562	-157	0	0	0
	19(OCC)	-45	-561	164	0	0	0
	20(OCC)	-143	-3	-75	0	0	0
	21(OCC)	-3	2	-2	0	0	0
	MAX	-1341/L6	-8621/L1	1462/L13			
400		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	1(HYD)	0	-2603	0	0	0	0
	2(OPE)	1265	-1328	-5050	0	0	0
	4(OPE)	1275	-1326	-5087	0	0	0
	6(OPE)	19	-1426	966	0	0	0
	8(SUS)	0	-1413	0	0	0	0
	9(SUS)	0	-1411	0	0	0	0
	10(OPE)	2027	-1324	-5493	0	0	0
	11(OPE)	472	-1322	-4630	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	12(OPE)	1257	-1157	-4928	0	0	0
	13(OPE)	1295	-1496	-5244	0	0	0
	14(OPE)	943	-1322	-2889	0	0	0
	15(OPE)	1273	-1329	-5078	0	0	0
	16(OCC)	752	2	-407	0	0	0
	17(OCC)	-803	4	457	0	0	0
	18(OCC)	-18	169	159	0	0	0
	19(OCC)	19	-170	-157	0	0	0
	20(OCC)	-333	4	2198	0	0	0
	21(OCC)	-2	-3	9	0	0	0
	MAX	2027/L10	-2603/L1	-5493/L10			
1060		TYPE=Rigid +Y;					
	1(HYD)	0	-1749	0	0	0	0
	2(OPE)	0	-942	0	0	0	0
	4(OPE)	0	-1081	0	0	0	0
	6(OPE)	0	-1261	0	0	0	0
	8(SUS)	0	-1317	0	0	0	0
	9(SUS)	0	-1316	0	0	0	0
	10(OPE)	0	-981	0	0	0	0
	11(OPE)	0	-1159	0	0	0	0
	12(OPE)	0	-916	0	0	0	0
	13(OPE)	0	-1246	0	0	0	0
	14(OPE)	0	-1093	0	0	0	0
	15(OPE)	0	-607	0	0	0	0
	16(OCC)	0	99	0	0	0	0
	17(OCC)	0	-78	0	0	0	0
	18(OCC)	0	164	0	0	0	0
	19(OCC)	0	-165	0	0	0	0
	20(OCC)	0	-12	0	0	0	0
	21(OCC)	0	473	0	0	0	0
	MAX		-1749/L1				
1170		TYPE=Rigid Z w/gap; Rigid +Y; Rigid X w/gap;					
	1(HYD)	-136	-1268	-7	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	176	-5199	-35	0	0	0
	8(SUS)	-115	-1092	-1	0	0	0
	9(SUS)	-115	-1092	-1	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	0	0	52	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	52	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	176/L6	-5199/L6	52/L14			
1330		TYPE=Rigid ANC;					
	1(HYD)	-23	-401	5	20	2	-16
	2(OPE)	-293	279	37	26	-45	188
	4(OPE)	-401	326	40	29	-64	231
	6(OPE)	189	1046	-9	-61	32	40
	8(SUS)	-21	-393	5	19	2	-18
	9(SUS)	-21	-392	5	19	2	-18
	10(OPE)	-382	307	37	28	-65	232
	11(OPE)	-425	390	43	27	-63	241
	12(OPE)	-399	430	42	24	-65	237
	13(OPE)	-403	219	38	33	-63	224
	14(OPE)	-339	732	156	65	-57	252
	15(OPE)	-395	845	47	7	-79	237
	16(OCC)	19	-19	-3	-0	-2	1
	17(OCC)	-24	65	3	-1	1	10
	18(OCC)	2	104	2	-5	-1	6
	19(OCC)	-2	-107	-2	5	1	-7
	20(OCC)	62	407	116	36	6	21
	21(OCC)	7	519	7	-21	-15	6
	MAX	-425/L11	1046/L6	156/L14	65/L14	-79/L15	252/L14
1350		TYPE=Rigid ANC;					
	1(HYD)	-23	-459	5	65	-1	-94
	2(OPE)	-293	224	37	2	-82	231
	4(OPE)	-401	271	40	-1	-112	281
	6(OPE)	189	992	-9	-165	53	218
	8(SUS)	-21	-447	5	63	-1	-94
	9(SUS)	-21	-447	5	63	-1	-94
	10(OPE)	-368	252	37	1	-110	279
	11(OPE)	-439	336	43	-9	-115	303
	12(OPE)	-399	382	42	-17	-113	307
	13(OPE)	-403	158	38	15	-111	255
	14(OPE)	-339	678	170	-6	-122	374
	15(OPE)	-395	791	47	-76	-128	379
	16(OCC)	33	-19	-3	1	2	-2
	17(OCC)	-38	65	3	-8	-3	21
	18(OCC)	2	111	2	-16	-1	25

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	19(OCC)	-2	-113	-2	16	1	-26
	20(OCC)	62	407	130	-6	-10	92
	21(OCC)	7	519	7	-75	-16	97
	MAX	-439/L11	992/L6	170/L14	-165/L6	-128/L15	379/L15
1370		TYPE=Rigid ANC;					
	1(HYD)	137	-3962	-8	1737	19	504
	2(OPE)	3302	-3135	-87	1231	983	-7528
	4(OPE)	3343	-3031	-87	1190	998	-7808
	6(OPE)	-375	-3649	-6	1612	-166	1799
	8(SUS)	109	-3510	-6	1560	16	417
	9(SUS)	109	-3509	-6	1559	16	417
	10(OPE)	4871	-3083	-88	1207	1620	-12554
	11(OPE)	2047	-2952	-78	1175	481	-3630
	12(OPE)	3324	-2616	-86	1008	995	-7827
	13(OPE)	3351	-3447	-88	1373	996	-7762
	14(OPE)	3478	-2996	1040	5254	1559	-8179
	15(OPE)	4778	-1940	-94	737	1535	-12941
	16(OCC)	1528	-51	-1	17	623	-4746
	17(OCC)	-1296	80	9	-15	-517	4178
	18(OCC)	-19	415	1	-182	-3	-19
	19(OCC)	7	-416	-1	182	-2	46
	20(OCC)	135	35	1127	4064	561	-371
	21(OCC)	1435	1091	-7	-453	537	-5133
	MAX	4871/L10	-3962/L1	1127/L20	5254/L14	1620/L10	-12941/L15
1500		TYPE=Rigid +Y;					
	1(HYD)	0	0	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	0	0	0	0	0	0
	9(SUS)	0	0	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
1510		TYPE=Rigid +Y;					
	1(HYD)	-33	-113	6	0	0	0
	2(OPE)	-47	-158	6	0	0	0
	4(OPE)	-40	-136	9	0	0	0
	6(OPE)	0	0	0	0	0	0
	8(SUS)	-32	-108	5	0	0	0
	9(SUS)	-32	-108	5	0	0	0
	10(OPE)	-37	-127	8	0	0	0
	11(OPE)	-36	-123	8	0	0	0
	12(OPE)	-30	-102	7	0	0	0
	13(OPE)	-50	-171	11	0	0	0
	14(OPE)	-141	-525	69	0	0	0
	15(OPE)	-32	-110	10	0	0	0
	16(OCC)	3	10	-1	0	0	0
	17(OCC)	4	14	-1	0	0	0
	18(OCC)	10	34	-2	0	0	0
	19(OCC)	-10	-35	2	0	0	0
	20(OCC)	-101	-388	60	0	0	0
	21(OCC)	8	26	1	0	0	0
	MAX	-141/L14	-525/L14	69/L14			
1530		TYPE=Rigid Z w/gap; Rigid +Y;					
	1(HYD)	-43	-719	-8	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	99	-623	10	0	0	0
	8(SUS)	-36	-665	-9	0	0	0
	9(SUS)	-36	-665	-9	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	99/L6	-719/L1	10/L6			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 22 (OCC) L22=L16+L8
CASE 23 (OCC) L23=L17+L8
CASE 24 (OCC) L24=L18+L8
CASE 25 (OCC) L25=L19+L8
CASE 26 (OCC) L26=L20+L8
CASE 27 (OCC) L27=L21+L8
CASE 28 (EXP) L28=L2-L8
CASE 29 (EXP) L29=L4-L8
CASE 30 (EXP) L30=L2-L4
CASE 31 (EXP) L31=L6-L8
CASE 32 (EXP) L32=L2-L6
CASE 33 (EXP) L33=L4-L6

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	11.3	@Node	320
Code Stress:	27168.9	Allowable Stress:	241316.5
Axial Stress:	6760.3	@Node	1240
Bending Stress:	28981.2	@Node	1090
Torsion Stress:	1816.9	@Node	1388
Hoop Stress:	14676.3	@Node	1240
Max Stress Intensity:	32331.4	@Node	290

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	34.1	@Node	290
Code Stress:	44062.5	Allowable Stress:	129365.3
Axial Stress:	12076.3	@Node	330
Bending Stress:	42649.4	@Node	290
Torsion Stress:	3057.1	@Node	1388
Hoop Stress:	24443.4	@Node	290
Max Stress Intensity:	54724.7	@Node	290

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	24.7	@Node	290
Code Stress:	31958.5	Allowable Stress:	129365.3
Axial Stress:	1289.6	@Node	1530
Bending Stress:	42608.5	@Node	290
Torsion Stress:	3056.1	@Node	1388
Hoop Stress:	0.0	@Node	1038

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Max Stress Intensity:	42610.4	@Node	290	

CODE STRESS CHECK PASSED : LOADCASE 22 (OCC) L22=L16+L8

Highest Stresses: (KPa) LOADCASE 22 (OCC) L22=L16+L8				
Ratio (%):	35.9	@Node	320	
Code Stress:	61799.8	Allowable Stress:		172055.9
Axial Stress:	12275.8	@Node	1598	
Bending Stress:	55684.4	@Node	1090	
Torsion Stress:	3229.0	@Node	1388	
Hoop Stress:	24443.4	@Node	290	
Max Stress Intensity:	66681.2	@Node	290	

CODE STRESS CHECK PASSED : LOADCASE 23 (OCC) L23=L17+L8

Highest Stresses: (KPa) LOADCASE 23 (OCC) L23=L17+L8				
Ratio (%):	41.3	@Node	320	
Code Stress:	71108.7	Allowable Stress:		172055.9
Axial Stress:	12801.2	@Node	330	
Bending Stress:	59628.1	@Node	290	
Torsion Stress:	3932.9	@Node	1388	
Hoop Stress:	24443.4	@Node	290	
Max Stress Intensity:	71801.1	@Node	290	

CODE STRESS CHECK PASSED : LOADCASE 24 (OCC) L24=L18+L8

Highest Stresses: (KPa) LOADCASE 24 (OCC) L24=L18+L8				
Ratio (%):	27.9	@Node	290	
Code Stress:	47940.9	Allowable Stress:		172055.9
Axial Stress:	12130.9	@Node	390	
Bending Stress:	47819.0	@Node	290	
Torsion Stress:	3206.5	@Node	1388	
Hoop Stress:	24443.4	@Node	290	
Max Stress Intensity:	59895.3	@Node	290	

CODE STRESS CHECK PASSED : LOADCASE 25 (OCC) L25=L19+L8

Highest Stresses: (KPa) LOADCASE 25 (OCC) L25=L19+L8				
Ratio (%):	27.9	@Node	290	
Code Stress:	47978.3	Allowable Stress:		172055.9
Axial Stress:	12082.2	@Node	360	
Bending Stress:	47763.3	@Node	290	
Torsion Stress:	2855.4	@Node	1388	
Hoop Stress:	24443.4	@Node	290	
Max Stress Intensity:	59919.0	@Node	290	

CODE STRESS CHECK PASSED : LOADCASE 26 (OCC) L26=L20+L8

Highest Stresses: (KPa) LOADCASE 26 (OCC) L26=L20+L8				
Ratio (%):	38.3	@Node	290	
Code Stress:	65861.1	Allowable Stress:		172055.9
Axial Stress:	12866.3	@Node	400	
Bending Stress:	78802.9	@Node	290	

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Torsion Stress:              5004.1       @Node   1040
Hoop Stress:                24443.4       @Node    290
Max Stress Intensity:       86629.1       @Node    290

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L21+L8

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L21+L8
Ratio (%):                     57.2       @Node   1230
Code Stress:               104945.7       Allowable Stress:     183400.5
Axial Stress:               13391.4       @Node   1240
Bending Stress:             97883.9       @Node   1230
Torsion Stress:             15700.9       @Node   1600
Hoop Stress:                24443.4       @Node    290
Max Stress Intensity:      105043.9       @Node   1230

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L2-L8
Ratio (%):                     43.0       @Node   1090
Code Stress:               134160.4       Allowable Stress:     311816.3
Axial Stress:                2316.6       @Node   1500
Bending Stress:            126979.5       @Node   1090
Torsion Stress:             15480.0       @Node   1600
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:      302524.8       @Node    290

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L4-L8

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L4-L8
Ratio (%):                     39.7       @Node   1090
Code Stress:               123770.1       Allowable Stress:     311816.3
Axial Stress:                2414.7       @Node   1500
Bending Stress:            116269.7       @Node   1090
Torsion Stress:             14846.6       @Node   1600
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:      308455.3       @Node    290

 CODE STRESS CHECK PASSED      : LOADCASE 30 (EXP) L30=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 30 (EXP) L30=L2-L4
Ratio (%):                      5.2       @Node   1230
Code Stress:                17145.3       Allowable Stress:     328398.8
Axial Stress:                 344.5       @Node   1390
Bending Stress:             16207.9       @Node   1230
Torsion Stress:              2475.2       @Node   1230
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:       27202.2       @Node   1285

 CODE STRESS CHECK PASSED      : LOADCASE 31 (EXP) L31=L6-L8

Highest Stresses: (   KPa    ) LOADCASE 31 (EXP) L31=L6-L8
Ratio (%):                     17.4       @Node   1230
Code Stress:                57232.3       Allowable Stress:     328398.8
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Axial Stress:                2896.1       @Node   1230
Bending Stress:             53317.6       @Node   1230
Torsion Stress:              5375.0       @Node   1230
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:       83221.1       @Node   1230

 CODE STRESS CHECK PASSED      : LOADCASE 32 (EXP) L32=L2-L6

Highest Stresses: (   KPa    ) LOADCASE 32 (EXP) L32=L2-L6
Ratio (%):                     41.4       @Node    290
Code Stress:               125469.6       Allowable Stress:     302893.3
Axial Stress:                3118.9       @Node   1500
Bending Stress:            123625.6       @Node    290
Torsion Stress:             15042.0       @Node   1600
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:      353800.9       @Node    290

 CODE STRESS CHECK PASSED      : LOADCASE 33 (EXP) L33=L4-L6

Highest Stresses: (   KPa    ) LOADCASE 33 (EXP) L33=L4-L6
Ratio (%):                     42.2       @Node    290
Code Stress:               127558.4       Allowable Stress:     302552.0
Axial Stress:                3217.0       @Node   1500
Bending Stress:            125695.7       @Node    290
Torsion Stress:             14408.6       @Node   1600
Hoop Stress:                    0.0       @Node   1038
Max Stress Intensity:      359725.4       @Node    290
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:42
Job:: BNK-GCS-CN-052-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:42
Job:: BNK-GCS-CN-052-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

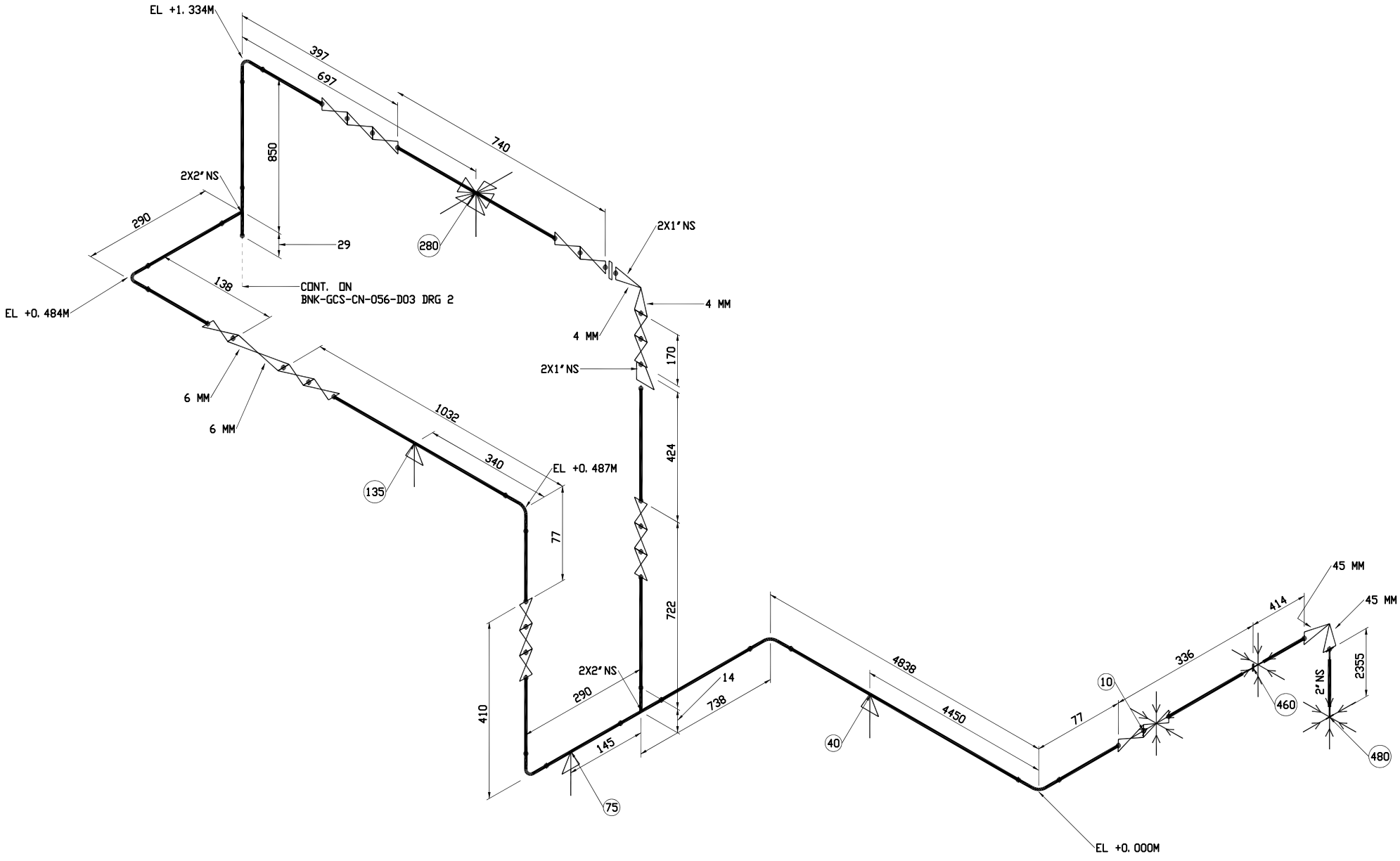
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
1350		Absolute Method								
	Limits	2800	2800	2100		420	280	360		
	2(OPE)	234	224	-180	0.086	-118	-82	-198	0.550	
	4(OPE)	326	271	-237	0.116	-141	-112	-243	0.676	
	6(OPE)	-159	992	103	0.354	32	53	-271	0.753	
	8(SUS)	16	-447	-14	0.160	-7	-1	113	0.314	
	9(SUS)	16	-447	-14	0.159	-7	-1	113	0.313	

BNK-GCS-CN-056

1. GAS-111-0042A-CN05-2"-PT
2. FL-112-0019A-AN07-2"-PT
3. FL-112-0018A-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG.

1 OF 2

REV.	CHANGE	DATE
		15 MAY 2024

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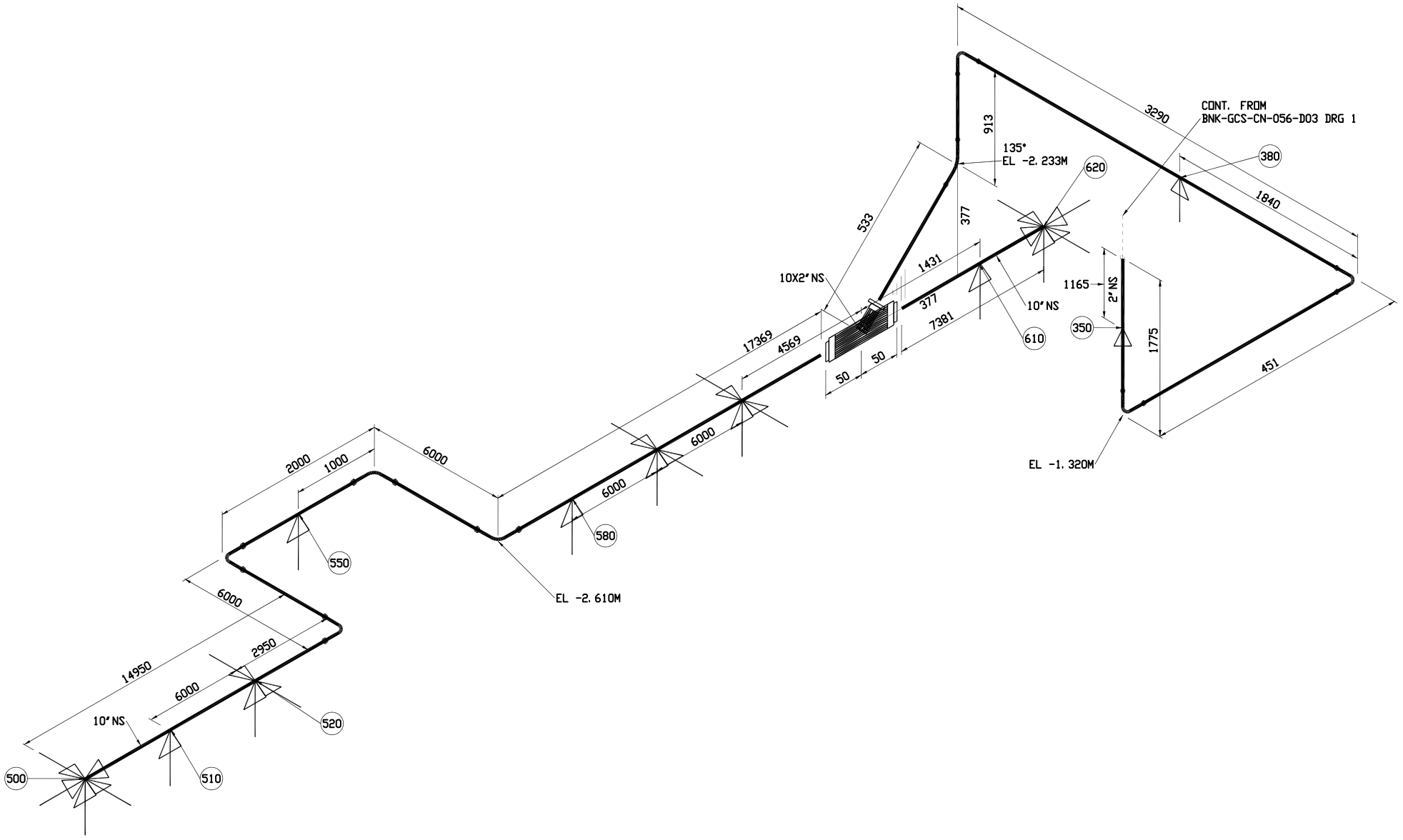

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 2 OF 2

REV.	CHANGE	DATE
		15 MAY 2024

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CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:58
Job:: BNK-GCS-CN-056-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (OPE) W+T1+P1
2 (Alt-SUS) W+P1
3 (OPE) W+T2+P1
4 (Alt-SUS) W+P1
5 (OPE) W+T3+P1
6 (Alt-SUS) W+P1
7 (SUS) W+P1
8 (SUS) WNC
9 (OPE) W+T2+P1+U1
10 (OPE) W+T2+P1-U1
11 (OPE) W+T2+P1+U2
12 (OPE) W+T2+P1-U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1+F1
15 (OCC) L15=L9-L3
16 (OCC) L16=L10-L3
17 (OCC) L17=L11-L3
18 (OCC) L18=L12-L3
19 (OCC) L19=L13-L3
20 (OCC) L20=L14-L3
21 (OCC) L21=L15+L7
22 (OCC) L22=L16+L7
23 (OCC) L23=L17+L7
24 (OCC) L24=L18+L7
25 (OCC) L25=L19+L7
26 (OCC) L26=L20+L7
27 (EXP) L27=L1-L7
28 (EXP) L28=L3-L7
29 (EXP) L29=L1-L3
30 (EXP) L30=L5-L7
31 (EXP) L31=L1-L5
32 (EXP) L32=L3-L5

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:58
Job:: BNK-GCS-CN-056-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 15,2024 16:58:38

PIPE DATA

From 10 To 20 DZ= 73.025 mm.
PIPE
Dia= 60.325 mm. Wall= 5.537 mm. Cor= 3.0000 mm.
Element Name= FLANGE_FLG_150
GENERAL
T1= 115 C T2= 60 C T3= 60 C P1= 2,200.0500 KPa PHyd= 3,300.0752 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 197,200,352 KPa
EH2= 200,644,016 KPa EH3= 200,644,016 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000181 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RIGID Weight= 44.48 N.
RESTRAINTS
Node 10 ANC Cnode 440
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa
EQUIPMENT LIMITS
Nozzle Node = 10 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,800.14 N.
FB= 2,800.14 N. FC= 2,100.10 N. MA= 420.02 N.m. MB= 280.01 N.m.
MC= 360.02 N.m. Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute

From 20 To 30 DZ= 77.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 29
Angle/Node @2= .00 28

From 30 To 40 DX= -4,450.000 mm.
RESTRAINTS
Node 40 +Y Mu = .30

From 40 To 50 DX= -388.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 49
Angle/Node @2= .00 48

INPUT LISTING

```
 From  50  To  70 DZ= 738.000 mm.
 SIF's & TEE's
    Node  70   Welding Tee
 ------------------------------------------------------------------------------
 From  70  To  75 DZ= 145.000 mm.
 RESTRAINTS
    Node  75  +Y
 ------------------------------------------------------------------------------
 From  75  To  80 DZ= 145.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 79
    Angle/Node @2= .00 78
 ------------------------------------------------------------------------------
 From  80  To  90 DY= 77.000 mm.
 ------------------------------------------------------------------------------
 From  90  To  100 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  100  To  110 DY= 187.000 mm.
 RIGID  Weight= 258.00 N.
 ------------------------------------------------------------------------------
 From  110  To  120 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  120  To  130 DY= 77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 129
    Angle/Node @2= .00 128
 ------------------------------------------------------------------------------
 From  130  To  135  DX= -340.000 mm.
 RESTRAINTS
    Node  135  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  135  To  140  DX= -340.000 mm.
 ------------------------------------------------------------------------------
 From  140  To  150  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  150  To  160  DX= -285.325 mm.  DY= .000 mm.  DZ= .000 mm.
 RIGID  Weight= 458.17 N.
 ------------------------------------------------------------------------------
 From  70  To  170 DY= 403.000 mm.
 ------------------------------------------------------------------------------
 From  170  To  180 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  180  To  190 DY= 187.000 mm.
 RIGID  Weight= 258.00 N.
 ------------------------------------------------------------------------------
 From  190  To  200 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  200  To  210 DY= 210.000 mm.
 ------------------------------------------------------------------------------
 From  210  To  220 DY= 214.000 mm.
 REDUCER
```

INPUT LISTING
```
    Diam2= 33.401 mm.   Wall2= 6.350 mm.
 ------------------------------------------------------------------------------
 From  220  To  230 DY= 65.088 mm.
 PIPE
    Dia= 33.401 mm.   Wall= 6.350 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 22.24 N.
 ------------------------------------------------------------------------------
 From  230  To  240 DY= 109.000 mm.
 RIGID  Weight= 44.48 N.
 FORCES & MOMENTS
    Node  240   FX1= 1,000.05 N.   FY1= 1,000.05 N.
 ------------------------------------------------------------------------------
 From  240  To  250  DX= -44.975 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  250  To  260  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  260  To  270  DX= -66.675 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  270  To  280  DX= -300.000 mm.
 RESTRAINTS
    Node  280  +Y   Mu = .30
    Node  280  X   Gap= 3.000 mm.
    Node  280  Z   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  280  To  290  DX= -300.000 mm.
 ------------------------------------------------------------------------------
 From  290  To  300  DX= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  300  To  310  DX= -187.000 mm.
 RIGID  Weight= 209.07 N.
 ------------------------------------------------------------------------------
 From  310  To  320  DX= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  320  To  330  DX= -77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 329
    Angle/Node @2= .00 328
```

INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  330  To  340 DY= -850.000 mm.
 SIF's & TEE's
    Node  340   Welding Tee
 ----------------------------------------------------------------------------
 From  340  To  350 DY= -1,194.000 mm.
 RESTRAINTS
    Node  350  +Y   Mu = .30
 ----------------------------------------------------------------------------
 From  350  To  360 DY= -610.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 359
    Angle/Node @2= .00 358
 ----------------------------------------------------------------------------
 From  360  To  370 DZ= -451.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 369
    Angle/Node @2= .00 368
 ----------------------------------------------------------------------------
 From  370  To  380  DX= -1,840.000 mm.
 RESTRAINTS
    Node  380  +Y   Mu = .30
 ----------------------------------------------------------------------------
 From  380  To  390  DX= -1,450.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 389
    Angle/Node @2= .00 388
 ----------------------------------------------------------------------------
 From  390  To  400 DY= -913.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 399
    Angle/Node @2= .00 398
 ----------------------------------------------------------------------------
 From  400  To  410 DY= -377.000 mm.  DZ= 377.000 mm.
 ----------------------------------------------------------------------------
 From  340  To  420 DZ= 290.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 419
    Angle/Node @2= .00 418
 ----------------------------------------------------------------------------
 From  420  To  430  DX= 77.000 mm.
 ----------------------------------------------------------------------------
 From  430  To  160  DX= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ----------------------------------------------------------------------------
 From  440  To  450 DZ= -73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Fluid Den= .0001154 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
```

INPUT LISTING
```
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  450  To  460 DZ= -190.000 mm.
 RESTRAINTS
    Node  460  ANC   Cnode  461
 ---------------------------------------------------------------------------
 From  461  To  470 DZ= -459.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  470  To  480 DY= -2,400.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  480  ANC
 ---------------------------------------------------------------------------
 From  500  To  510 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  510  +Y   Mu = .30
    Node  500  +Y   Mu = .30
    Node  500  X   Gap= 3.000 mm.
    Node  500  Z   Gap= 3.000 mm.
 UNIFORM LOAD
   Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
   Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
   Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  510  To  520 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  520  +Y   Mu = .30
    Node  520  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  520  To  530 DZ= -2,950.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 529
    Angle/Node @2= .00 528
 ---------------------------------------------------------------------------
 From  530  To  540  DX= -6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 539
    Angle/Node @2= .00 538
 ---------------------------------------------------------------------------
 From  540  To  550 DZ= -1,000.000 mm.
```

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```
 RESTRAINTS
    Node  550  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  550  To  560 DZ= -1,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 559
    Angle/Node @2= .00 558
 ------------------------------------------------------------------------------
 From  560  To  570  DX= 6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 569
    Angle/Node @2= .00 568
 ------------------------------------------------------------------------------
 From  570  To  580 DZ= -850.000 mm.
 RESTRAINTS
    Node  580  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  580  To  590  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  590  +Y   Mu = .30
    Node  590  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  590  To  600  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  600  +Y
    Node  600  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  600  To  410 DZ= -4,569.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 600.0137 KPa   PHyd= 900.0205 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 187,483,936 KPa   EH2= 187,335,024 KPa
    EH3= 205,934,864 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
    Insul Den= .0001362 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  410  To  610 DZ= -1,431.000 mm.
 RESTRAINTS
    Node  610  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  610  To  620 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  620  +Y   Mu = .30
    Node  620  X
    Node  620  Z   Gap= 3.000 mm.
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```
 MATERIAL Changes:
    10              20              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
   500             510              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
   600             410              Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                    v = .292   Density= .0078 kg./cu.cm.
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 ALLOWABLE STRESS Changes
    10              20              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
   260             270              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 129,638 KPa
                                    Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
   440             450              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 137,895 KPa
                                    Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
   500             510              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 129,638 KPa
                                    Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
   600             410              B31.3 (2016)        Cycle Max Switch = ---
                                    Sc= 137,895 KPa   Sh1= 129,638 KPa
                                    Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                    Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                    Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                    Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                    Sy= 241,316 KPa
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 BEND ELEMENTS
    20              30              Radius= 76.200 mm. (LONG)
                                    Bend Angle= 90.000   Angle/Node @1= 45.00 29
                                    Angle/Node @2= .00 28
    40              50              Radius= 76.200 mm. (LONG)
```

INPUT LISTING

```
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 49
                                  Angle/Node @2= .00 48
    75              80            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 79
                                  Angle/Node @2= .00 78
   120             130            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 129   Angle/Node @2= .00 128
   320             330            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 329   Angle/Node @2= .00 328
   350             360            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 359   Angle/Node @2= .00 358
   360             370            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 369   Angle/Node @2= .00 368
   380             390            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 389   Angle/Node @2= .00 388
   390             400            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 45.000   Angle/Node @1= 22.50
                                 399   Angle/Node @2= .00 398
   340             420            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 419   Angle/Node @2= .00 418
   520             530            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 529   Angle/Node @2= .00 528
   530             540            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 539   Angle/Node @2= .00 538
   550             560            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 559   Angle/Node @2= .00 558
   560             570            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 569   Angle/Node @2= .00 568
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RIGIDS
    10              20          RIGID  Weight= 44.48 N.
    90             100          RIGID  Weight= 44.48 N.
   100             110          RIGID  Weight= 258.00 N.
   110             120          RIGID  Weight= 44.48 N.
   140             150          RIGID  Weight= 44.48 N.
   150             160          RIGID  Weight= 458.17 N.
   170             180          RIGID  Weight= 44.48 N.
   180             190          RIGID  Weight= 258.00 N.
   190             200          RIGID  Weight= 44.48 N.
   220             230          RIGID  Weight= 22.24 N.
   230             240          RIGID  Weight= 44.48 N.
   240             250          RIGID  Weight= 44.48 N.
   250             260          RIGID  Weight= 44.48 N.
```

INPUT LISTING

260	270	RIGID	Weight= 31.14 N.
290	300	RIGID	Weight= 31.14 N.
300	310	RIGID	Weight= 209.07 N.
310	320	RIGID	Weight= 31.14 N.
430	160	RIGID	Weight= 31.14 N.
440	450	RIGID	Weight= 44.48 N.
461	470	RIGID	Weight= .00 N.
470	480	RIGID	Weight= .00 N.

SIF's & TEE's

50	70	Node 70 Welding Tee
330	340	Node 340 Welding Tee

REDUCERS

210	220	Diam2= 33.401 mm. Wall2= 6.350 mm.

RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
10	ANC	440				.000	.000	.000
40	+Y				.30	.000	1.000	.000
75	+Y					.000	1.000	.000
135	+Y				.30	.000	1.000	.000
280	+Y				.30	.000	1.000	.000
280	X			3.00		1.000	.000	.000
280	Z			3.00		.000	.000	1.000
350	+Y				.30	.000	1.000	.000
380	+Y				.30	.000	1.000	.000
460	ANC	461				.000	.000	.000
480	ANC					.000	.000	.000
510	+Y				.30	.000	1.000	.000
500	+Y				.30	.000	1.000	.000
500	X			3.00		1.000	.000	.000
500	Z			3.00		.000	.000	1.000
520	+Y				.30	.000	1.000	.000
520	X			3.00		1.000	.000	.000
550	+Y				.30	.000	1.000	.000
580	+Y				.30	.000	1.000	.000
590	+Y				.30	.000	1.000	.000
590	X			3.00		1.000	.000	.000
600	+Y					.000	1.000	.000
600	X			3.00		1.000	.000	.000
610	+Y				.30	.000	1.000	.000
620	+Y				.30	.000	1.000	.000
620	X					1.000	.000	.000
620	Z			3.00		.000	.000	1.000

INPUT LISTING

EQUIPMENT LIMITS
10 20 Nozzle Node = 10

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,800.14 N. FB= 2,800.14 N.
FC= 2,100.10 N. MA= 420.02 N.m. MB= 280.01 N.m. MC= 360.02 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute
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FORCES AND MOMENTS
230 240 Node 240 FX1= 1,000.05 N.
FY1= 1,000.05 N.
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UNIFORM LOAD Changes
10 20 Vector1 in G-s
X1 Dir = .26 g's Y1 Dir = .00 g's
Z1 Dir = .00 g's
Vector2 in G-s
X2 Dir = .00 g's Y2 Dir = .12 g's
Z2 Dir = .00 g's
Vector3 in G-s
X3 Dir = .00 g's Y3 Dir = .00 g's
Z3 Dir = .26 g's
500 510 Vector1 in G-s
X1 Dir = .26 g's Y1 Dir = .00 g's
Z1 Dir = .00 g's
Vector2 in G-s
X2 Dir = .00 g's Y2 Dir = .12 g's
Z2 Dir = .00 g's
Vector3 in G-s
X3 Dir = .00 g's Y3 Dir = .00 g's
Z3 Dir = .26 g's
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INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.

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FLUID DENSITY	lbs./cu.in.	x	0.028	= kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	= N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	= N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	= N./cm.
G LOAD	g's	x	1.000	= g's
WIND LOAD	lbs./sq.in.	x	6.895	= KPa
ELEVATION	inches	x	0.025	= m.
COMPOUND LENGTH	inches	x	25.400	= mm.
DIAMETER	inches	x	25.400	= mm.
WALL THICKNESS	inches	x	25.400	= mm.

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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS =	NO
MISSING MASS ZPA =	EXTRACTED
MIN WALL MILL TOLERANCE =	12.5000
WRC-107 VERSION =	MAR 79 1B1/2B1
WRC-107 INTERPOLATION =	LAST VALUE
DEFAULT AMBIENT TEMPERATURE=	21.1111 C
BOURDON PRESSURE=	NONE
COEFFICIENT OF FRICTION (MU) =	0.000000
INCLUDE SPRG STIF IN HGR OPE =	NO
INCLUDE INSULATION IN HYDROTEST =	NO
REDUCED INTERSECTION =	B31.1(POST1980)
USE WRC329	NO
NO REDUCED SIF FOR RFT AND WLT	NO
B31.1 REDUCED Z FIX =	YES
CLASS 1 BRANCH FLEX	NO
ALL STRESS CASES CORRODED =	NO
ADD TORSION IN SL STRESS =	DEFAULT

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ADD F/A IN STRESS =	DEFAULT
OCCASIONAL LOAD FACTOR =	0.000000
DEFAULT CODE =	B31.3
B31.3 SUS CASE SIF FACTOR =	0.000000
ALLOW USERS BEND SIF =	NO
USE SCHNEIDER	NO
YIELD CRITERION STRESS =	MAX 3D SHEAR
USE PD/4T	NO
BASE HOOP STRESS ON ? =	ID
EN13480 USE IN OUTPLANE SIFS=	NO
LIBERAL EXPANSION ALLOWABLE=	YES
B31.3 SEC 319.2.3C SAXIAL=	Default
B31.3 WELDING/CONTOUR TEE ISB16.9	FALSE
PRESSURE VARIATION IN EXP CASE=	DEFAULT
IMPLEMENT B313 APP-P	NO
IMPLEMENT B313 CODE CASE 178	YES
IGNORE B31.1/B31.3 Wc FACTOR=	YES
USE FRP SIF =	YES
USE FRP FLEX =	YES
BS 7159 Pressure Stiffening=	Design Strain
FRP Property Data File=	CAESAR.FRP
FRP Emod (axial) =	0.220632E+08 KPa
FRP Ratio Gmod/Emod (axial) =	0.250000
FRP Ea/Eh*Vh/a =	0.152730
FRP Laminate Type =	THREE
FRP Alpha =	21.6000 C
FRP Density =	0.166079E-02 kg./cu.cm.
EXCLUDE f2 FROM UKOOA BENDING =	NO

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EXECUTION CONTROL PARAMETERS

Rigid/ExpJt Print Flag	1.000
Bourdon Option	.000
Loop Closure Flag	2.000
Thermal Bowing Delta Temp ..	.000 C
Liberal Allowable Flag	1.000
Uniform Load Option	1.000
Ambient Temperature	20.997 C
Plastic (FRP) Alpha	21.600
Plastic (FRP) GMOD/EMODa ...	.250
Plastic (FRP) Laminate Type.	3.000
Eqn Optimizer	.000
Node Selection	.000
Eqn Ordering	.000
Collins	.000
Degree Determination	.000
User Eqn Control	.000
North Direction	-X

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COORDINATE REPORT

/--------------------(mm.)----------------------/

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NODE	X	Y	Z
10	.000	.000	.000
20	.000	.000	73.025
30	.000	.000	150.025
40	-4450.000	.000	150.025
50	-4838.000	.000	150.025
70	-4838.000	.000	888.025
75	-4838.000	.000	1033.025
80	-4838.000	.000	1178.025
90	-4838.000	77.000	1178.025
100	-4838.000	150.025	1178.025
110	-4838.000	337.025	1178.025
120	-4838.000	410.050	1178.025
130	-4838.000	487.050	1178.025
135	-5178.000	487.050	1178.025
140	-5518.000	487.050	1178.025
150	-5591.025	487.050	1178.025
160	-5876.350	487.050	1178.025
70	-4838.000	.000	888.025
170	-4838.000	403.000	888.025
180	-4838.000	476.025	888.025
190	-4838.000	663.025	888.025
200	-4838.000	736.050	888.025
210	-4838.000	946.050	888.025
220	-4838.000	1160.050	888.025
230	-4838.000	1225.138	888.025
240	-4838.000	1334.138	888.025
250	-4882.975	1334.138	888.025
260	-4956.000	1334.138	888.025
270	-5022.675	1334.138	888.025
280	-5322.675	1334.138	888.025
290	-5622.675	1334.138	888.025
300	-5689.350	1334.138	888.025
310	-5876.350	1334.138	888.025
320	-5943.024	1334.138	888.025
330	-6020.024	1334.138	888.025
340	-6020.024	484.138	888.025
350	-6020.024	-709.862	888.025
360	-6020.024	-1319.862	888.025
370	-6020.024	-1319.862	437.025
380	-7860.024	-1319.862	437.025
390	-9310.024	-1319.862	437.025
400	-9310.024	-2232.862	437.025
410	-9310.024	-2609.862	814.025
340	-6020.024	484.138	888.025
420	-6020.024	484.138	1178.025
430	-5943.024	484.138	1178.025
430	-5943.024	487.050	1178.025
160	-5876.350	487.050	1178.025
10	.000	.000	.000
450	.000	.000	-73.025
460	.000	.000	-263.025
470	.000	.000	-722.025
480	.000	-2400.000	-722.025
500	-9310.024	-2609.862	35183.023
510	-9310.024	-2609.862	29183.025

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INPUT LISTING

520	-9310.024	-2609.862	23183.025
530	-9310.024	-2609.862	20233.025
540	-15310.024	-2609.862	20233.025
550	-15310.024	-2609.862	19233.025
560	-15310.024	-2609.862	18233.025
570	-9310.024	-2609.862	18233.025
580	-9310.024	-2609.862	17383.025
590	-9310.024	-2609.862	11383.025
600	-9310.024	-2609.862	5383.025
410	-9310.024	-2609.862	814.025
610	-9310.024	-2609.862	-616.975
620	-9310.024	-2609.862	-6616.975

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Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (OPE) W+T1+P1
2 (Alt-SUS) W+P1
3 (OPE) W+T2+P1
4 (Alt-SUS) W+P1
5 (OPE) W+T3+P1
6 (Alt-SUS) W+P1
7 (SUS) W+P1
8 (SUS) WNC
9 (OPE) W+T2+P1+U1
10 (OPE) W+T2+P1-U1
11 (OPE) W+T2+P1+U2
12 (OPE) W+T2+P1-U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1+F1
15 (OCC) L15=L9-L3
16 (OCC) L16=L10-L3
17 (OCC) L17=L11-L3
18 (OCC) L18=L12-L3
19 (OCC) L19=L13-L3
20 (OCC) L20=L14-L3
21 (OCC) L21=L15+L7
22 (OCC) L22=L16+L7
23 (OCC) L23=L17+L7
24 (OCC) L24=L18+L7
25 (OCC) L25=L19+L7
26 (OCC) L26=L20+L7
27 (EXP) L27=L1-L7
28 (EXP) L28=L3-L7
29 (EXP) L29=L1-L3
30 (EXP) L30=L5-L7
31 (EXP) L31=L1-L5
32 (EXP) L32=L3-L5

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (OPE) W+T1+P1
CASE 3 (OPE) W+T2+P1
CASE 5 (OPE) W+T3+P1
CASE 7 (SUS) W+P1
CASE 8 (SUS) WNC
CASE 9 (OPE) W+T2+P1+U1
CASE 10 (OPE) W+T2+P1-U1
CASE 11 (OPE) W+T2+P1+U2
CASE 12 (OPE) W+T2+P1-U2
CASE 13 (OPE) W+T2+P1+U3
CASE 14 (OPE) W+T2+P1+F1
CASE 15 (OCC) L15=L9-L3
CASE 16 (OCC) L16=L10-L3
CASE 17 (OCC) L17=L11-L3
CASE 18 (OCC) L18=L12-L3
CASE 19 (OCC) L19=L13-L3
CASE 20 (OCC) L20=L14-L3

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid ANC;					
	1(OPE)	462	-269	-68	43	-47	194
	3(OPE)	84	-260	-13	42	-7	167
	5(OPE)	290	-222	-37	27	-24	124
	7(SUS)	34	-217	2	28	5	108
	8(SUS)	34	-216	2	28	5	107
	9(OPE)	214	-258	-25	40	-13	167
	10(OPE)	-226	-257	22	41	9	160
	11(OPE)	81	-233	-13	38	-8	153
	12(OPE)	99	-286	-13	45	-6	181
	13(OPE)	129	-250	56	41	54	155
	14(OPE)	170	-258	-32	35	-24	158
	15(OCC)	130	1	-12	-1	-5	0
	16(OCC)	-310	2	35	-1	16	-7
	17(OCC)	-2	27	-1	-4	-1	-14
	18(OCC)	15	-27	-0	3	1	14
	19(OCC)	45	10	69	-1	61	-12
	20(OCC)	86	2	-19	-7	-17	-9
	MAX	462/L1	-286/L12	69/L19	45/L12	61/L19	194/L1
40		TYPE=Rigid +Y;					
	1(OPE)	-49	-174	-17	0	0	0
	3(OPE)	-42	-141	6	0	0	0
	5(OPE)	-57	-245	-47	0	0	0
	7(SUS)	-29	-299	-43	0	0	0
	8(SUS)	-29	-298	-43	0	0	0
	9(OPE)	-34	-115	-6	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(OPE)	-33	-129	21	0	0	0
	11(OPE)	-34	-116	6	0	0	0
	12(OPE)	-50	-166	6	0	0	0
	13(OPE)	-58	-327	79	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OCC)	8	26	-12	0	0	0
	16(OCC)	9	12	15	0	0	0
	17(OCC)	7	25	-1	0	0	0
	18(OCC)	-8	-25	-0	0	0	0
	19(OCC)	-16	-186	73	0	0	0
	20(OCC)	42	141	-6	0	0	0
	MAX	-58/L13	-327/L13	79/L13			
75		TYPE=Rigid +Y;					
	1(OPE)	0	-821	0	0	0	0
	3(OPE)	0	-585	0	0	0	0
	5(OPE)	0	-759	0	0	0	0
	7(SUS)	0	-750	0	0	0	0
	8(SUS)	0	-750	0	0	0	0
	9(OPE)	0	-352	0	0	0	0
	10(OPE)	0	-669	0	0	0	0
	11(OPE)	0	-394	0	0	0	0
	12(OPE)	0	-752	0	0	0	0
	13(OPE)	0	-364	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OCC)	0	233	0	0	0	0
	16(OCC)	0	-84	0	0	0	0
	17(OCC)	0	190	0	0	0	0
	18(OCC)	0	-167	0	0	0	0
	19(OCC)	0	221	0	0	0	0
	20(OCC)	0	585	0	0	0	0
	MAX		-821/L1				
135		TYPE=Rigid +Y;					
	1(OPE)	0	0	0	0	0	0
	3(OPE)	0	0	0	0	0	0
	5(OPE)	-80	-505	9	0	0	0
	7(SUS)	-17	-461	26	0	0	0
	8(SUS)	-17	-461	26	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OCC)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	MAX	-80/L5	-505/L5	26/L7			
280		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(OPE)	0	0	72	0	0	0
	3(OPE)	290	0	45	0	0	0
	5(OPE)	-198	-676	42	0	0	0
	7(SUS)	16	-149	42	0	0	0
	8(SUS)	16	-149	42	0	0	0
	9(OPE)	785	0	60	0	0	0
	10(OPE)	0	0	14	0	0	0
	11(OPE)	322	0	46	0	0	0
	12(OPE)	277	0	46	0	0	0
	13(OPE)	293	0	463	0	0	0
	14(OPE)	1132	0	47	0	0	0
	15(OCC)	495	0	15	0	0	0
	16(OCC)	-290	0	-30	0	0	0
	17(OCC)	32	0	1	0	0	0
	18(OCC)	-13	0	1	0	0	0
	19(OCC)	3	0	418	0	0	0
	20(OCC)	842	0	3	0	0	0
	MAX	1132/L14	-676/L5	463/L13			
350		TYPE=Rigid +Y;					
	1(OPE)	317	-1182	158	0	0	0
	3(OPE)	423	-1459	114	0	0	0
	5(OPE)	-65	-224	15	0	0	0
	7(SUS)	-17	-742	-28	0	0	0
	8(SUS)	-17	-742	-28	0	0	0
	9(OPE)	498	-1706	117	0	0	0
	10(OPE)	117	-1432	87	0	0	0
	11(OPE)	397	-1383	121	0	0	0
	12(OPE)	454	-1560	113	0	0	0
	13(OPE)	373	-1501	253	0	0	0
	14(OPE)	343	-1203	113	0	0	0
	15(OCC)	76	-247	3	0	0	0
	16(OCC)	-306	27	-27	0	0	0
	17(OCC)	-26	76	7	0	0	0
	18(OCC)	31	-101	-1	0	0	0
	19(OCC)	-50	-42	139	0	0	0
	20(OCC)	-80	255	-0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	MAX	498/L9	-1706/L9	253/L13			
380		TYPE=Rigid +Y;					
	1(OPE)	0	0	0	0	0	0
	3(OPE)	0	0	0	0	0	0
	5(OPE)	-71	-236	4	0	0	0
	7(SUS)	-54	-179	5	0	0	0
	8(SUS)	-54	-179	5	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OCC)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	MAX	-71/L5	-236/L5	5/L7			
460		TYPE=Rigid ANC;					
	1(OPE)	462	-328	-68	125	74	194
	3(OPE)	84	-319	-13	122	15	167
	5(OPE)	290	-281	-37	97	52	124
	7(SUS)	34	-276	2	97	14	108
	8(SUS)	34	-275	2	97	14	107
	9(OPE)	229	-317	-25	120	46	167
	10(OPE)	-241	-316	22	120	-54	160
	11(OPE)	81	-285	-13	110	13	153
	12(OPE)	99	-352	-13	133	20	181
	13(OPE)	129	-309	71	118	88	155
	14(OPE)	170	-317	-32	114	20	158
	15(OCC)	145	1	-12	-2	32	0
	16(OCC)	-325	2	35	-1	-69	-7
	17(OCC)	-2	34	-1	-12	-1	-14
	18(OCC)	15	-34	-0	12	5	14
	19(OCC)	45	10	84	-3	73	-12
	20(OCC)	86	2	-19	-7	6	-9
	MAX	462/L1	-352/L12	84/L19	133/L12	88/L13	194/L1
480		TYPE=Rigid ANC;					
	1(OPE)	462	-328	-68	112	287	-916
	3(OPE)	84	-319	-13	237	53	-35
	5(OPE)	290	-281	-37	137	185	-573

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	7(SUS)	34	-276	2	228	29	27
	8(SUS)	34	-275	2	227	29	27
	9(OPE)	229	-317	-25	206	152	-383
	10(OPE)	-241	-316	22	318	-165	739
	11(OPE)	81	-285	-13	208	51	-43
	12(OPE)	99	-352	-13	264	65	-57
	13(OPE)	129	-309	71	431	147	-154
	14(OPE)	170	-317	-32	184	98	-251
	15(OCC)	145	1	-12	-32	98	-348
	16(OCC)	-325	2	35	81	-218	774
	17(OCC)	-2	34	-1	-29	-3	-8
	18(OCC)	15	-34	-0	27	12	-22
	19(OCC)	45	10	84	194	93	-120
	20(OCC)	86	2	-19	-54	45	-216
	MAX	462/L1	-352/L12	84/L19	431/L13	287/L1	-916/L1
500		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z w/gap;					
	1(OPE)	917	-1589	8825	0	0	0
	3(OPE)	929	-1589	8881	0	0	0
	5(OPE)	56	-1585	-3506	0	0	0
	7(SUS)	-0	-1586	0	0	0	0
	8(SUS)	-0	-1584	0	0	0	0
	9(OPE)	1578	-1589	9108	0	0	0
	10(OPE)	491	-1588	8440	0	0	0
	11(OPE)	962	-1399	8562	0	0	0
	12(OPE)	898	-1779	9197	0	0	0
	13(OPE)	1004	-1589	11902	0	0	0
	14(OPE)	929	-1589	8880	0	0	0
	15(OCC)	649	0	227	0	0	0
	16(OCC)	-438	1	-441	0	0	0
	17(OCC)	33	190	-319	0	0	0
	18(OCC)	-31	-190	316	0	0	0
	19(OCC)	75	0	3021	0	0	0
	20(OCC)	-0	0	-1	0	0	0
	MAX	1578/L9	-1779/L12	11902/L13			
510		TYPE=Rigid +Y;					
	1(OPE)	365	-2872	-780	0	0	0
	3(OPE)	366	-2871	-780	0	0	0
	5(OPE)	-243	-2893	833	0	0	0
	7(SUS)	0	-2890	0	0	0	0
	8(SUS)	0	-2886	0	0	0	0
	9(OPE)	497	-2871	-703	0	0	0
	10(OPE)	395	-2874	-767	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	11(OPE)	329	-2525	-682	0	0	0
	12(OPE)	402	-3217	-878	0	0	0
	13(OPE)	386	-2871	-770	0	0	0
	14(OPE)	366	-2873	-780	0	0	0
	15(OCC)	132	-0	77	0	0	0
	16(OCC)	29	-4	13	0	0	0
	17(OCC)	-37	346	97	0	0	0
	18(OCC)	36	-346	-98	0	0	0
	19(OCC)	20	-0	10	0	0	0
	20(OCC)	0	-2	-1	0	0	0
	MAX	497/L9	-3217/L12	-878/L12			
520		TYPE=Rigid +Y; Rigid X w/gap;					
	1(OPE)	-1222	-5899	-1764	0	0	0
	3(OPE)	-1244	-5900	-1764	0	0	0
	5(OPE)	-385	-5879	1721	0	0	0
	7(SUS)	-0	-5882	0	0	0	0
	8(SUS)	-0	-5874	0	0	0	0
	9(OPE)	1595	-5900	-1764	0	0	0
	10(OPE)	-5102	-5896	-1763	0	0	0
	11(OPE)	-1312	-5193	-1553	0	0	0
	12(OPE)	-1178	-6606	-1975	0	0	0
	13(OPE)	-773	-5900	-1764	0	0	0
	14(OPE)	-1243	-5898	-1763	0	0	0
	15(OCC)	2839	0	0	0	0	0
	16(OCC)	-3858	4	1	0	0	0
	17(OCC)	-68	707	211	0	0	0
	18(OCC)	66	-706	-211	0	0	0
	19(OCC)	471	0	0	0	0	0
	20(OCC)	1	2	1	0	0	0
	MAX	-5102/L10	-6606/L12	-1975/L12			
550		TYPE=Rigid +Y;					
	1(OPE)	-1290	-4610	498	0	0	0
	3(OPE)	-1291	-4614	500	0	0	0
	5(OPE)	1340	-4511	-188	0	0	0
	7(SUS)	2	-4524	-0	0	0	0
	8(SUS)	2	-4518	-0	0	0	0
	9(OPE)	-1252	-4614	591	0	0	0
	10(OPE)	-1234	-4596	614	0	0	0
	11(OPE)	-1134	-4067	450	0	0	0
	12(OPE)	-1447	-5159	549	0	0	0
	13(OPE)	-1219	-4613	655	0	0	0
	14(OPE)	-1288	-4603	499	0	0	0
	15(OCC)	39	0	91	0	0	0
	16(OCC)	56	18	114	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	17(OCC)	156	547	-51	0	0	0
	18(OCC)	-156	-545	49	0	0	0
	19(OCC)	72	1	155	0	0	0
	20(OCC)	3	11	-1	0	0	0
	MAX	-1447/L12	-5159/L12	655/L13			
580		TYPE=Rigid +Y;					
	1(OPE)	-222	-3885	1144	0	0	0
	3(OPE)	-222	-3878	1142	0	0	0
	5(OPE)	-217	-4009	-1183	0	0	0
	7(SUS)	-3	-3993	-0	0	0	0
	8(SUS)	-3	-3988	-0	0	0	0
	9(OPE)	-112	-3879	1158	0	0	0
	10(OPE)	-325	-3901	1124	0	0	0
	11(OPE)	-201	-3405	1002	0	0	0
	12(OPE)	-243	-4355	1284	0	0	0
	13(OPE)	-274	-3881	1132	0	0	0
	14(OPE)	-223	-3893	1146	0	0	0
	15(OCC)	111	-1	16	0	0	0
	16(OCC)	-103	-23	-18	0	0	0
	17(OCC)	22	474	-140	0	0	0
	18(OCC)	-21	-476	142	0	0	0
	19(OCC)	-51	-2	-10	0	0	0
	20(OCC)	-1	-14	4	0	0	0
	MAX	-325/L10	-4355/L12	1284/L12			
590		TYPE=Rigid +Y; Rigid X w/gap;					
	1(OPE)	430	-3737	1120	0	0	0
	3(OPE)	437	-3740	1120	0	0	0
	5(OPE)	-341	-3719	-1062	0	0	0
	7(SUS)	5	-3721	-0	0	0	0
	8(SUS)	5	-3716	-0	0	0	0
	9(OPE)	3256	-3739	1120	0	0	0
	10(OPE)	-1479	-3736	1119	0	0	0
	11(OPE)	274	-3292	986	0	0	0
	12(OPE)	585	-4186	1254	0	0	0
	13(OPE)	23	-3737	1121	0	0	0
	14(OPE)	409	-3736	1119	0	0	0
	15(OCC)	2820	1	-0	0	0	0
	16(OCC)	-1916	4	-1	0	0	0
	17(OCC)	-163	447	-134	0	0	0
	18(OCC)	148	-447	134	0	0	0
	19(OCC)	-414	3	1	0	0	0
	20(OCC)	-28	3	-1	0	0	0
	MAX	3256/L9	-4186/L12	1254/L12			

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:58
Job:: BNK-GCS-CN-056-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
600		TYPE=Rigid +Y; Rigid X w/gap;					
	1(OPE)	473	-3434	0	0	0	0
	3(OPE)	455	-3430	0	0	0	0
	5(OPE)	0	-3397	0	0	0	0
	7(SUS)	0	-3404	0	0	0	0
	8(SUS)	0	-3399	0	0	0	0
	9(OPE)	1150	-3432	0	0	0	0
	10(OPE)	-326	-3424	0	0	0	0
	11(OPE)	549	-3019	0	0	0	0
	12(OPE)	380	-3841	0	0	0	0
	13(OPE)	335	-3440	0	0	0	0
	14(OPE)	533	-3431	0	0	0	0
	15(OCC)	695	-2	0	0	0	0
	16(OCC)	-781	6	0	0	0	0
	17(OCC)	95	410	0	0	0	0
	18(OCC)	-75	-411	0	0	0	0
	19(OCC)	-120	-11	0	0	0	0
	20(OCC)	78	-1	0	0	0	0
	MAX	1150/L9	-3841/L12				
610		TYPE=Rigid +Y;					
	1(OPE)	4	-4478	1344	0	0	0
	3(OPE)	-0	-4483	1345	0	0	0
	5(OPE)	48	-4069	-1220	0	0	0
	7(SUS)	64	-4135	-0	0	0	0
	8(SUS)	64	-4130	-0	0	0	0
	9(OPE)	159	-4495	1339	0	0	0
	10(OPE)	-369	-4443	1281	0	0	0
	11(OPE)	1	-3970	1191	0	0	0
	12(OPE)	1	-4994	1498	0	0	0
	13(OPE)	31	-4478	1343	0	0	0
	14(OPE)	9	-4465	1339	0	0	0
	15(OCC)	159	-12	-6	0	0	0
	16(OCC)	-369	40	-64	0	0	0
	17(OCC)	1	513	-154	0	0	0
	18(OCC)	1	-511	153	0	0	0
	19(OCC)	31	5	-2	0	0	0
	20(OCC)	9	18	-6	0	0	0
	MAX	-369/L10	-4994/L12	1498/L12			
620		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	1(OPE)	-256	-1372	-10504	0	0	0
	3(OPE)	-265	-1372	-10571	0	0	0

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:58
Job:: BNK-GCS-CN-056-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	5(OPE)	67	-1394	4643	0	0	0
	7(SUS)	-6	-1390	-0	0	0	0
	8(SUS)	-6	-1389	-0	0	0	0
	9(OPE)	498	-1371	-11002	0	0	0
	10(OPE)	-963	-1375	-10060	0	0	0
	11(OPE)	-261	-1206	-10026	0	0	0
	12(OPE)	-265	-1538	-11049	0	0	0
	13(OPE)	-220	-1371	-5620	0	0	0
	14(OPE)	-245	-1373	-10501	0	0	0
	15(OCC)	763	1	-431	0	0	0
	16(OCC)	-698	-3	512	0	0	0
	17(OCC)	4	166	545	0	0	0
	18(OCC)	-0	-166	-477	0	0	0
	19(OCC)	45	1	4952	0	0	0
	20(OCC)	20	-1	71	0	0	0
	MAX	-963/L10	-1538/L12	-11049/L12			

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:58
Job:: BNK-GCS-CN-056-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (OPE) W+T1+P1
2 (Alt-SUS) W+P1
3 (OPE) W+T2+P1
4 (Alt-SUS) W+P1
5 (OPE) W+T3+P1
6 (Alt-SUS) W+P1
7 (SUS) W+P1
8 (SUS) WNC
9 (OPE) W+T2+P1+U1
10 (OPE) W+T2+P1-U1
11 (OPE) W+T2+P1+U2
12 (OPE) W+T2+P1-U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1+F1
15 (OCC) L15=L9-L3
16 (OCC) L16=L10-L3
17 (OCC) L17=L11-L3
18 (OCC) L18=L12-L3
19 (OCC) L19=L13-L3
20 (OCC) L20=L14-L3
21 (OCC) L21=L15+L7
22 (OCC) L22=L16+L7
23 (OCC) L23=L17+L7
24 (OCC) L24=L18+L7
25 (OCC) L25=L19+L7
26 (OCC) L26=L20+L7
27 (EXP) L27=L1-L7
28 (EXP) L28=L3-L7
29 (EXP) L29=L1-L3
30 (EXP) L30=L5-L7
31 (EXP) L31=L1-L5
32 (EXP) L32=L3-L5

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:58
Job:: BNK-GCS-CN-056-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 7 (SUS) W+P1
CASE 8 (SUS) WNC
CASE 21 (OCC) L21=L15+L7
CASE 22 (OCC) L22=L16+L7
CASE 23 (OCC) L23=L17+L7
CASE 24 (OCC) L24=L18+L7
CASE 25 (OCC) L25=L19+L7
CASE 26 (OCC) L26=L20+L7
CASE 27 (EXP) L27=L1-L7
CASE 28 (EXP) L28=L3-L7
CASE 29 (EXP) L29=L1-L3
CASE 30 (EXP) L30=L5-L7
CASE 31 (EXP) L31=L1-L5
CASE 32 (EXP) L32=L3-L5

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 7 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 7 (SUS) W+P1			
Ratio (%):	35.2	@Node	520
Code Stress:	45513.1	Allowable Stress:	129365.3
Axial Stress:	12074.0	@Node	560
Bending Stress:	33439.6	@Node	520
Torsion Stress:	8430.2	@Node	28
Hoop Stress:	24443.4	@Node	510
Max Stress Intensity:	45513.1	@Node	520

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 8 (SUS) WNC			
Ratio (%):	25.8	@Node	520
Code Stress:	33397.3	Allowable Stress:	129365.3
Axial Stress:	1349.9	@Node	350
Bending Stress:	33397.3	@Node	520
Torsion Stress:	8390.8	@Node	28
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	33397.3	@Node	520

CODE STRESS CHECK PASSED : LOADCASE 21 (OCC) L21=L15+L7

Highest Stresses: (KPa) LOADCASE 21 (OCC) L21=L15+L7			
Ratio (%):	35.2	@Node	520
Code Stress:	60603.5	Allowable Stress:	172055.9
Axial Stress:	12116.3	@Node	560
Bending Stress:	48389.2	@Node	520
Torsion Stress:	8452.5	@Node	28
Hoop Stress:	24443.4	@Node	510
Max Stress Intensity:	61287.6	@Node	569

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
 CODE STRESS CHECK PASSED      : LOADCASE 22 (OCC) L22=L16+L7

Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L16+L7
Ratio (%):                 44.6       @Node    520
Code Stress:             76743.0       Allowable Stress:     172055.9
Axial Stress:            12785.9       @Node    530
Bending Stress:          64544.0       @Node    520
Torsion Stress:           7909.0       @Node     28
Hoop Stress:             24443.4       @Node    510
Max Stress Intensity:    76743.0       @Node    520

 CODE STRESS CHECK PASSED      : LOADCASE 23 (OCC) L23=L17+L7

Highest Stresses: (   KPa    ) LOADCASE 23 (OCC) L23=L17+L7
Ratio (%):                 28.9       @Node    520
Code Stress:             49740.3       Allowable Stress:     172055.9
Axial Stress:            12270.3       @Node    620
Bending Stress:          37585.9       @Node    520
Torsion Stress:           7345.6       @Node     28
Hoop Stress:             24443.4       @Node    510
Max Stress Intensity:    49740.3       @Node    520

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L18+L7

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L18+L7
Ratio (%):                 28.9       @Node    520
Code Stress:             49719.3       Allowable Stress:     172055.9
Axial Stress:            12069.2       @Node    528
Bending Stress:          37565.5       @Node    520
Torsion Stress:           9508.6       @Node     28
Hoop Stress:             24443.4       @Node    510
Max Stress Intensity:    49719.3       @Node    520

 CODE STRESS CHECK PASSED      : LOADCASE 25 (OCC) L25=L19+L7

Highest Stresses: (   KPa    ) LOADCASE 25 (OCC) L25=L19+L7
Ratio (%):                 28.7       @Node    520
Code Stress:             49454.0       Allowable Stress:     172055.9
Axial Stress:            13859.6       @Node    620
Bending Stress:          41798.2       @Node    568
Torsion Stress:           7506.2       @Node     28
Hoop Stress:             24443.4       @Node    510
Max Stress Intensity:    63103.8       @Node    569

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L20+L7

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L20+L7
Ratio (%):                 26.5       @Node    520
Code Stress:             45566.6       Allowable Stress:     172055.9
Axial Stress:            12935.6       @Node    210
Bending Stress:          34980.5       @Node    220
Torsion Stress:           7732.2       @Node     28
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Hoop Stress:                24443.4       @Node    510
Max Stress Intensity:       49456.0       @Node     70

 CODE STRESS CHECK PASSED      : LOADCASE 27 (EXP) L27=L1-L7

Highest Stresses: (   KPa    ) LOADCASE 27 (EXP) L27=L1-L7
Ratio (%):                    40.2       @Node    559
Code Stress:               125854.2       Allowable Stress:     312988.6
Axial Stress:                1366.2       @Node    620
Bending Stress:            127433.1       @Node    558
Torsion Stress:             14362.9       @Node    360
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      340400.3       @Node    558

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L3-L7

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L3-L7
Ratio (%):                    40.6       @Node    559
Code Stress:               126988.4       Allowable Stress:     312647.3
Axial Stress:                1375.0       @Node    620
Bending Stress:            128582.0       @Node    558
Torsion Stress:             15045.3       @Node    418
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      343468.1       @Node    558

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L1-L3

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L1-L3
Ratio (%):                     9.5       @Node    220
Code Stress:                31658.2       Allowable Stress:     332335.7
Axial Stress:                 397.3       @Node     30
Bending Stress:             27075.9       @Node    220
Torsion Stress:              7933.9       @Node    220
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:       45689.4       @Node    220

 CODE STRESS CHECK PASSED      : LOADCASE 30 (EXP) L30=L5-L7

Highest Stresses: (   KPa    ) LOADCASE 30 (EXP) L30=L5-L7
Ratio (%):                     5.3       @Node    559
Code Stress:                17114.0       Allowable Stress:     323309.5
Axial Stress:                 604.3       @Node    620
Bending Stress:             17085.5       @Node    329
Torsion Stress:              4395.0       @Node    220
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:       45410.0       @Node    559

 CODE STRESS CHECK PASSED      : LOADCASE 31 (EXP) L31=L1-L5

Highest Stresses: (   KPa    ) LOADCASE 31 (EXP) L31=L1-L5
Ratio (%):                    45.7       @Node    559
Code Stress:               142968.2       Allowable Stress:     312988.6
Axial Stress:                1970.5       @Node    620
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:58
Job:: BNK-GCS-CN-056-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Bending Stress:            144143.0       @Node    558
Torsion Stress:             17615.2       @Node    418
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      385127.5       @Node    558

 CODE STRESS CHECK PASSED      : LOADCASE 32 (EXP) L32=L3-L5

Highest Stresses: (   KPa    ) LOADCASE 32 (EXP) L32=L3-L5
Ratio (%):                   46.1       @Node    559
Code Stress:               144102.4       Allowable Stress:     312647.3
Axial Stress:                1979.3       @Node    620
Bending Stress:            145292.0       @Node    558
Torsion Stress:             18581.0       @Node    418
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      388195.3       @Node    558
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:58
Job:: BNK-GCS-CN-056-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Nozzle Check : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (OPE) W+T1+P1
2 (Alt-SUS) W+P1
3 (OPE) W+T2+P1
4 (Alt-SUS) W+P1
5 (OPE) W+T3+P1
6 (Alt-SUS) W+P1
7 (SUS) W+P1
8 (SUS) WNC
9 (OPE) W+T2+P1+U1
10 (OPE) W+T2+P1-U1
11 (OPE) W+T2+P1+U2
12 (OPE) W+T2+P1-U2
13 (OPE) W+T2+P1+U3
14 (OPE) W+T2+P1+F1
15 (OCC) L15=L9-L3
16 (OCC) L16=L10-L3
17 (OCC) L17=L11-L3
18 (OCC) L18=L12-L3
19 (OCC) L19=L13-L3
20 (OCC) L20=L14-L3
21 (OCC) L21=L15+L7
22 (OCC) L22=L16+L7
23 (OCC) L23=L17+L7
24 (OCC) L24=L18+L7
25 (OCC) L25=L19+L7
26 (OCC) L26=L20+L7
27 (EXP) L27=L1-L7
28 (EXP) L28=L3-L7
29 (EXP) L29=L1-L3
30 (EXP) L30=L5-L7
31 (EXP) L31=L1-L5
32 (EXP) L32=L3-L5

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 15, 2024 Time: 16:58
Job:: BNK-GCS-CN-056-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

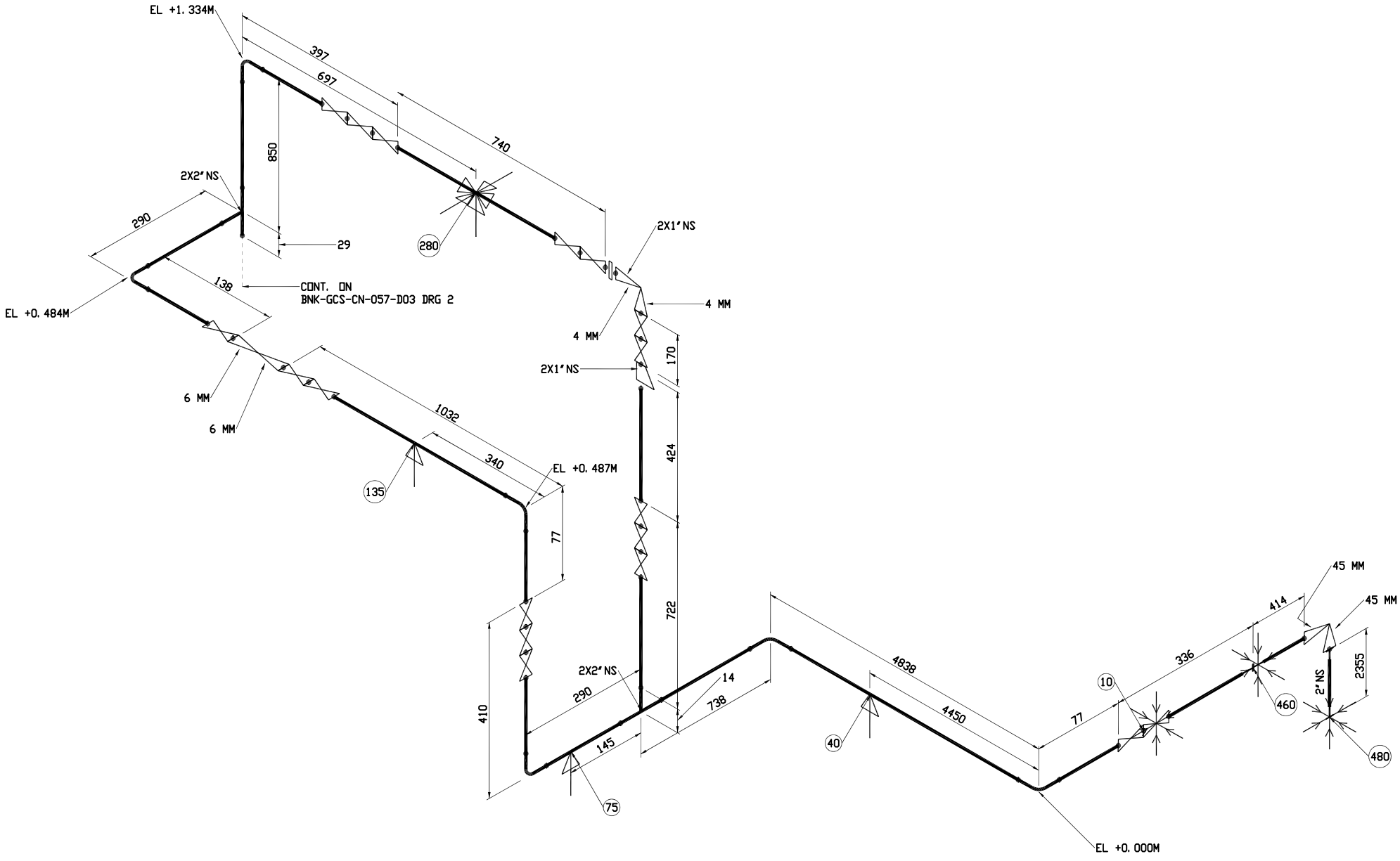
LOAD CASE DEFINITION KEY

CASE 1 (OPE) W+T1+P1
CASE 3 (OPE) W+T2+P1
CASE 5 (OPE) W+T3+P1
CASE 7 (SUS) W+P1
CASE 8 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
10		Absolute Method								
	Limits	2800	2800	2100		420	280	360		
	1(OPE)	-68	-269	-462	0.220	194	-47	-43	0.461	
	3(OPE)	-13	-260	-84	0.093	167	-7	-42	0.397	
	5(OPE)	-37	-222	-290	0.138	124	-24	-27	0.295	
	7(SUS)	2	-217	-34	0.078	108	5	-28	0.256	
	8(SUS)	2	-216	-34	0.077	107	5	-28	0.255	

BNK-GCS-CN-057

1. GAS-111-0042B-CN05-2"-PT
2. FL-112-0019B-AN07-2"-PT
3. FL-112-0018B-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 1 OF 2

REV.	CHANGE	DATE
		20 MAY 2024

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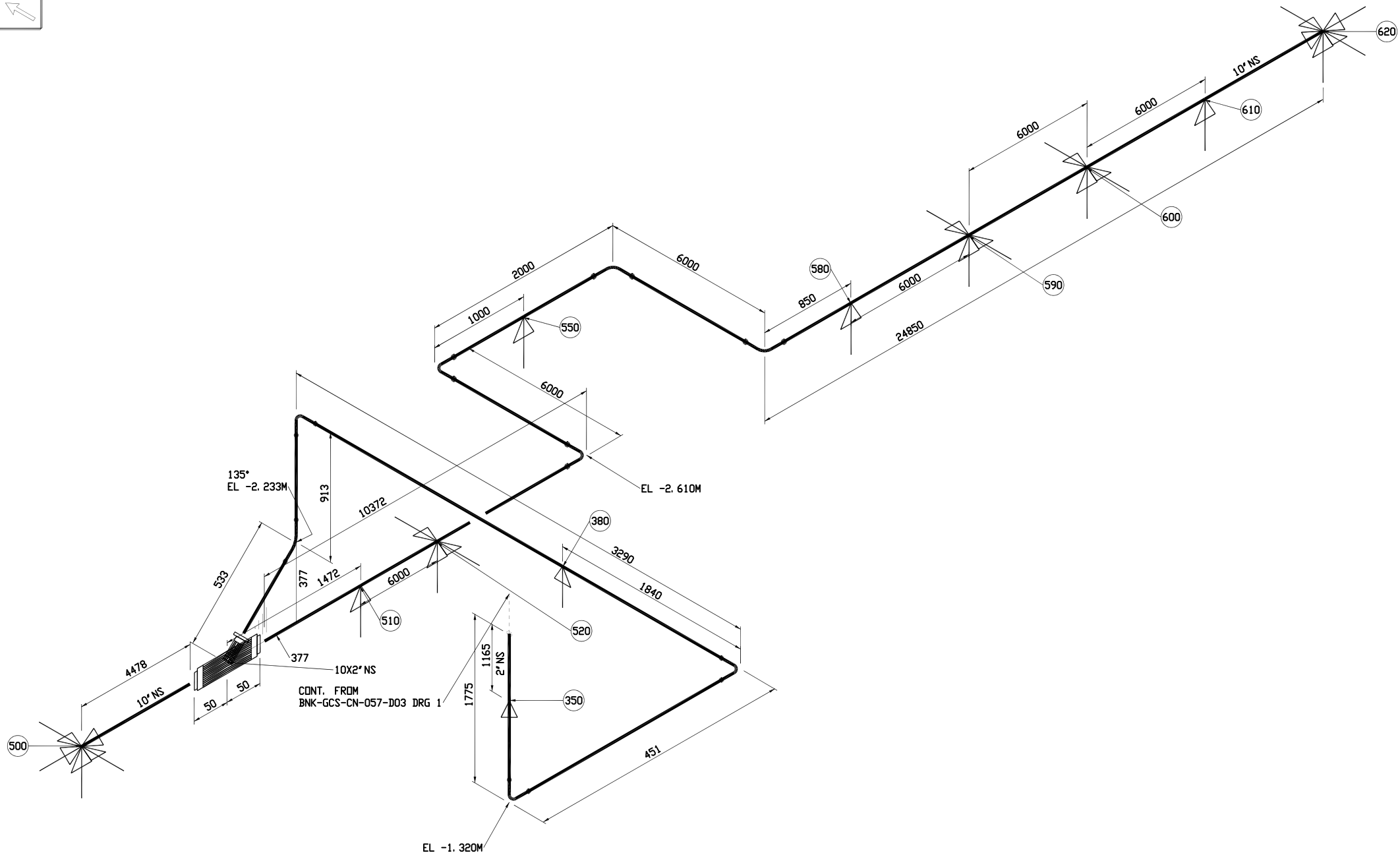

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PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

REV.

DRG.

PIPELINE REFERENCE

2 OF 2

REV.	CHANGE	DATE
		20 MAY 2024

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Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
INPUT LISTING 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 14:12
Job:: BNK-GCS-CN-057-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 20,2024 14:12: 8

PIPE DATA

From 10 To 20 DZ= 73.025 mm.
PIPE
Dia= 60.325 mm. Wall= 5.537 mm. Cor= 3.0000 mm.
Element Name= FLANGE_FLG_150
GENERAL
T1= 115 C T2= 60 C T3= 60 C P1= 2,200.0500 KPa PHyd= 3,300.0752 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 197,200,352 KPa
EH2= 200,644,016 KPa EH3= 200,644,016 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000181 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RIGID Weight= 44.48 N.
RESTRAINTS
Node 10 ANC Cnode 440
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa
EQUIPMENT LIMITS
Nozzle Node = 10 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,800.14 N.
FB= 2,800.14 N. FC= 2,100.10 N. MA= 420.02 N.m. MB= 280.01 N.m.
MC= 360.02 N.m. Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute

From 20 To 30 DZ= 77.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 29
Angle/Node @2= .00 28

From 30 To 40 DX= -4,450.000 mm.
RESTRAINTS
Node 40 +Y

From 40 To 50 DX= -388.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 49
Angle/Node @2= .00 48

INPUT LISTING
```
 From  50  To  70 DZ= 738.000 mm.
 SIF's & TEE's
    Node  70   Welding Tee
 ---------------------------------------------------------------------------
 From  70  To  75 DZ= 145.000 mm.
 RESTRAINTS
    Node  75  +Y
 ---------------------------------------------------------------------------
 From  75  To  80 DZ= 145.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 79
    Angle/Node @2= .00 78
 ---------------------------------------------------------------------------
 From  80  To  90 DY= 77.000 mm.
 ---------------------------------------------------------------------------
 From  90  To  100 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  100  To  110 DY= 187.000 mm.
 RIGID  Weight= 258.00 N.
 ---------------------------------------------------------------------------
 From  110  To  120 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  120  To  130 DY= 77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 129
    Angle/Node @2= .00 128
 ---------------------------------------------------------------------------
 From  130  To  135  DX= -340.000 mm.
 RESTRAINTS
    Node  135  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  135  To  140  DX= -340.000 mm.
 ---------------------------------------------------------------------------
 From  140  To  150  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  150  To  160  DX= -285.325 mm.  DY= .000 mm.  DZ= .000 mm.
 RIGID  Weight= 458.17 N.
 ---------------------------------------------------------------------------
 From  70  To  170 DY= 403.000 mm.
 ---------------------------------------------------------------------------
 From  170  To  180 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  180  To  190 DY= 187.000 mm.
 RIGID  Weight= 258.00 N.
 ---------------------------------------------------------------------------
 From  190  To  200 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ---------------------------------------------------------------------------
 From  200  To  210 DY= 210.000 mm.
 ---------------------------------------------------------------------------
 From  210  To  220 DY= 214.000 mm.
 REDUCER
```

INPUT LISTING
```
    Diam2= 33.401 mm.   Wall2= 6.350 mm.
 ------------------------------------------------------------------------------
 From  220  To  230 DY= 65.088 mm.
 PIPE
    Dia= 33.401 mm.   Wall= 6.350 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 22.24 N.
 ------------------------------------------------------------------------------
 From  230  To  240 DY= 109.000 mm.
 RIGID  Weight= 44.48 N.
 FORCES & MOMENTS
    Node  240   FX1= 1,000.05 N.   FY1= 1,000.05 N.
 ------------------------------------------------------------------------------
 From  240  To  250  DX= -44.975 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  250  To  260  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  260  To  270  DX= -66.675 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  270  To  280  DX= -300.000 mm.
 RESTRAINTS
    Node  280  +Y   Mu = .30
    Node  280  X   Gap= 3.000 mm.
    Node  280  Z
 ------------------------------------------------------------------------------
 From  280  To  290  DX= -300.000 mm.
 ------------------------------------------------------------------------------
 From  290  To  300  DX= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  300  To  310  DX= -187.000 mm.
 RIGID  Weight= 209.07 N.
 ------------------------------------------------------------------------------
 From  310  To  320  DX= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  320  To  330  DX= -77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 329
    Angle/Node @2= .00 328
```

INPUT LISTING

```
 ---------------------------------------------------------------------------
 From  330  To  340 DY= -850.000 mm.
 SIF's & TEE's
    Node  340   Welding Tee
 ---------------------------------------------------------------------------
 From  340  To  350 DY= -1,194.000 mm.
 RESTRAINTS
    Node  350  +Y
 ---------------------------------------------------------------------------
 From  350  To  360 DY= -610.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 359
    Angle/Node @2= .00 358
 ---------------------------------------------------------------------------
 From  360  To  370 DZ= -451.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 369
    Angle/Node @2= .00 368
 ---------------------------------------------------------------------------
 From  370  To  380  DX= -1,840.000 mm.
 RESTRAINTS
    Node  380  +Y
 ---------------------------------------------------------------------------
 From  380  To  390  DX= -1,450.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 389
    Angle/Node @2= .00 388
 ---------------------------------------------------------------------------
 From  390  To  400 DY= -913.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 399
    Angle/Node @2= .00 398
 ---------------------------------------------------------------------------
 From  400  To  410 DY= -377.000 mm.  DZ= 377.000 mm.
 ---------------------------------------------------------------------------
 From  340  To  420 DZ= 290.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 419
    Angle/Node @2= .00 418
 ---------------------------------------------------------------------------
 From  420  To  430  DX= 77.000 mm.
 ---------------------------------------------------------------------------
 From  430  To  160  DX= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ---------------------------------------------------------------------------
 From  440  To  450 DZ= -73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Fluid Den= .0001154 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
```

INPUT LISTING
```
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  450  To  460 DZ= -190.000 mm.
 RESTRAINTS
    Node  460  ANC   Cnode  461
 ---------------------------------------------------------------------------
 From  461  To  470 DZ= -459.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  470  To  480 DY= -2,400.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  480  ANC
 ---------------------------------------------------------------------------
 From  500  To  410 DZ= -4,528.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  500  +Y   Mu = .30
    Node  500  X
    Node  500  Z   Gap= 3.000 mm.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  410  To  510 DZ= -1,472.000 mm.
 RESTRAINTS
    Node  510  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  510  To  520 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  520  +Y   Mu = .30
    Node  520  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  520  To  530 DZ= -2,950.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 529
    Angle/Node @2= .00 528
 ---------------------------------------------------------------------------
 From  530  To  540  DX= -6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 539
    Angle/Node @2= .00 538
 ---------------------------------------------------------------------------
 From  540  To  550 DZ= -1,000.000 mm.
 RESTRAINTS
```

INPUT LISTING
```
    Node  550  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  550  To  560 DZ= -1,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 559
    Angle/Node @2= .00 558
 ------------------------------------------------------------------------------
 From  560  To  570  DX= 6,000.000 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 569
    Angle/Node @2= .00 568
 ------------------------------------------------------------------------------
 From  570  To  580 DZ= -850.000 mm.
 RESTRAINTS
    Node  580  +Y   Mu = .30
 ------------------------------------------------------------------------------
 From  580  To  590  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  590  +Y   Mu = .30
    Node  590  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  590  To  600  DX= .000 mm.  DZ= -6,000.000 mm.
 RESTRAINTS
    Node  600  +Y
    Node  600  X   Gap= 3.000 mm.
 ------------------------------------------------------------------------------
 From  600  To  610 DZ= -6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    P1= 600.0137 KPa   PHyd= 900.0205 KPa   Mat= (106)A106 Grade B
    E= 203,401,232 KPa   EH1= 187,483,936 KPa   EH2= 187,335,024 KPa
    EH3= 205,934,864 KPa   EH4= 203,401,232 KPa   EH5= 203,401,232 KPa
    EH6= 203,401,232 KPa   EH7= 203,401,232 KPa   EH8= 203,401,232 KPa
    EH9= 203,401,232 KPa   v = .292   Pipe Den= .0078334 kg./cu.cm.
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
    Insul Den= .0001362 kg./cu.cm.
 RESTRAINTS
    Node  610  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  610  To  620 DZ= -6,000.000 mm.
 RESTRAINTS
    Node  620  +Y   Mu = .30
    Node  620  X
    Node  620  Z   Gap= 3.000 mm.
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 MATERIAL Changes:
    10              20              Mat= (106)A106 Grade B   E= 203,401,232 KPa
```

INPUT LISTING

```
                                  v = .292   Density= .0078 kg./cu.cm.
   500             410            Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                  v = .292   Density= .0078 kg./cu.cm.
   600             610            Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                  v = .292   Density= .0078 kg./cu.cm.
```


ALLOWABLE STRESS Changes

```
    10              20            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   260             270            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   440             450            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 137,895 KPa
                                  Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   500             410            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
   600             610            B31.3 (2016)        Cycle Max Switch = ---
                                  Sc= 137,895 KPa   Sh1= 129,638 KPa
                                  Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                  Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                  Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                  Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                  Sy= 241,316 KPa
```


BEND ELEMENTS

```
    20              30            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 29
                                  Angle/Node @2= .00 28
    40              50            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 49
                                  Angle/Node @2= .00 48
    75              80            Radius= 76.200 mm. (LONG)
```

INPUT LISTING

```
                                  Bend Angle= 90.000   Angle/Node @1= 45.00 79
                                  Angle/Node @2= .00 78
   120             130            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 129   Angle/Node @2= .00 128
   320             330            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 329   Angle/Node @2= .00 328
   350             360            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 359   Angle/Node @2= .00 358
   360             370            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 369   Angle/Node @2= .00 368
   380             390            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 389   Angle/Node @2= .00 388
   390             400            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 45.000   Angle/Node @1= 22.50
                                 399   Angle/Node @2= .00 398
   340             420            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 419   Angle/Node @2= .00 418
   520             530            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 529   Angle/Node @2= .00 528
   530             540            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 539   Angle/Node @2= .00 538
   550             560            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 559   Angle/Node @2= .00 558
   560             570            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                 569   Angle/Node @2= .00 568
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RIGIDS
    10              20          RIGID  Weight= 44.48 N.
    90             100          RIGID  Weight= 44.48 N.
   100             110          RIGID  Weight= 258.00 N.
   110             120          RIGID  Weight= 44.48 N.
   140             150          RIGID  Weight= 44.48 N.
   150             160          RIGID  Weight= 458.17 N.
   170             180          RIGID  Weight= 44.48 N.
   180             190          RIGID  Weight= 258.00 N.
   190             200          RIGID  Weight= 44.48 N.
   220             230          RIGID  Weight= 22.24 N.
   230             240          RIGID  Weight= 44.48 N.
   240             250          RIGID  Weight= 44.48 N.
   250             260          RIGID  Weight= 44.48 N.
   260             270          RIGID  Weight= 31.14 N.
   290             300          RIGID  Weight= 31.14 N.
   300             310          RIGID  Weight= 209.07 N.
```

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Job:: BNK-GCS-CN-057-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

310	320	RIGID	Weight= 31.14 N.
430	160	RIGID	Weight= 31.14 N.
440	450	RIGID	Weight= 44.48 N.
461	470	RIGID	Weight= .00 N.
470	480	RIGID	Weight= .00 N.

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SIF's & TEE's

50	70	Node 70	Welding Tee
330	340	Node 340	Welding Tee

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REDUCERS

210	220	Diam2= 33.401 mm.	Wall2= 6.350 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
10	ANC	440				.000	.000	.000
40	+Y					.000	1.000	.000
75	+Y					.000	1.000	.000
135	+Y				.30	.000	1.000	.000
280	+Y				.30	.000	1.000	.000
280	X			3.00		1.000	.000	.000
280	Z					.000	.000	1.000
350	+Y					.000	1.000	.000
380	+Y					.000	1.000	.000
460	ANC	461				.000	.000	.000
480	ANC					.000	.000	.000
500	+Y				.30	.000	1.000	.000
500	X					1.000	.000	.000
500	Z			3.00		.000	.000	1.000
510	+Y				.30	.000	1.000	.000
520	+Y				.30	.000	1.000	.000
520	X			3.00		1.000	.000	.000
550	+Y				.30	.000	1.000	.000
580	+Y				.30	.000	1.000	.000
590	+Y				.30	.000	1.000	.000
590	X			3.00		1.000	.000	.000
600	+Y					.000	1.000	.000
600	X			3.00		1.000	.000	.000
610	+Y				.30	.000	1.000	.000
620	+Y				.30	.000	1.000	.000
620	X					1.000	.000	.000
620	Z			3.00		.000	.000	1.000

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EQUIPMENT LIMITS

INPUT LISTING
```
    10              20              Nozzle Node = 10


    Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 2,800.14 N.   FB= 2,800.14 N.
    FC= 2,100.10 N.   MA= 420.02 N.m.   MB= 280.01 N.m.   MC= 360.02 N.m.
    Equipment Major Direction Vector= .0000  1.0000  .0000
    Interact. Mtd= Absolute
```


FORCES AND MOMENTS
```
  230             240             Node  240   FX1= 1,000.05 N.
                                  FY1= 1,000.05 N.
```


UNIFORM LOAD Changes
```
   10              20             Vector1 in G-s
                                  X1 Dir = .26 g's  Y1 Dir = .00 g's
                                  Z1 Dir = .00 g's
                                  Vector2 in G-s
                                  X2 Dir = .00 g's  Y2 Dir = .12 g's
                                  Z2 Dir = .00 g's
                                  Vector3 in G-s
                                  X3 Dir = .00 g's  Y3 Dir = .00 g's
                                  Z3 Dir = .26 g's
```


INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	=	N./cm.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

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Job:: BNK-GCS-CN-057-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS =	NO
MISSING MASS ZPA =	EXTRACTED
MIN WALL MILL TOLERANCE =	12.5000
WRC-107 VERSION =	MAR 79 1B1/2B1
WRC-107 INTERPOLATION =	LAST VALUE
DEFAULT AMBIENT TEMPERATURE=	21.1111 C
BOURDON PRESSURE=	NONE
COEFFICIENT OF FRICTION (MU) =	0.000000
INCLUDE SPRG STIF IN HGR OPE =	NO
INCLUDE INSULATION IN HYDROTEST =	NO
REDUCED INTERSECTION =	B31.1(POST1980)
USE WRC329	NO
NO REDUCED SIF FOR RFT AND WLT	NO
B31.1 REDUCED Z FIX =	YES
CLASS 1 BRANCH FLEX	NO
ALL STRESS CASES CORRODED =	NO
ADD TORSION IN SL STRESS =	DEFAULT
ADD F/A IN STRESS =	DEFAULT
OCCASIONAL LOAD FACTOR =	0.000000
DEFAULT CODE =	B31.3
B31.3 SUS CASE SIF FACTOR =	0.000000
ALLOW USERS BEND SIF =	NO
USE SCHNEIDER	NO
YIELD CRITERION STRESS =	MAX 3D SHEAR
USE PD/4T	NO
BASE HOOP STRESS ON ? =	ID
EN13480 USE IN OUTPLANE SIFS=	NO
LIBERAL EXPANSION ALLOWABLE=	YES
B31.3 SEC 319.2.3C SAXIAL=	Default

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```
  B31.3 WELDING/CONTOUR TEE ISB16.9 FALSE
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178      YES
  IGNORE B31.1/B31.3 Wc FACTOR=     YES
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152730
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000              C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
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 EXECUTION CONTROL PARAMETERS

    Rigid/ExpJt Print Flag .....    1.000
    Bourdon Option .............     .000
    Loop Closure Flag ..........    2.000
    Thermal Bowing Delta Temp ..     .000 C
    Liberal Allowable Flag .....    1.000
    Uniform Load Option ........    1.000

    Ambient Temperature ........   20.997 C
    Plastic (FRP) Alpha ........   21.600
    Plastic (FRP) GMOD/EMODa ...     .250
    Plastic (FRP) Laminate Type.    3.000
    Eqn Optimizer ..............     .000
    Node Selection .............     .000
    Eqn Ordering ...............     .000
    Collins ....................     .000
    Degree Determination .......     .000
    User Eqn Control ...........     .000
    North Direction ............      -X
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 COORDINATE REPORT
          /--------------------(mm.)----------------------/
  NODE           X              Y              Z
    10          .000          .000           .000
    20          .000          .000         73.025
    30          .000          .000        150.025
    40     -4450.000          .000        150.025
    50     -4838.000          .000        150.025
    70     -4838.000          .000        888.025
    75     -4838.000          .000       1033.025
    80     -4838.000          .000       1178.025
    90     -4838.000        77.000       1178.025
   100     -4838.000       150.025       1178.025
   110     -4838.000       337.025       1178.025
```

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120	-4838.000	410.050	1178.025
130	-4838.000	487.050	1178.025
135	-5178.000	487.050	1178.025
140	-5518.000	487.050	1178.025
150	-5591.025	487.050	1178.025
160	-5876.350	487.050	1178.025
70	-4838.000	.000	888.025
170	-4838.000	403.000	888.025
180	-4838.000	476.025	888.025
190	-4838.000	663.025	888.025
200	-4838.000	736.050	888.025
210	-4838.000	946.050	888.025
220	-4838.000	1160.050	888.025
230	-4838.000	1225.138	888.025
240	-4838.000	1334.138	888.025
250	-4882.975	1334.138	888.025
260	-4956.000	1334.138	888.025
270	-5022.675	1334.138	888.025
280	-5322.675	1334.138	888.025
290	-5622.675	1334.138	888.025
300	-5689.350	1334.138	888.025
310	-5876.350	1334.138	888.025
320	-5943.024	1334.138	888.025
330	-6020.024	1334.138	888.025
340	-6020.024	484.138	888.025
350	-6020.024	-709.862	888.025
360	-6020.024	-1319.862	888.025
370	-6020.024	-1319.862	437.025
380	-7860.024	-1319.862	437.025
390	-9310.024	-1319.862	437.025
400	-9310.024	-2232.862	437.025
410	-9310.024	-2609.862	814.025
340	-6020.024	484.138	888.025
420	-6020.024	484.138	1178.025
430	-5943.024	484.138	1178.025
430	-5943.024	487.050	1178.025
160	-5876.350	487.050	1178.025
10	.000	.000	.000
450	.000	.000	-73.025
460	.000	.000	-263.025
470	.000	.000	-722.025
480	.000	-2400.000	-722.025
500	-9310.024	-2609.862	5342.025
410	-9310.024	-2609.862	814.025
510	-9310.024	-2609.862	-657.975
520	-9310.024	-2609.862	-6657.975
530	-9310.024	-2609.862	-9607.975
540	-15310.024	-2609.862	-9607.975
550	-15310.024	-2609.862	-10607.975
560	-15310.024	-2609.862	-11607.975
570	-9310.024	-2609.862	-11607.975
580	-9310.024	-2609.862	-12457.975
590	-9310.024	-2609.862	-18457.975
600	-9310.024	-2609.862	-24457.975
610	-9310.024	-2609.862	-30457.975
620	-9310.024	-2609.862	-36457.977

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 10 (OPE) W+T2+P1+U1
CASE 11 (OPE) W+T2+P1-U1
CASE 12 (OPE) W+T2+P1+U2
CASE 13 (OPE) W+T2+P1-U2
CASE 14 (OPE) W+T2+P1+U3
CASE 15 (OPE) W+T2+P1+F1
CASE 16 (OCC) L16=L10-L4
CASE 17 (OCC) L17=L11-L4
CASE 18 (OCC) L18=L12-L4
CASE 19 (OCC) L19=L13-L4
CASE 20 (OCC) L20=L14-L4
CASE 21 (OCC) L21=L15-L4

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid ANC;					
	1(HYD)	-5	-262	-0	35	-3	135
	2(OPE)	590	-273	-88	45	-73	200
	4(OPE)	207	-264	-27	43	-25	174
	6(OPE)	205	-221	-39	27	-37	121
	8(SUS)	-4	-218	-0	29	-2	107
	9(SUS)	-4	-217	-0	28	-2	107
	10(OPE)	348	-263	-44	41	-38	174
	11(OPE)	-6	-263	3	43	-3	170
	12(OPE)	206	-238	-26	39	-24	161
	13(OPE)	208	-291	-27	46	-27	188
	14(OPE)	227	-239	59	35	73	143
	15(OPE)	388	-253	-56	36	-45	148
	16(OCC)	140	2	-18	-2	-12	0
	17(OCC)	-213	1	30	0	23	-4
	18(OCC)	-1	27	1	-3	2	-14
	19(OCC)	1	-27	-1	3	-2	14
	20(OCC)	20	25	86	-8	98	-31
	21(OCC)	181	11	-29	-7	-20	-26
	MAX	590/L2	-291/L13	-88/L2	46/L13	98/L20	200/L2
40		TYPE=Rigid +Y;					
	1(HYD)	0	-362	0	0	0	0
	2(OPE)	0	-181	0	0	0	0
	4(OPE)	0	-98	0	0	0	0
	6(OPE)	0	-261	0	0	0	0

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	8(SUS)	0	-294	0	0	0	0
	9(SUS)	0	-292	0	0	0	0
	10(OPE)	0	-62	0	0	0	0
	11(OPE)	0	-119	0	0	0	0
	12(OPE)	0	-76	0	0	0	0
	13(OPE)	0	-120	0	0	0	0
	14(OPE)	0	-540	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	36	0	0	0	0
	17(OCC)	0	-21	0	0	0	0
	18(OCC)	0	22	0	0	0	0
	19(OCC)	0	-22	0	0	0	0
	20(OCC)	0	-443	0	0	0	0
	21(OCC)	0	98	0	0	0	0
	MAX		-540/L14				
75		TYPE=Rigid +Y;					
	1(HYD)	0	-728	0	0	0	0
	2(OPE)	0	-735	0	0	0	0
	4(OPE)	0	-445	0	0	0	0
	6(OPE)	0	-765	0	0	0	0
	8(SUS)	0	-693	0	0	0	0
	9(SUS)	0	-692	0	0	0	0
	10(OPE)	0	-89	0	0	0	0
	11(OPE)	0	-541	0	0	0	0
	12(OPE)	0	-281	0	0	0	0
	13(OPE)	0	-609	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	357	0	0	0	0
	17(OCC)	0	-95	0	0	0	0
	18(OCC)	0	164	0	0	0	0
	19(OCC)	0	-164	0	0	0	0
	20(OCC)	0	445	0	0	0	0
	21(OCC)	0	445	0	0	0	0
	MAX		-765/L6				
135		TYPE=Rigid +Y;					
	1(HYD)	-25	-586	-65	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	-90	-465	-56	0	0	0
	8(SUS)	-22	-559	-59	0	0	0
	9(SUS)	-22	-558	-59	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX	-90/L6	-586/L1	-65/L1			
280		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z;					
	1(HYD)	26	-125	68	0	0	0
	2(OPE)	15	0	116	0	0	0
	4(OPE)	393	0	74	0	0	0
	6(OPE)	-210	-699	76	0	0	0
	8(SUS)	21	-131	61	0	0	0
	9(SUS)	21	-131	61	0	0	0
	10(OPE)	984	0	94	0	0	0
	11(OPE)	0	0	64	0	0	0
	12(OPE)	399	0	74	0	0	0
	13(OPE)	387	0	75	0	0	0
	14(OPE)	368	0	647	0	0	0
	15(OPE)	1121	0	83	0	0	0
	16(OCC)	591	0	20	0	0	0
	17(OCC)	-393	0	-10	0	0	0
	18(OCC)	7	0	-0	0	0	0
	19(OCC)	-6	0	1	0	0	0
	20(OCC)	-25	0	573	0	0	0
	21(OCC)	728	0	9	0	0	0
	MAX	1121/L15	-699/L6	647/L14			
350		TYPE=Rigid +Y;					
	1(HYD)	0	-798	0	0	0	0
	2(OPE)	0	-1274	0	0	0	0
	4(OPE)	0	-1656	0	0	0	0
	6(OPE)	0	-214	0	0	0	0
	8(SUS)	0	-720	0	0	0	0
	9(SUS)	0	-720	0	0	0	0
	10(OPE)	0	-2030	0	0	0	0
	11(OPE)	0	-1514	0	0	0	0
	12(OPE)	0	-1544	0	0	0	0
	13(OPE)	0	-1769	0	0	0	0
	14(OPE)	0	-1679	0	0	0	0
	15(OPE)	0	-1231	0	0	0	0

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Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	16(OCC)	0	-374	0	0	0	0
	17(OCC)	0	142	0	0	0	0
	18(OCC)	0	112	0	0	0	0
	19(OCC)	0	-113	0	0	0	0
	20(OCC)	0	-23	0	0	0	0
	21(OCC)	0	425	0	0	0	0
	MAX		-2030/L10				
380		TYPE=Rigid +Y;					
	1(HYD)	0	-252	0	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	-224	0	0	0	0
	8(SUS)	0	-188	0	0	0	0
	9(SUS)	0	-188	0	0	0	0
	10(OPE)	0	0	0	0	0	0
	11(OPE)	0	0	0	0	0	0
	12(OPE)	0	0	0	0	0	0
	13(OPE)	0	0	0	0	0	0
	14(OPE)	0	0	0	0	0	0
	15(OPE)	0	0	0	0	0	0
	16(OCC)	0	0	0	0	0	0
	17(OCC)	0	0	0	0	0	0
	18(OCC)	0	0	0	0	0	0
	19(OCC)	0	0	0	0	0	0
	20(OCC)	0	0	0	0	0	0
	21(OCC)	0	0	0	0	0	0
	MAX		-252/L1				
460		TYPE=Rigid ANC;					
	1(HYD)	-5	-326	-0	116	-4	135
	2(OPE)	590	-332	-88	128	83	200
	4(OPE)	207	-323	-27	124	29	174
	6(OPE)	205	-280	-39	96	16	121
	8(SUS)	-4	-276	-0	97	-3	107
	9(SUS)	-4	-275	-0	97	-3	107
	10(OPE)	363	-322	-44	122	57	174
	11(OPE)	-21	-322	3	124	-7	170
	12(OPE)	206	-290	-26	112	31	161
	13(OPE)	208	-357	-27	136	28	188
	14(OPE)	227	-298	75	109	133	143
	15(OPE)	388	-312	-56	114	57	148
	16(OCC)	156	2	-18	-2	27	0
	17(OCC)	-228	1	30	0	-36	-4
	18(OCC)	-1	34	1	-12	1	-14
	19(OCC)	1	-34	-1	12	-1	14
	20(OCC)	20	25	101	-15	103	-31

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	21(OCC)	181	11	-29	-10	28	-26
	MAX	590/L2	-357/L13	101/L20	136/L13	133/L14	200/L2
480		TYPE=Rigid ANC;					
	1(HYD)	-5	-326	-0	265	-6	147
	2(OPE)	590	-332	-88	68	353	-1216
	4(OPE)	207	-323	-27	209	125	-323
	6(OPE)	205	-280	-39	130	110	-371
	8(SUS)	-4	-276	-0	223	-5	117
	9(SUS)	-4	-275	-0	222	-5	116
	10(OPE)	363	-322	-44	163	223	-697
	11(OPE)	-21	-322	3	280	-17	220
	12(OPE)	206	-290	-26	183	125	-335
	13(OPE)	208	-357	-27	234	124	-312
	14(OPE)	227	-298	75	425	237	-403
	15(OPE)	388	-312	-56	124	235	-784
	16(OCC)	156	2	-18	-45	99	-374
	17(OCC)	-228	1	30	71	-141	543
	18(OCC)	-1	34	1	-26	1	-11
	19(OCC)	1	-34	-1	26	-1	11
	20(OCC)	20	25	101	217	113	-79
	21(OCC)	181	11	-29	-85	111	-461
	MAX	590/L2	-357/L13	101/L20	425/L14	353/L2	-1216/L2
500		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	1(HYD)	1	-2937	-1	0	0	0
	2(OPE)	634	-1630	8969	0	0	0
	4(OPE)	651	-1627	8780	0	0	0
	6(OPE)	91	-1598	-3487	0	0	0
	8(SUS)	1	-1599	-1	0	0	0
	9(SUS)	1	-1597	-1	0	0	0
	10(OPE)	1298	-1630	9279	0	0	0
	11(OPE)	137	-1624	8602	0	0	0
	12(OPE)	685	-1434	8615	0	0	0
	13(OPE)	621	-1820	9209	0	0	0
	14(OPE)	700	-1636	12159	0	0	0
	15(OPE)	696	-1629	8835	0	0	0
	16(OCC)	648	-3	499	0	0	0
	17(OCC)	-514	3	-177	0	0	0
	18(OCC)	35	193	-165	0	0	0
	19(OCC)	-30	-193	430	0	0	0
	20(OCC)	49	-9	3379	0	0	0
	21(OCC)	45	-2	56	0	0	0
	MAX	1298/L10	-2937/L1	12159/L14			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
510		TYPE=Rigid +Y;					
	1(HYD)	4	-5450	-1	0	0	0
	2(OPE)	305	-3368	-963	0	0	0
	4(OPE)	308	-3369	-963	0	0	0
	6(OPE)	-237	-2947	852	0	0	0
	8(SUS)	4	-2998	-1	0	0	0
	9(SUS)	4	-2994	-1	0	0	0
	10(OPE)	497	-3386	-886	0	0	0
	11(OPE)	339	-3411	-965	0	0	0
	12(OPE)	285	-3000	-854	0	0	0
	13(OPE)	329	-3739	-1072	0	0	0
	14(OPE)	334	-3366	-953	0	0	0
	15(OPE)	314	-3338	-951	0	0	0
	16(OCC)	189	-17	77	0	0	0
	17(OCC)	31	-42	-3	0	0	0
	18(OCC)	-23	370	109	0	0	0
	19(OCC)	22	-370	-110	0	0	0
	20(OCC)	26	4	10	0	0	0
	21(OCC)	6	31	12	0	0	0
	MAX	497/L10	-5450/L1	-1072/L13			
520		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	-1	-10826	-1	0	0	0
	2(OPE)	-1455	-5748	-1719	0	0	0
	4(OPE)	-1493	-5750	-1719	0	0	0
	6(OPE)	-357	-5884	1729	0	0	0
	8(SUS)	-1	-5873	-0	0	0	0
	9(SUS)	-1	-5865	-0	0	0	0
	10(OPE)	1197	-5754	-1720	0	0	0
	11(OPE)	-5546	-5719	-1710	0	0	0
	12(OPE)	-1566	-5044	-1508	0	0	0
	13(OPE)	-1385	-6456	-1930	0	0	0
	14(OPE)	-1118	-5752	-1720	0	0	0
	15(OPE)	-1437	-5770	-1725	0	0	0
	16(OCC)	2690	-4	-1	0	0	0
	17(OCC)	-4053	31	9	0	0	0
	18(OCC)	-73	706	211	0	0	0
	19(OCC)	108	-706	-211	0	0	0
	20(OCC)	375	-2	-1	0	0	0
	21(OCC)	56	-20	-6	0	0	0
	MAX	-5546/L11	-10826/L1	-1930/L13			
550		TYPE=Rigid +Y;					
	1(HYD)	1	-8358	0	0	0	0
	2(OPE)	-1291	-4598	487	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	4(OPE)	-1290	-4598	489	0	0	0
	6(OPE)	1347	-4530	-183	0	0	0
	8(SUS)	1	-4536	0	0	0	0
	9(SUS)	1	-4530	0	0	0	0
	10(OPE)	-1243	-4594	595	0	0	0
	11(OPE)	-1238	-4617	620	0	0	0
	12(OPE)	-1133	-4055	442	0	0	0
	13(OPE)	-1447	-5141	533	0	0	0
	14(OPE)	-1215	-4595	652	0	0	0
	15(OPE)	-1286	-4585	487	0	0	0
	16(OCC)	47	4	107	0	0	0
	17(OCC)	51	-19	131	0	0	0
	18(OCC)	156	543	-47	0	0	0
	19(OCC)	-157	-543	44	0	0	0
	20(OCC)	75	3	163	0	0	0
	21(OCC)	3	12	-2	0	0	0
	MAX	-1447/L13	-8358/L1	652/L14			
580		TYPE=Rigid +Y;					
	1(HYD)	-0	-7331	0	0	0	0
	2(OPE)	-210	-3991	1179	0	0	0
	4(OPE)	-211	-3991	1179	0	0	0
	6(OPE)	-210	-3978	-1175	0	0	0
	8(SUS)	-0	-3979	0	0	0	0
	9(SUS)	-0	-3974	0	0	0	0
	10(OPE)	-103	-3990	1193	0	0	0
	11(OPE)	-319	-3995	1155	0	0	0
	12(OPE)	-192	-3514	1036	0	0	0
	13(OPE)	-228	-4468	1321	0	0	0
	14(OPE)	-266	-3991	1167	0	0	0
	15(OPE)	-212	-3989	1178	0	0	0
	16(OCC)	108	1	14	0	0	0
	17(OCC)	-109	-4	-24	0	0	0
	18(OCC)	19	477	-142	0	0	0
	19(OCC)	-17	-477	142	0	0	0
	20(OCC)	-55	0	-11	0	0	0
	21(OCC)	-1	2	-1	0	0	0
	MAX	-319/L11	-7331/L1	1321/L13			
590		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-6871	0	0	0	0
	2(OPE)	563	-3713	1112	0	0	0
	4(OPE)	559	-3713	1112	0	0	0
	6(OPE)	-354	-3731	-1062	0	0	0
	8(SUS)	0	-3729	0	0	0	0
	9(SUS)	0	-3725	0	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	10(OPE)	3203	-3714	1113	0	0	0
	11(OPE)	-1294	-3708	1111	0	0	0
	12(OPE)	374	-3265	978	0	0	0
	13(OPE)	738	-4161	1247	0	0	0
	14(OPE)	26	-3714	1114	0	0	0
	15(OPE)	540	-3717	1113	0	0	0
	16(OCC)	2644	-1	0	0	0	0
	17(OCC)	-1853	5	-2	0	0	0
	18(OCC)	-185	448	-134	0	0	0
	19(OCC)	179	-448	134	0	0	0
	20(OCC)	-533	-1	2	0	0	0
	21(OCC)	-19	-3	1	0	0	0
	MAX	3203/L10	-6871/L1	1247/L13			
600		TYPE=Rigid +Y; Rigid X w/gap;					
	1(HYD)	0	-6230	0	0	0	0
	2(OPE)	967	-3385	0	0	0	0
	4(OPE)	982	-3385	0	0	0	0
	6(OPE)	0	-3381	0	0	0	0
	8(SUS)	0	-3381	0	0	0	0
	9(SUS)	0	-3377	0	0	0	0
	10(OPE)	1772	-3385	0	0	0	0
	11(OPE)	0	-3387	0	0	0	0
	12(OPE)	1068	-2980	0	0	0	0
	13(OPE)	897	-3791	0	0	0	0
	14(OPE)	950	-3385	0	0	0	0
	15(OPE)	991	-3384	0	0	0	0
	16(OCC)	790	0	0	0	0	0
	17(OCC)	-982	-1	0	0	0	0
	18(OCC)	87	406	0	0	0	0
	19(OCC)	-84	-406	0	0	0	0
	20(OCC)	-32	0	0	0	0	0
	21(OCC)	9	1	0	0	0	0
	MAX	1772/L10	-6230/L1				
610		TYPE=Rigid +Y;					
	1(HYD)	-0	-7422	0	0	0	0
	2(OPE)	81	-4027	1205	0	0	0
	4(OPE)	80	-4027	1205	0	0	0
	6(OPE)	-158	-4028	-1198	0	0	0
	8(SUS)	-0	-4028	0	0	0	0
	9(SUS)	-0	-4023	0	0	0	0
	10(OPE)	221	-4027	1188	0	0	0
	11(OPE)	-261	-4026	1179	0	0	0
	12(OPE)	69	-3543	1061	0	0	0
	13(OPE)	91	-4510	1350	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	14(OPE)	102	-4027	1204	0	0	0
	15(OPE)	80	-4027	1205	0	0	0
	16(OCC)	141	-0	-18	0	0	0
	17(OCC)	-341	0	-26	0	0	0
	18(OCC)	-11	483	-145	0	0	0
	19(OCC)	11	-483	145	0	0	0
	20(OCC)	22	-0	-2	0	0	0
	21(OCC)	-0	-0	0	0	0	0
	MAX	-341/L17	-7422/L1	1350/L13			
620		TYPE=Rigid +Y; Rigid X; Rigid Z w/gap;					
	1(HYD)	0	-2575	0	0	0	0
	2(OPE)	-61	-1398	-10199	0	0	0
	4(OPE)	-62	-1398	-10257	0	0	0
	6(OPE)	86	-1398	4507	0	0	0
	8(SUS)	0	-1398	0	0	0	0
	9(SUS)	0	-1396	0	0	0	0
	10(OPE)	709	-1398	-10673	0	0	0
	11(OPE)	-791	-1398	-10031	0	0	0
	12(OPE)	-63	-1230	-9759	0	0	0
	13(OPE)	-61	-1565	-10757	0	0	0
	14(OPE)	-26	-1398	-5432	0	0	0
	15(OPE)	-62	-1398	-10261	0	0	0
	16(OCC)	771	0	-416	0	0	0
	17(OCC)	-729	-0	226	0	0	0
	18(OCC)	-1	168	498	0	0	0
	19(OCC)	1	-168	-500	0	0	0
	20(OCC)	36	0	4825	0	0	0
	21(OCC)	-0	0	-4	0	0	0
	MAX	-791/L11	-2575/L1	-10757/L13			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 22 (OCC) L22=L16+L8
CASE 23 (OCC) L23=L17+L8
CASE 24 (OCC) L24=L18+L8
CASE 25 (OCC) L25=L19+L8
CASE 26 (OCC) L26=L20+L8
CASE 27 (OCC) L27=L21+L8
CASE 28 (EXP) L28=L2-L8
CASE 29 (EXP) L29=L4-L8
CASE 30 (EXP) L30=L2-L4
CASE 31 (EXP) L31=L6-L8
CASE 32 (EXP) L32=L2-L6
CASE 33 (EXP) L33=L4-L6

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	12.1	@Node	520
Code Stress:	29201.3	Allowable Stress:	241316.5
Axial Stress:	6820.3	@Node	128
Bending Stress:	23241.6	@Node	520
Torsion Stress:	5622.7	@Node	28
Hoop Stress:	14676.3	@Node	28
Max Stress Intensity:	29201.4	@Node	520

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	35.2	@Node	520
Code Stress:	45524.8	Allowable Stress:	129365.3
Axial Stress:	12073.7	@Node	410
Bending Stress:	33451.3	@Node	520
Torsion Stress:	8415.6	@Node	28
Hoop Stress:	24443.4	@Node	410
Max Stress Intensity:	45525.0	@Node	520

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	25.8	@Node	520
Code Stress:	33409.1	Allowable Stress:	129365.3
Axial Stress:	1313.4	@Node	350
Bending Stress:	33408.9	@Node	520
Torsion Stress:	8376.4	@Node	28
Hoop Stress:	0.0	@Node	20

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Max Stress Intensity:       33409.1       @Node    520

 CODE STRESS CHECK PASSED      : LOADCASE 22 (OCC) L22=L16+L8

Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L16+L8
Ratio (%):                    34.2       @Node    520
Code Stress:                58916.6       Allowable Stress:     172055.9
Axial Stress:               12223.0       @Node    128
Bending Stress:             48769.7       @Node    220
Torsion Stress:             10245.0       @Node    418
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       58916.9       @Node    520

 CODE STRESS CHECK PASSED      : LOADCASE 23 (OCC) L23=L17+L8

Highest Stresses: (   KPa    ) LOADCASE 23 (OCC) L23=L17+L8
Ratio (%):                    45.8       @Node    520
Code Stress:                78721.6       Allowable Stress:     172055.9
Axial Stress:               12823.3       @Node    530
Bending Stress:             66518.6       @Node    520
Torsion Stress:              8082.5       @Node     28
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       78721.6       @Node    520

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L18+L8

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L18+L8
Ratio (%):                    28.9       @Node    520
Code Stress:                49744.5       Allowable Stress:     172055.9
Axial Stress:               12253.1       @Node    620
Bending Stress:             37665.6       @Node    520
Torsion Stress:              7342.4       @Node     28
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       49744.5       @Node    520

 CODE STRESS CHECK PASSED      : LOADCASE 25 (OCC) L25=L19+L8

Highest Stresses: (   KPa    ) LOADCASE 25 (OCC) L25=L19+L8
Ratio (%):                    29.0       @Node    520
Code Stress:                49865.5       Allowable Stress:     172055.9
Axial Stress:               12068.2       @Node    528
Bending Stress:             37681.6       @Node    520
Torsion Stress:              9488.4       @Node     28
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       49865.8       @Node    520

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L20+L8

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L20+L8
Ratio (%):                    39.7       @Node     70
Code Stress:                72723.2       Allowable Stress:     183400.5
Axial Stress:               13814.0       @Node    620
Bending Stress:             69224.4       @Node     70
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Torsion Stress:              7538.0       @Node    389
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       88103.7       @Node     70

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L21+L8

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L21+L8
Ratio (%):                     34.1       @Node    220
Code Stress:                62583.1       Allowable Stress:     183400.5
Axial Stress:               12721.6       @Node    210
Bending Stress:             55329.8       @Node    220
Torsion Stress:             13002.4       @Node    418
Hoop Stress:                24443.4       @Node    410
Max Stress Intensity:       67232.9       @Node    220

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L2-L8
Ratio (%):                     40.5       @Node    559
Code Stress:               126812.7       Allowable Stress:     312912.2
Axial Stress:                1327.5       @Node    620
Bending Stress:             128151.2       @Node    558
Torsion Stress:              18365.9       @Node    418
Hoop Stress:                     0.0       @Node     20
Max Stress Intensity:       342359.3       @Node    558

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L4-L8

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L4-L8
Ratio (%):                     40.9       @Node    559
Code Stress:               127943.0       Allowable Stress:     312570.9
Axial Stress:                1335.1       @Node    620
Bending Stress:             129298.3       @Node    558
Torsion Stress:              21109.7       @Node    418
Hoop Stress:                     0.0       @Node     20
Max Stress Intensity:       345422.2       @Node    558

 CODE STRESS CHECK PASSED      : LOADCASE 30 (EXP) L30=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 30 (EXP) L30=L2-L4
Ratio (%):                     12.1       @Node    220
Code Stress:                40167.3       Allowable Stress:     332071.1
Axial Stress:                 440.9       @Node    220
Bending Stress:             36008.2       @Node    220
Torsion Stress:              8439.1       @Node    220
Hoop Stress:                     0.0       @Node     20
Max Stress Intensity:       57983.2       @Node    220

 CODE STRESS CHECK PASSED      : LOADCASE 31 (EXP) L31=L6-L8

Highest Stresses: (   KPa    ) LOADCASE 31 (EXP) L31=L6-L8
Ratio (%):                      5.5       @Node    329
Code Stress:                18841.9       Allowable Stress:     339514.6
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Axial Stress:	586.6	@Node	620
Bending Stress:	18292.0	@Node	329
Torsion Stress:	3959.0	@Node	220
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	45279.6	@Node	559

CODE STRESS CHECK PASSED : LOADCASE 32 (EXP) L32=L2-L6

Highest Stresses: (KPa) LOADCASE 32 (EXP) L32=L2-L6				
Ratio (%):	46.0	@Node	559	
Code Stress:	143877.6	Allowable Stress:		312912.2
Axial Stress:	1914.1	@Node	620	
Bending Stress:	144833.8	@Node	558	
Torsion Stress:	22093.9	@Node	418	
Hoop Stress:	0.0	@Node	20	
Max Stress Intensity:	387010.4	@Node	558	

CODE STRESS CHECK PASSED : LOADCASE 33 (EXP) L33=L4-L6

Highest Stresses: (KPa) LOADCASE 33 (EXP) L33=L4-L6				
Ratio (%):	46.4	@Node	559	
Code Stress:	145008.0	Allowable Stress:		312570.9
Axial Stress:	1921.7	@Node	620	
Bending Stress:	145980.9	@Node	558	
Torsion Stress:	24837.8	@Node	418	
Hoop Stress:	0.0	@Node	20	
Max Stress Intensity:	390073.3	@Node	558	

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS..... 2
Nozzle Check : Multiple..... 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T2+P1+U1
11 (OPE) W+T2+P1-U1
12 (OPE) W+T2+P1+U2
13 (OPE) W+T2+P1-U2
14 (OPE) W+T2+P1+U3
15 (OPE) W+T2+P1+F1
16 (OCC) L16=L10-L4
17 (OCC) L17=L11-L4
18 (OCC) L18=L12-L4
19 (OCC) L19=L13-L4
20 (OCC) L20=L14-L4
21 (OCC) L21=L15-L4
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 14:12
Job:: BNK-GCS-CN-057-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

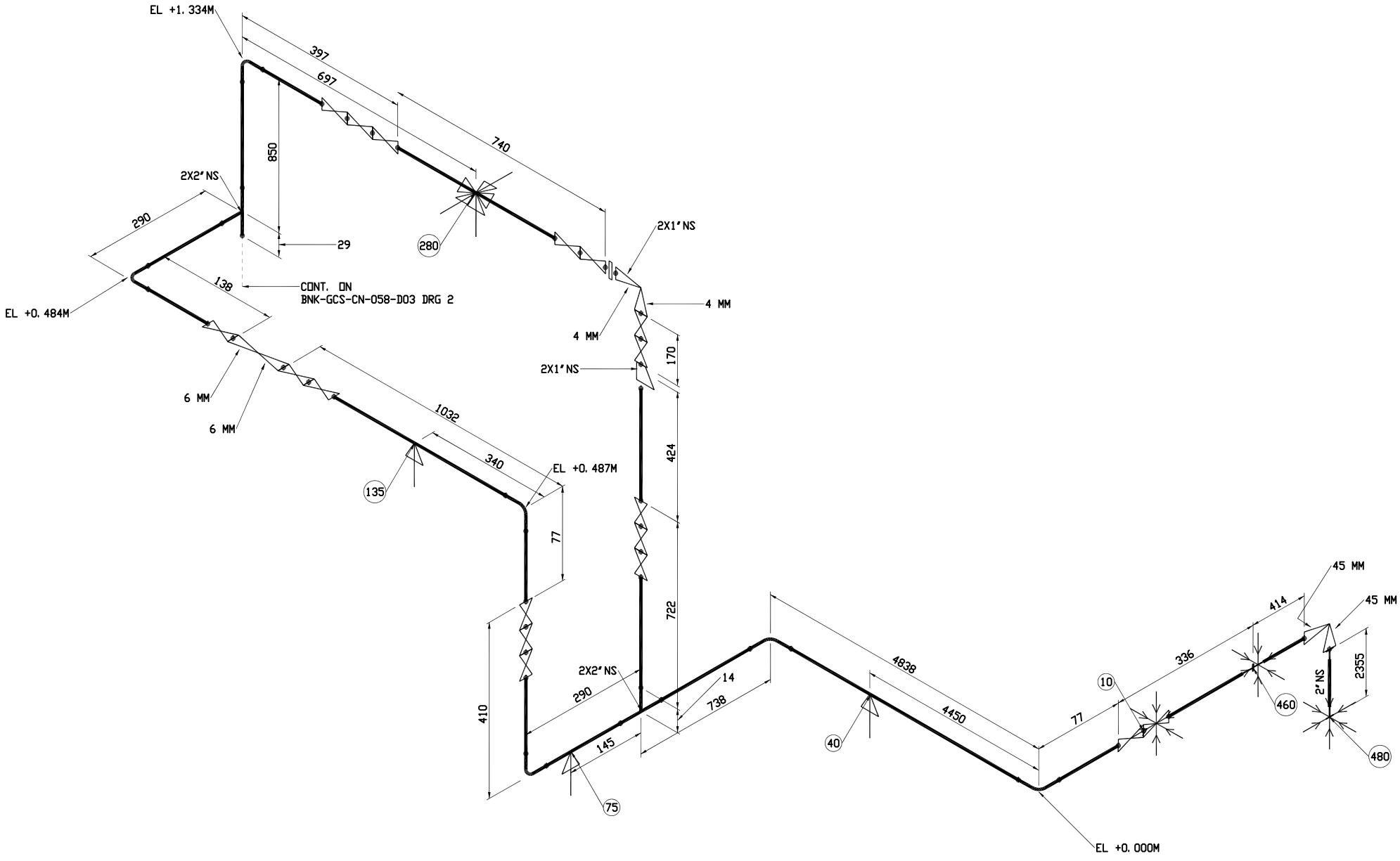
LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
10		Absolute Method								
	Limits	2800	2800	2100		420	280	360		
	2(OPE)	-88	-273	-590	0.281	200	-73	-45	0.476	
	4(OPE)	-27	-264	-207	0.099	174	-25	-43	0.415	
	6(OPE)	-39	-221	-205	0.098	121	-37	-27	0.288	
	8(SUS)	-0	-218	4	0.078	107	-2	-29	0.256	
	9(SUS)	-0	-217	4	0.077	107	-2	-28	0.255	

BNK-GCS-CN-058

1. GAS-111-0042C-CN05-2"-PT
2. FL-112-0019C-AN07-2"-PT
3. FL-112-0018C-AN07-2"-PT



CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 1 OF 2

REV.	CHANGE	DATE
		20 MAY 2024

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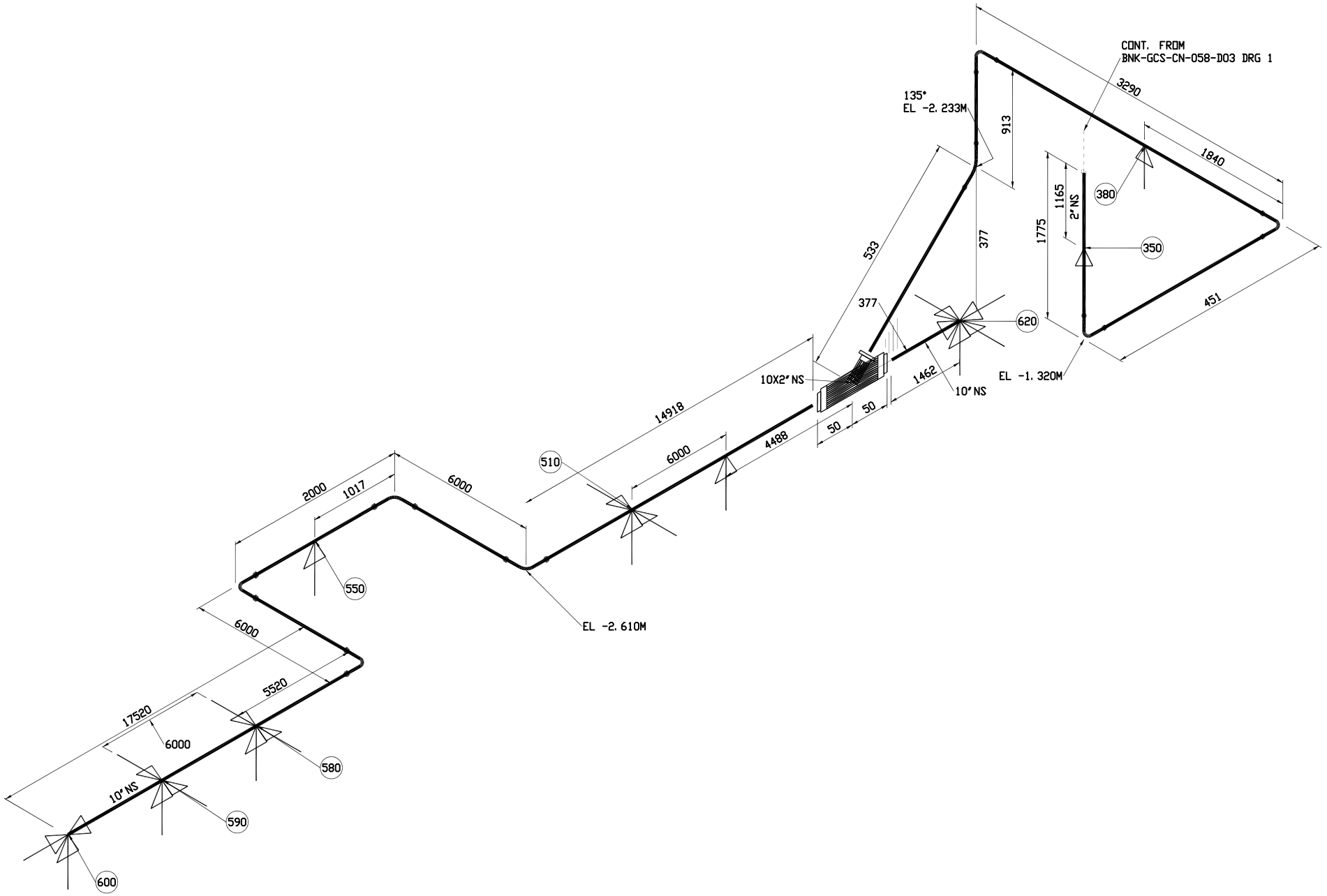

CHECK ISOMETRIC ONLY – DO NOT ISSUE

PIPING SPEC.		OP. TEMP.	
INSULATION SPEC.		PROJECT NO.	
INSULATION THKS.		SYSTEM	
PAINTING SPEC.		AREA	
MATERIAL		DRAWN BY	
OP. PRESSURE		E.L.DIAGRAM	

INTERGRAPH

PIPELINE REFERENCE

REV.

DRG. 2 OF 2

REV.	CHANGE	DATE
		20 MAY 2024

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T1+P1+U1
11 (OPE) W+T1+P1-U1
12 (OPE) W+T1+P1-U2
13 (OPE) W+T1+P1-U2
14 (OPE) W+T1+P1+U3
15 (OPE) W+T1+P1+F1
16 (OCC) L16=L10-L2
17 (OCC) L17=L11-L2
18 (OCC) L18=L12-L2
19 (OCC) L19=L13-L2
20 (OCC) L20=L14-L2
21 (OCC) L21=L15-L2
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

INPUT LISTING

```
 Job Description:

   PROJECT:

   CLIENT :

   ANALYST:

   NOTES  :
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 14:19
Job:: BNK-GCS-CN-058-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

File created by FEATools
CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) MAY 20,2024 14:19:50

PIPE DATA

From 10 To 20 DZ= 73.025 mm.
PIPE
Dia= 60.325 mm. Wall= 5.537 mm. Cor= 3.0000 mm.
Element Name= FLANGE_FLG_150
GENERAL
T1= 115 C T2= 60 C T3= 60 C P1= 2,200.0500 KPa PHyd= 3,300.0752 KPa
Mat= (106)A106 Grade B E= 203,401,232 KPa EH1= 197,200,352 KPa
EH2= 200,644,016 KPa EH3= 200,644,016 KPa EH4= 203,401,232 KPa
EH5= 203,401,232 KPa EH6= 203,401,232 KPa EH7= 203,401,232 KPa
EH8= 203,401,232 KPa EH9= 203,401,232 KPa v = .292
Pipe Den= .0078334 kg./cu.cm. Fluid Den= .0000181 kg./cu.cm.
Insul Thk= .000 mm. Insul Den= .0000000 kg./cu.cm.
RIGID Weight= 44.48 N.
RESTRAINTS
Node 10 ANC Cnode 440
UNIFORM LOAD
Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's
Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's
Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 137,895 KPa
Sh1= 137,895 KPa Sh2= 137,895 KPa Sh3= 137,895 KPa Sh4= 137,895 KPa
Sh5= 137,895 KPa Sh6= 137,895 KPa Sh7= 137,895 KPa Sh8= 137,895 KPa
Sh9= 137,895 KPa Sy= 241,316 KPa
EQUIPMENT LIMITS
Nozzle Node = 10 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,800.14 N.
FB= 2,800.14 N. FC= 2,100.10 N. MA= 420.02 N.m. MB= 280.01 N.m.
MC= 360.02 N.m. Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute

From 20 To 30 DZ= 77.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 29
Angle/Node @2= .00 28

From 30 To 40 DX= -4,450.000 mm.
RESTRAINTS
Node 40 +Y

From 40 To 50 DX= -388.000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 49
Angle/Node @2= .00 48

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 14:19
Job:: BNK-GCS-CN-058-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```
 From  50  To  70 DZ= 738.000 mm.
 SIF's & TEE's
    Node  70   Welding Tee
 ----------------------------------------------------------------------------
 From  70  To  75 DZ= 145.000 mm.
 RESTRAINTS
    Node  75  +Y
 ----------------------------------------------------------------------------
 From  75  To  80 DZ= 145.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 79
    Angle/Node @2= .00 78
 ----------------------------------------------------------------------------
 From  80  To  90 DY= 77.000 mm.
 ----------------------------------------------------------------------------
 From  90  To  100 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ----------------------------------------------------------------------------
 From  100  To  110 DY= 187.000 mm.
 RIGID  Weight= 258.00 N.
 ----------------------------------------------------------------------------
 From  110  To  120 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ----------------------------------------------------------------------------
 From  120  To  130 DY= 77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 129
    Angle/Node @2= .00 128
 ----------------------------------------------------------------------------
 From  130  To  135  DX= -340.000 mm.
 RESTRAINTS
    Node  135  +Y   Mu = .30
 ----------------------------------------------------------------------------
 From  135  To  140  DX= -340.000 mm.
 ----------------------------------------------------------------------------
 From  140  To  150  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ----------------------------------------------------------------------------
 From  150  To  160  DX= -285.325 mm.  DY= .000 mm.  DZ= .000 mm.
 RIGID  Weight= 458.17 N.
 ----------------------------------------------------------------------------
 From  70  To  170 DY= 403.000 mm.
 ----------------------------------------------------------------------------
 From  170  To  180 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ----------------------------------------------------------------------------
 From  180  To  190 DY= 187.000 mm.
 RIGID  Weight= 258.00 N.
 ----------------------------------------------------------------------------
 From  190  To  200 DY= 73.025 mm.
 RIGID  Weight= 44.48 N.
 ----------------------------------------------------------------------------
 From  200  To  210 DY= 210.000 mm.
 ----------------------------------------------------------------------------
 From  210  To  220 DY= 214.000 mm.
 REDUCER
```

INPUT LISTING
```
    Diam2= 33.401 mm.   Wall2= 6.350 mm.
 ------------------------------------------------------------------------------
 From  220  To  230 DY= 65.088 mm.
 PIPE
    Dia= 33.401 mm.   Wall= 6.350 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 22.24 N.
 ------------------------------------------------------------------------------
 From  230  To  240 DY= 109.000 mm.
 RIGID  Weight= 44.48 N.
 FORCES & MOMENTS
    Node  240   FX1= 1,000.05 N.   FY1= 1,000.05 N.
 ------------------------------------------------------------------------------
 From  240  To  250  DX= -44.975 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
    Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  250  To  260  DX= -73.025 mm.
 RIGID  Weight= 44.48 N.
 ------------------------------------------------------------------------------
 From  260  To  270  DX= -66.675 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Fluid Den= .0000015 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 31.14 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------------
 From  270  To  280  DX= -300.000 mm.
 RESTRAINTS
    Node  280  +Y   Mu = .30
    Node  280  X   Gap= 3.000 mm.
    Node  280  Z
 ------------------------------------------------------------------------------
 From  280  To  290  DX= -300.000 mm.
 ------------------------------------------------------------------------------
 From  290  To  300  DX= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  300  To  310  DX= -187.000 mm.
 RIGID  Weight= 209.07 N.
 ------------------------------------------------------------------------------
 From  310  To  320  DX= -66.675 mm.
 RIGID  Weight= 31.14 N.
 ------------------------------------------------------------------------------
 From  320  To  330  DX= -77.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 329
    Angle/Node @2= .00 328
```

INPUT LISTING

```
 ----------------------------------------------------------------------------
 From  330  To  340 DY= -850.000 mm.
 SIF's & TEE's
    Node  340   Welding Tee
 ----------------------------------------------------------------------------
 From  340  To  350 DY= -1,194.000 mm.
 RESTRAINTS
    Node  350  +Y   Mu = .30
 ----------------------------------------------------------------------------
 From  350  To  360 DY= -610.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 359
    Angle/Node @2= .00 358
 ----------------------------------------------------------------------------
 From  360  To  370 DZ= -451.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 369
    Angle/Node @2= .00 368
 ----------------------------------------------------------------------------
 From  370  To  380  DX= -1,840.000 mm.
 RESTRAINTS
    Node  380  +Y   Mu = .30
 ----------------------------------------------------------------------------
 From  380  To  390  DX= -1,450.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 389
    Angle/Node @2= .00 388
 ----------------------------------------------------------------------------
 From  390  To  400 DY= -913.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 399
    Angle/Node @2= .00 398
 ----------------------------------------------------------------------------
 From  400  To  410 DY= -377.000 mm.  DZ= 377.000 mm.
 ----------------------------------------------------------------------------
 From  340  To  420 DZ= 290.000 mm.
 BEND at "TO" end
    Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 419
    Angle/Node @2= .00 418
 ----------------------------------------------------------------------------
 From  420  To  430  DX= 77.000 mm.
 ----------------------------------------------------------------------------
 From  430  To  160  DX= 66.675 mm.
 RIGID  Weight= 31.14 N.
 ----------------------------------------------------------------------------
 From  440  To  450 DZ= -73.025 mm.
 PIPE
    Dia= 60.325 mm.   Wall= 5.537 mm.
 GENERAL
    T1= 115 C   T2= 60 C   T3= 60 C   P1= 2,200.0500 KPa   PHyd= 3,300.0752 KPa
    Fluid Den= .0001154 kg./cu.cm.   Insul Thk= .000 mm.
 RIGID  Weight= 44.48 N.
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 137,895 KPa   Sh2= 137,895 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
```

INPUT LISTING
```
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  450  To  460 DZ= -190.000 mm.
 RESTRAINTS
    Node  460  ANC   Cnode  461
 ---------------------------------------------------------------------------
 From  461  To  470 DZ= -459.000 mm.
 RIGID  Weight= .00 N.
 ---------------------------------------------------------------------------
 From  470  To  480 DY= -2,400.000 mm.
 RIGID  Weight= .00 N.
 RESTRAINTS
    Node  480  ANC
 ---------------------------------------------------------------------------
 From  500  To  510 DZ= 6,000.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0001362 kg./cu.cm.
 RESTRAINTS
    Node  510  +Y   Mu = .30
    Node  510  X
 UNIFORM LOAD
   Vector1  in G-s  X1 Dir = .26 g's  Y1 Dir = .00 g's  Z1 Dir = .00 g's
   Vector2  in G-s  X2 Dir = .00 g's  Y2 Dir = .12 g's  Z2 Dir = .00 g's
   Vector3  in G-s  X3 Dir = .00 g's  Y3 Dir = .00 g's  Z3 Dir = .26 g's
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  510  To  520 DZ= 4,480.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 519
    Angle/Node @2= .00 518
 ---------------------------------------------------------------------------
 From  520  To  530  DX= -6,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 529
    Angle/Node @2= .00 528
 ---------------------------------------------------------------------------
 From  530  To  540 DZ= 517.000 mm.
 ---------------------------------------------------------------------------
 From  540  To  550 DZ= 500.000 mm.
 RESTRAINTS
    Node  550  +Y   Mu = .30
 ---------------------------------------------------------------------------
 From  550  To  560 DZ= 983.000 mm.
 BEND at "TO" end
```

INPUT LISTING
```
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 559
    Angle/Node @2= .00 558
 ---------------------------------------------------------------------------
 From  560  To  570  DX= 6,000.000 mm.
 BEND at "TO" end
    Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 569
    Angle/Node @2= .00 568
 ---------------------------------------------------------------------------
 From  570  To  580 DZ= 5,520.000 mm.
 RESTRAINTS
    Node  580  +Y   Mu = .30
    Node  580  X   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  580  To  590 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  590  +Y   Mu = .30
    Node  590  X
 ---------------------------------------------------------------------------
 From  590  To  600 DZ= 6,000.000 mm.
 RESTRAINTS
    Node  600  +Y   Mu = .30
    Node  600  Z   Gap= 3.000 mm.
 ---------------------------------------------------------------------------
 From  500  To  410 DZ= -4,488.000 mm.
 PIPE
    Dia= 273.050 mm.   Wall= 9.271 mm.   Cor= 6.0000 mm.
 GENERAL
    T1= 270 C   T2= 272 C   T3= -28 C   P1= 600.0137 KPa   PHyd= 900.0205 KPa
    Mat= (106)A106 Grade B   E= 203,401,232 KPa   EH1= 187,483,936 KPa
    EH2= 187,335,024 KPa   EH3= 205,934,864 KPa   EH4= 203,401,232 KPa
    EH5= 203,401,232 KPa   EH6= 203,401,232 KPa   EH7= 203,401,232 KPa
    EH8= 203,401,232 KPa   EH9= 203,401,232 KPa   v = .292
    Pipe Den= .0078334 kg./cu.cm.   Fluid Den= .0000015 kg./cu.cm.
    Insul Thk= .000 mm.   Insul Den= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  500  +Y   Mu = .30
 ALLOWABLE STRESSES
    B31.3 (2016)        Cycle Max Switch = ---   Sc= 137,895 KPa
    Sh1= 129,638 KPa   Sh2= 129,365 KPa   Sh3= 137,895 KPa   Sh4= 137,895 KPa
    Sh5= 137,895 KPa   Sh6= 137,895 KPa   Sh7= 137,895 KPa   Sh8= 137,895 KPa
    Sh9= 137,895 KPa   Sy= 241,316 KPa
 ---------------------------------------------------------------------------
 From  410  To  620 DZ= -1,512.000 mm.
 RESTRAINTS
    Node  620  +Y   Mu = .30
    Node  620  Z   Gap= 3.000 mm.
    Node  620  X   Gap= 3.000 mm.
 CAESAR II 2018  Ver.10.00.00.7700,  (Build 170726)  MAY 20,2024  14:19:50



 MATERIAL Changes:
    10              20             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
   500             510             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
```

CAESAR II 2018 Ver.10.00.00.7700, (Build 170726) Date: MAY 20, 2024 Time: 14:19
Job:: BNK-GCS-CN-058-D03
Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING
```
   500             410             Mat= (106)A106 Grade B   E= 203,401,232 KPa
                                   v = .292   Density= .0078 kg./cu.cm.
 CAESAR II 2018  Ver.10.00.00.7700,  (Build 170726)  MAY 20,2024  14:19:50
 JOBNAME: D:\BINAK PRO\NATIVE CAESAR FILE\NATIVE CEASAR FILE-D03\BNK-GCS-CN-058-

 ALLOWABLE STRESS Changes
    10              20             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 137,895 KPa
                                   Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
   260             270             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 129,638 KPa
                                   Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
   440             450             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 137,895 KPa
                                   Sh2= 137,895 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
   500             510             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 129,638 KPa
                                   Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
   500             410             B31.3 (2016)        Cycle Max Switch = ---
                                   Sc= 137,895 KPa   Sh1= 129,638 KPa
                                   Sh2= 129,365 KPa   Sh3= 137,895 KPa
                                   Sh4= 137,895 KPa   Sh5= 137,895 KPa
                                   Sh6= 137,895 KPa   Sh7= 137,895 KPa
                                   Sh8= 137,895 KPa   Sh9= 137,895 KPa
                                   Sy= 241,316 KPa
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 BEND ELEMENTS
    20              30             Radius= 76.200 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00 29
                                   Angle/Node @2= .00 28
    40              50             Radius= 76.200 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00 49
                                   Angle/Node @2= .00 48
    75              80             Radius= 76.200 mm. (LONG)
                                   Bend Angle= 90.000   Angle/Node @1= 45.00 79
                                   Angle/Node @2= .00 78
   120             130             Radius= 76.200 mm. (LONG)
```

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INPUT LISTING

```
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                129   Angle/Node @2= .00 128
   320             330            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                329   Angle/Node @2= .00 328
   350             360            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                359   Angle/Node @2= .00 358
   360             370            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                369   Angle/Node @2= .00 368
   380             390            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                389   Angle/Node @2= .00 388
   390             400            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 45.000   Angle/Node @1= 22.50
                                399   Angle/Node @2= .00 398
   340             420            Radius= 76.200 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                419   Angle/Node @2= .00 418
   510             520            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                519   Angle/Node @2= .00 518
   520             530            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                529   Angle/Node @2= .00 528
   550             560            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                559   Angle/Node @2= .00 558
   560             570            Radius= 381.000 mm. (LONG)
                                  Bend Angle= 90.000   Angle/Node @1= 45.00
                                569   Angle/Node @2= .00 568
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RIGIDS
    10              20          RIGID  Weight= 44.48 N.
    90             100          RIGID  Weight= 44.48 N.
   100             110          RIGID  Weight= 258.00 N.
   110             120          RIGID  Weight= 44.48 N.
   140             150          RIGID  Weight= 44.48 N.
   150             160          RIGID  Weight= 458.17 N.
   170             180          RIGID  Weight= 44.48 N.
   180             190          RIGID  Weight= 258.00 N.
   190             200          RIGID  Weight= 44.48 N.
   220             230          RIGID  Weight= 22.24 N.
   230             240          RIGID  Weight= 44.48 N.
   240             250          RIGID  Weight= 44.48 N.
   250             260          RIGID  Weight= 44.48 N.
   260             270          RIGID  Weight= 31.14 N.
   290             300          RIGID  Weight= 31.14 N.
   300             310          RIGID  Weight= 209.07 N.
   310             320          RIGID  Weight= 31.14 N.
   430             160          RIGID  Weight= 31.14 N.
   440             450          RIGID  Weight= 44.48 N.
```

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INPUT LISTING
```
   461             470           RIGID  Weight= .00 N.
   470             480           RIGID  Weight= .00 N.
```


SIF's & TEE's
```
    50              70              Node  70   Welding Tee
   330             340              Node  340   Welding Tee
```


REDUCERS
```
   210             220              Diam2= 33.401 mm.   Wall2= 6.350 mm.
```


RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors		
10	ANC	440				.000	.000	.000
40	+Y					.000	1.000	.000
75	+Y					.000	1.000	.000
135	+Y				.30	.000	1.000	.000
280	+Y				.30	.000	1.000	.000
280	X			3.00		1.000	.000	.000
280	Z					.000	.000	1.000
350	+Y				.30	.000	1.000	.000
380	+Y				.30	.000	1.000	.000
460	ANC	461				.000	.000	.000
480	ANC					.000	.000	.000
510	+Y				.30	.000	1.000	.000
510	X					1.000	.000	.000
550	+Y				.30	.000	1.000	.000
580	+Y				.30	.000	1.000	.000
580	X			3.00		1.000	.000	.000
590	+Y				.30	.000	1.000	.000
590	X					1.000	.000	.000
600	+Y				.30	.000	1.000	.000
600	Z			3.00		.000	.000	1.000
500	+Y				.30	.000	1.000	.000
620	+Y				.30	.000	1.000	.000
620	Z			3.00		.000	.000	1.000
620	X			3.00		1.000	.000	.000

EQUIPMENT LIMITS
```
   10              20              Nozzle Node = 10

   Limiting Loads:  A=pipe; B=ref; C=AxB;   FA= 2,800.14 N.   FB= 2,800.14 N.
   FC= 2,100.10 N.   MA= 420.02 N.m.   MB= 280.01 N.m.   MC= 360.02 N.m.
   Equipment Major Direction Vector= .0000  1.0000  .0000
```

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INPUT LISTING
Interact. Mtd= Absolute
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FORCES AND MOMENTS

230	240	Node 240 FX1= 1,000.05 N. FY1= 1,000.05 N.

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UNIFORM LOAD Changes

10	20	Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's
500	510	Vector1 in G-s X1 Dir = .26 g's Y1 Dir = .00 g's Z1 Dir = .00 g's Vector2 in G-s X2 Dir = .00 g's Y2 Dir = .12 g's Z2 Dir = .00 g's Vector3 in G-s X3 Dir = .00 g's Y3 Dir = .00 g's Z3 Dir = .26 g's

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INPUT UNITS USED...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	=	N./cm.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.

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INPUT LISTING
WALL THICKNESS inches x 25.400 = mm.
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SETUP FILE PARAMETERS

CONNECT GEOMETRY THRU CNODES =	YES
MIN ALLOWED BEND ANGLE =	5.00000
MAX ALLOWED BEND ANGLE =	95.0000
BEND LENGTH ATTACHMENT PERCENT =	1.00000
MIN ANGLE TO ADJACENT BEND PT =	5.00000
LOOP CLOSURE TOLERANCE =	25.4000 mm.
THERMAL BOWING HORZ TOLERANCE =	0.100000E-03
AUTO NODE NUMBER INCREMENT=	10.0000
Z AXIS UP=	NO
USE PRESSURE STIFFENING =	DEFAULT
ALPHA TOLERANCE =	0.500000E-01
RESLD-FORCE =	NO
HGR DEF RESWGT STIF =	0.175127E+13 N./cm.
DECOMP SNG TOL =	0.100000E+11
BEND AXIAL SHAPE =	YES
FRICT STIF =	0.175127E+07 N./cm.
FRICT NORM FORCE VAR =	0.150000
FRICT ANGLE VAR =	15.0000
FRICT SLIDE MULT =	1.00000
ROD TOLERANCE =	1.00000
ROD INC =	2.00000
INCORE NUMERICAL CHECK =	NO
OUTCORE NUMERICAL CHECK =	NO
DEFAULT TRANS RESTRAINT STIFF=	0.175127E+13 N./cm.
DEFAULT ROT RESTRAINT STIFF=	0.112985E+12 N.m./deg
IGNORE SPRING HANGER STIFFNESS =	NO
MISSING MASS ZPA =	EXTRACTED
MIN WALL MILL TOLERANCE =	12.5000
WRC-107 VERSION =	MAR 79 1B1/2B1
WRC-107 INTERPOLATION =	LAST VALUE
DEFAULT AMBIENT TEMPERATURE=	21.1111 C
BOURDON PRESSURE=	NONE
COEFFICIENT OF FRICTION (MU) =	0.000000
INCLUDE SPRG STIF IN HGR OPE =	NO
INCLUDE INSULATION IN HYDROTEST =	NO
REDUCED INTERSECTION =	B31.1(POST1980)
USE WRC329	NO
NO REDUCED SIF FOR RFT AND WLT	NO
B31.1 REDUCED Z FIX =	YES
CLASS 1 BRANCH FLEX	NO
ALL STRESS CASES CORRODED =	NO
ADD TORSION IN SL STRESS =	DEFAULT
ADD F/A IN STRESS =	DEFAULT
OCCASIONAL LOAD FACTOR =	0.000000
DEFAULT CODE =	B31.3
B31.3 SUS CASE SIF FACTOR =	0.000000
ALLOW USERS BEND SIF =	NO
USE SCHNEIDER	NO
YIELD CRITERION STRESS =	MAX 3D SHEAR
USE PD/4T	NO
BASE HOOP STRESS ON ? =	ID

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INPUT LISTING

EN13480 USE IN OUTPLANE SIFS=	NO
LIBERAL EXPANSION ALLOWABLE=	YES
B31.3 SEC 319.2.3C SAXIAL=	Default
B31.3 WELDING/CONTOUR TEE ISB16.9	FALSE
PRESSURE VARIATION IN EXP CASE=	DEFAULT
IMPLEMENT B313 APP-P	NO
IMPLEMENT B313 CODE CASE 178	YES
IGNORE B31.1/B31.3 Wc FACTOR=	YES
USE FRP SIF =	YES
USE FRP FLEX =	YES
BS 7159 Pressure Stiffening=	Design Strain
FRP Property Data File=	CAESAR.FRP
FRP Emod (axial) =	0.220632E+08 KPa
FRP Ratio Gmod/Emod (axial) =	0.250000
FRP Ea/Eh*Vh/a =	0.152730
FRP Laminate Type =	THREE
FRP Alpha =	21.6000 C
FRP Density =	0.166079E-02 kg./cu.cm.
EXCLUDE f2 FROM UKOOA BENDING =	NO

EXECUTION CONTROL PARAMETERS

Rigid/ExpJt Print Flag	1.000
Bourdon Option	.000
Loop Closure Flag	2.000
Thermal Bowing Delta Temp ..	.000 C
Liberal Allowable Flag	1.000
Uniform Load Option	1.000
Ambient Temperature	20.997 C
Plastic (FRP) Alpha	21.600
Plastic (FRP) GMOD/EMODa ...	.250
Plastic (FRP) Laminate Type.	3.000
Eqn Optimizer	.000
Node Selection	.000
Eqn Ordering	.000
Collins	.000
Degree Determination	.000
User Eqn Control	.000
North Direction	-X

COORDINATE REPORT

NODE	X (mm.)	Y (mm.)	Z (mm.)
10	.000	.000	.000
20	.000	.000	73.025
30	.000	.000	150.025
40	-4450.000	.000	150.025
50	-4838.000	.000	150.025
70	-4838.000	.000	888.025
75	-4838.000	.000	1033.025
80	-4838.000	.000	1178.025

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INPUT LISTING

90	-4838.000	77.000	1178.025
100	-4838.000	150.025	1178.025
110	-4838.000	337.025	1178.025
120	-4838.000	410.050	1178.025
130	-4838.000	487.050	1178.025
135	-5178.000	487.050	1178.025
140	-5518.000	487.050	1178.025
150	-5591.025	487.050	1178.025
160	-5876.350	487.050	1178.025
70	-4838.000	.000	888.025
170	-4838.000	403.000	888.025
180	-4838.000	476.025	888.025
190	-4838.000	663.025	888.025
200	-4838.000	736.050	888.025
210	-4838.000	946.050	888.025
220	-4838.000	1160.050	888.025
230	-4838.000	1225.138	888.025
240	-4838.000	1334.138	888.025
250	-4882.975	1334.138	888.025
260	-4956.000	1334.138	888.025
270	-5022.675	1334.138	888.025
280	-5322.675	1334.138	888.025
290	-5622.675	1334.138	888.025
300	-5689.350	1334.138	888.025
310	-5876.350	1334.138	888.025
320	-5943.024	1334.138	888.025
330	-6020.024	1334.138	888.025
340	-6020.024	484.138	888.025
350	-6020.024	-709.862	888.025
360	-6020.024	-1319.862	888.025
370	-6020.024	-1319.862	437.025
380	-7860.024	-1319.862	437.025
390	-9310.024	-1319.862	437.025
400	-9310.024	-2232.862	437.025
410	-9310.024	-2609.862	814.025
340	-6020.024	484.138	888.025
420	-6020.024	484.138	1178.025
430	-5943.024	484.138	1178.025
430	-5943.024	487.050	1178.025
160	-5876.350	487.050	1178.025
10	.000	.000	.000
450	.000	.000	-73.025
460	.000	.000	-263.025
470	.000	.000	-722.025
480	.000	-2400.000	-722.025
500	-9310.024	-2609.862	5302.025
510	-9310.024	-2609.862	11302.025
520	-9310.024	-2609.862	15782.025
530	-15310.024	-2609.862	15782.025
540	-15310.024	-2609.862	16299.025
550	-15310.024	-2609.862	16799.025
560	-15310.024	-2609.862	17782.025
570	-9310.024	-2609.862	17782.025
580	-9310.024	-2609.862	23302.025
590	-9310.024	-2609.862	29302.025
600	-9310.024	-2609.862	35302.023

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INPUT LISTING

500	-9310.024	-2609.862	5302.025
410	-9310.024	-2609.862	814.025
620	-9310.024	-2609.862	-697.975

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Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Stress Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T1+P1+U1
11 (OPE) W+T1+P1-U1
12 (OPE) W+T1+P1-U2
13 (OPE) W+T1+P1-U2
14 (OPE) W+T1+P1+U3
15 (OPE) W+T1+P1+F1
16 (OCC) L16=L10-L2
17 (OCC) L17=L11-L2
18 (OCC) L18=L12-L2
19 (OCC) L19=L13-L2
20 (OCC) L20=L14-L2
21 (OCC) L21=L15-L2
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC
CASE 22 (OCC) L22=L16+L8
CASE 23 (OCC) L23=L17+L8
CASE 24 (OCC) L24=L18+L8
CASE 25 (OCC) L25=L19+L8
CASE 26 (OCC) L26=L20+L8
CASE 27 (OCC) L27=L21+L8
CASE 28 (EXP) L28=L2-L8
CASE 29 (EXP) L29=L4-L8
CASE 30 (EXP) L30=L2-L4
CASE 31 (EXP) L31=L6-L8
CASE 32 (EXP) L32=L2-L6
CASE 33 (EXP) L33=L4-L6

Piping Code: B31.3 = B31.3 -2016, Jan 31, 2017

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa) LOADCASE 1 (HYD) WW+HP			
Ratio (%):	23.7	@Node	580
Code Stress:	57129.6	Allowable Stress:	241316.5
Axial Stress:	6792.9	@Node	128
Bending Stress:	51169.8	@Node	580
Torsion Stress:	6203.2	@Node	560
Hoop Stress:	14676.3	@Node	28
Max Stress Intensity:	57129.6	@Node	580

CODE STRESS CHECK PASSED : LOADCASE 8 (SUS) W+P1

Highest Stresses: (KPa) LOADCASE 8 (SUS) W+P1			
Ratio (%):	66.3	@Node	580
Code Stress:	85729.8	Allowable Stress:	129365.3
Axial Stress:	12074.8	@Node	410
Bending Stress:	73656.3	@Node	580
Torsion Stress:	8928.4	@Node	560
Hoop Stress:	24443.4	@Node	510
Max Stress Intensity:	85729.8	@Node	580

CODE STRESS CHECK PASSED : LOADCASE 9 (SUS) WNC

Highest Stresses: (KPa) LOADCASE 9 (SUS) WNC			
Ratio (%):	56.9	@Node	580
Code Stress:	73563.0	Allowable Stress:	129365.3
Axial Stress:	1328.2	@Node	350
Bending Stress:	73563.0	@Node	580
Torsion Stress:	8917.1	@Node	560
Hoop Stress:	0.0	@Node	20

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Max Stress Intensity:       73563.0       @Node    580

 CODE STRESS CHECK PASSED      : LOADCASE 22 (OCC) L22=L16+L8

Highest Stresses: (   KPa    ) LOADCASE 22 (OCC) L22=L16+L8
Ratio (%):                    66.7       @Node    510
Code Stress:                114727.3       Allowable Stress:     172055.9
Axial Stress:                12277.2       @Node    560
Bending Stress:             102447.5       @Node    510
Torsion Stress:               8951.1       @Node    560
Hoop Stress:                 24443.4       @Node    510
Max Stress Intensity:       114727.1       @Node    510

 CODE STRESS CHECK PASSED      : LOADCASE 23 (OCC) L23=L17+L8

Highest Stresses: (   KPa    ) LOADCASE 23 (OCC) L23=L17+L8
Ratio (%):                    62.3       @Node    580
Code Stress:                107275.4       Allowable Stress:     172055.9
Axial Stress:                12584.1       @Node    519
Bending Stress:              94966.0       @Node    580
Torsion Stress:               8936.0       @Node    220
Hoop Stress:                 24443.4       @Node    510
Max Stress Intensity:       107275.4       @Node    580

 CODE STRESS CHECK PASSED      : LOADCASE 24 (OCC) L24=L18+L8

Highest Stresses: (   KPa    ) LOADCASE 24 (OCC) L24=L18+L8
Ratio (%):                    55.1       @Node    580
Code Stress:                 94832.6       Allowable Stress:     172055.9
Axial Stress:                12061.7       @Node    558
Bending Stress:              82632.3       @Node    580
Torsion Stress:               9997.5       @Node    560
Hoop Stress:                 24443.4       @Node    510
Max Stress Intensity:        94832.6       @Node    580

 CODE STRESS CHECK PASSED      : LOADCASE 25 (OCC) L25=L19+L8

Highest Stresses: (   KPa    ) LOADCASE 25 (OCC) L25=L19+L8
Ratio (%):                    55.1       @Node    580
Code Stress:                 94832.6       Allowable Stress:     172055.9
Axial Stress:                12061.7       @Node    558
Bending Stress:              82632.3       @Node    580
Torsion Stress:               9997.5       @Node    560
Hoop Stress:                 24443.4       @Node    510
Max Stress Intensity:        94832.6       @Node    580

 CODE STRESS CHECK PASSED      : LOADCASE 26 (OCC) L26=L20+L8

Highest Stresses: (   KPa    ) LOADCASE 26 (OCC) L26=L20+L8
Ratio (%):                    50.2       @Node    580
Code Stress:                 86421.8       Allowable Stress:     172055.9
Axial Stress:                13339.5       @Node    620
Bending Stress:              73669.3       @Node    580
```

STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

```
Torsion Stress:              8935.5       @Node    560
Hoop Stress:                24443.4       @Node    510
Max Stress Intensity:       86421.8       @Node    580

 CODE STRESS CHECK PASSED      : LOADCASE 27 (OCC) L27=L21+L8

Highest Stresses: (   KPa    ) LOADCASE 27 (OCC) L27=L21+L8
Ratio (%):                     49.8       @Node    580
Code Stress:                85766.7       Allowable Stress:     172055.9
Axial Stress:               13005.9       @Node    210
Bending Stress:             73692.9       @Node    580
Torsion Stress:              9525.3       @Node     28
Hoop Stress:                24443.4       @Node    510
Max Stress Intensity:       85766.7       @Node    580

 CODE STRESS CHECK PASSED      : LOADCASE 28 (EXP) L28=L2-L8

Highest Stresses: (   KPa    ) LOADCASE 28 (EXP) L28=L2-L8
Ratio (%):                     36.1       @Node    558
Code Stress:               108136.3       Allowable Stress:     299359.8
Axial Stress:                1102.3       @Node    620
Bending Stress:            107427.6       @Node    558
Torsion Stress:             15378.7       @Node    418
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      286888.9       @Node    558

 CODE STRESS CHECK PASSED      : LOADCASE 29 (EXP) L29=L4-L8

Highest Stresses: (   KPa    ) LOADCASE 29 (EXP) L29=L4-L8
Ratio (%):                     36.5       @Node    558
Code Stress:               109099.0       Allowable Stress:     299018.5
Axial Stress:                1109.4       @Node    620
Bending Stress:            108384.2       @Node    558
Torsion Stress:             16298.9       @Node    418
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:      289442.9       @Node    558

 CODE STRESS CHECK PASSED      : LOADCASE 30 (EXP) L30=L2-L4

Highest Stresses: (   KPa    ) LOADCASE 30 (EXP) L30=L2-L4
Ratio (%):                      8.1       @Node    220
Code Stress:                27058.3       Allowable Stress:     333408.3
Axial Stress:                 335.7       @Node     30
Bending Stress:             23422.7       @Node    220
Torsion Stress:              6522.6       @Node    220
Hoop Stress:                    0.0       @Node     20
Max Stress Intensity:       39054.1       @Node    220

 CODE STRESS CHECK PASSED      : LOADCASE 31 (EXP) L31=L6-L8

Highest Stresses: (   KPa    ) LOADCASE 31 (EXP) L31=L6-L8
Ratio (%):                      5.4       @Node    329
Code Stress:                18376.4       Allowable Stress:     339255.2
```

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
Various Load Cases

Axial Stress:	553.1	@Node	350
Bending Stress:	17826.0	@Node	329
Torsion Stress:	4919.2	@Node	220
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	39085.2	@Node	529

CODE STRESS CHECK PASSED : LOADCASE 32 (EXP) L32=L2-L6

Highest Stresses: (KPa) LOADCASE 32 (EXP) L32=L2-L6

Ratio (%):	40.5	@Node	558
Code Stress:	121345.8	Allowable Stress:	299359.8
Axial Stress:	1592.5	@Node	620
Bending Stress:	120779.2	@Node	530
Torsion Stress:	18641.8	@Node	418
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	322662.0	@Node	530

CODE STRESS CHECK PASSED : LOADCASE 33 (EXP) L33=L4-L6

Highest Stresses: (KPa) LOADCASE 33 (EXP) L33=L4-L6

Ratio (%):	40.9	@Node	558
Code Stress:	122308.4	Allowable Stress:	299018.5
Axial Stress:	1599.6	@Node	620
Bending Stress:	121742.6	@Node	530
Torsion Stress:	19561.9	@Node	418
Hoop Stress:	0.0	@Node	20
Max Stress Intensity:	325234.2	@Node	530

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS 2
Restraint Summary : Multiple 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T1+P1+U1
11 (OPE) W+T1+P1-U1
12 (OPE) W+T1+P1-U2
13 (OPE) W+T1+P1-U2
14 (OPE) W+T1+P1+U3
15 (OPE) W+T1+P1+F1
16 (OCC) L16=L10-L2
17 (OCC) L17=L11-L2
18 (OCC) L18=L12-L2
19 (OCC) L19=L13-L2
20 (OCC) L20=L14-L2
21 (OCC) L21=L15-L2
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 1 (HYD) WW+HP
CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
10		TYPE=Rigid ANC;					
	1(HYD)	-13	-262	-0	35	-4	134
	2(OPE)	416	-265	-66	43	-58	188
	4(OPE)	96	-255	-14	42	-15	161
	6(OPE)	230	-222	-39	27	-34	122
	8(SUS)	-12	-217	-0	28	-3	107
	9(SUS)	-12	-217	-0	28	-3	107
	MAX	416/L2	-265/L2	-66/L2	43/L2	-58/L2	188/L2
40		TYPE=Rigid +Y;					
	1(HYD)	0	-363	0	0	0	0
	2(OPE)	0	-262	0	0	0	0
	4(OPE)	0	-271	0	0	0	0
	6(OPE)	0	-257	0	0	0	0
	8(SUS)	0	-295	0	0	0	0
	9(SUS)	0	-294	0	0	0	0
	MAX		-363/L1				
75		TYPE=Rigid +Y;					
	1(HYD)	0	-751	0	0	0	0
	2(OPE)	0	-703	0	0	0	0
	4(OPE)	0	-455	0	0	0	0
	6(OPE)	0	-752	0	0	0	0
	8(SUS)	0	-718	0	0	0	0
	9(SUS)	0	-717	0	0	0	0
	MAX		-752/L6				
135		TYPE=Rigid +Y;					
	1(HYD)	-6	-544	-34	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	-17	-509	-88	0	0	0
	8(SUS)	5	-515	-28	0	0	0
	9(SUS)	5	-514	-28	0	0	0
	MAX	-17/L6	-544/L1	-88/L6			

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
280		TYPE=Rigid +Y; Rigid X w/gap; Rigid Z;					
	1(HYD)	15	-136	60	0	0	0
	2(OPE)	0	0	134	0	0	0
	4(OPE)	256	0	134	0	0	0
	6(OPE)	-202	-674	89	0	0	0
	8(SUS)	9	-142	52	0	0	0
	9(SUS)	9	-142	52	0	0	0
	MAX	256/L4	-674/L6	134/L2			
350		TYPE=Rigid +Y;					
	1(HYD)	13	-792	-34	0	0	0
	2(OPE)	364	-1217	-21	0	0	0
	4(OPE)	438	-1471	-51	0	0	0
	6(OPE)	-58	-195	7	0	0	0
	8(SUS)	-8	-720	-32	0	0	0
	9(SUS)	-8	-720	-32	0	0	0
	MAX	438/L4	-1471/L4	-51/L4			
380		TYPE=Rigid +Y;					
	1(HYD)	72	-275	41	0	0	0
	2(OPE)	0	0	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	2	-274	82	0	0	0
	8(SUS)	56	-199	15	0	0	0
	9(SUS)	56	-199	15	0	0	0
	MAX	72/L1	-275/L1	82/L6			
460		TYPE=Rigid ANC;					
	1(HYD)	-13	-325	-0	116	-7	134
	2(OPE)	416	-324	-66	125	51	188
	4(OPE)	96	-314	-14	121	11	161
	6(OPE)	230	-281	-39	97	26	122
	8(SUS)	-12	-276	-0	97	-6	107
	9(SUS)	-12	-275	-0	97	-6	107
	MAX	416/L2	-325/L1	-66/L2	125/L2	51/L2	188/L2
480		TYPE=Rigid ANC;					
	1(HYD)	-13	-325	-0	265	-13	166
	2(OPE)	416	-324	-66	115	242	-810
	4(OPE)	96	-314	-14	231	55	-69
	6(OPE)	230	-281	-39	131	132	-430
	8(SUS)	-12	-276	-0	223	-12	135

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	9(SUS)	-12	-275	-0	222	-12	135
	MAX	416/L2	-325/L1	-66/L2	265/L1	242/L2	-810/L2
500		TYPE=Rigid +Y;					
	1(HYD)	-25	-2884	-4	0	0	0
	2(OPE)	169	-1736	493	0	0	0
	4(OPE)	169	-1731	491	0	0	0
	6(OPE)	189	-1538	-421	0	0	0
	8(SUS)	-15	-1578	-2	0	0	0
	9(SUS)	-15	-1576	-2	0	0	0
	MAX	189/L6	-2884/L1	493/L2			
510		TYPE=Rigid X; Rigid +Y;					
	1(HYD)	7	-15270	-3	0	0	0
	2(OPE)	-414	-8147	2444	0	0	0
	4(OPE)	-422	-8147	2444	0	0	0
	6(OPE)	-878	-8310	-2493	0	0	0
	8(SUS)	4	-8284	-1	0	0	0
	9(SUS)	4	-8273	-1	0	0	0
	MAX	-878/L6	-15270/L1	-2493/L6			
550		TYPE=Rigid +Y;					
	1(HYD)	-2	-8377	0	0	0	0
	2(OPE)	-1376	-4622	-174	0	0	0
	4(OPE)	-1376	-4622	-173	0	0	0
	6(OPE)	1358	-4534	-73	0	0	0
	8(SUS)	-1	-4547	0	0	0	0
	9(SUS)	-1	-4541	0	0	0	0
	MAX	-1376/L4	-8377/L1	-174/L2			
580		TYPE=Rigid X w/gap; Rigid +Y;					
	1(HYD)	0	-16317	-0	0	0	0
	2(OPE)	-633	-8850	-2646	0	0	0
	4(OPE)	-652	-8850	-2646	0	0	0
	6(OPE)	-451	-8856	2618	0	0	0
	8(SUS)	0	-8855	-0	0	0	0
	9(SUS)	0	-8844	-0	0	0	0
	MAX	-652/L4	-16317/L1	-2646/L4			
590		TYPE=Rigid X; Rigid +Y;					
	1(HYD)	-0	-1915	-0	0	0	0
	2(OPE)	1237	-1034	-310	0	0	0
	4(OPE)	1260	-1034	-310	0	0	0

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RESTRAINT SUMMARY REPORT: Loads On Restraints
Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
	6(OPE)	-64	-1040	312	0	0	0
	8(SUS)	-0	-1039	-0	0	0	0
	9(SUS)	-0	-1038	-0	0	0	0
	MAX	1260/L4	-1915/L1	312/L6			
600		TYPE=Rigid Z w/gap; Rigid +Y;					
	1(HYD)	0	-3486	-0	0	0	0
	2(OPE)	-12	-1893	8408	0	0	0
	4(OPE)	-15	-1893	8455	0	0	0
	6(OPE)	37	-1892	-3785	0	0	0
	8(SUS)	0	-1892	-0	0	0	0
	9(SUS)	0	-1890	-0	0	0	0
	MAX	37/L6	-3486/L1	8455/L4			
620		TYPE=Rigid +Y; Rigid Z w/gap; Rigid X w/gap;					
	1(HYD)	-67	-3427	-7	0	0	0
	2(OPE)	59	-2166	-8475	0	0	0
	4(OPE)	64	-2165	-8552	0	0	0
	6(OPE)	34	-1843	3765	0	0	0
	8(SUS)	-38	-1893	-3	0	0	0
	9(SUS)	-38	-1890	-3	0	0	0
	MAX	-67/L1	-3427/L1	-8552/L4			

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LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS..... 2
Nozzle Check : Multiple..... 3

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP
2 (OPE) W+T1+P1
3 (Alt-SUS) W+P1
4 (OPE) W+T2+P1
5 (Alt-SUS) W+P1
6 (OPE) W+T3+P1
7 (Alt-SUS) W+P1
8 (SUS) W+P1
9 (SUS) WNC
10 (OPE) W+T1+P1+U1
11 (OPE) W+T1+P1-U1
12 (OPE) W+T1+P1-U2
13 (OPE) W+T1+P1-U2
14 (OPE) W+T1+P1+U3
15 (OPE) W+T1+P1+F1
16 (OCC) L16=L10-L2
17 (OCC) L17=L11-L2
18 (OCC) L18=L12-L2
19 (OCC) L19=L13-L2
20 (OCC) L20=L14-L2
21 (OCC) L21=L15-L2
22 (OCC) L22=L16+L8
23 (OCC) L23=L17+L8
24 (OCC) L24=L18+L8
25 (OCC) L25=L19+L8
26 (OCC) L26=L20+L8
27 (OCC) L27=L21+L8
28 (EXP) L28=L2-L8
29 (EXP) L29=L4-L8
30 (EXP) L30=L2-L4
31 (EXP) L31=L6-L8
32 (EXP) L32=L2-L6
33 (EXP) L33=L4-L6

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NOZZLE CHECK REPORT: Nozzle Loads Screening
Various Load Cases

LOAD CASE DEFINITION KEY

CASE 2 (OPE) W+T1+P1
CASE 4 (OPE) W+T2+P1
CASE 6 (OPE) W+T3+P1
CASE 8 (SUS) W+P1
CASE 9 (SUS) WNC

Node		fa N.	fb N.	fc N.	Forces Check	ma N.m.	mb N.m.	mc N.m.	Moments Check	
10		Absolute Method								
	Limits	2800	2800	2100		420	280	360		
	2(OPE)	-66	-265	-416	0.198	188	-58	-43	0.448	
	4(OPE)	-14	-255	-96	0.091	161	-15	-42	0.383	
	6(OPE)	-39	-222	-230	0.110	122	-34	-27	0.291	
	8(SUS)	-0	-217	12	0.078	107	-3	-28	0.255	
	9(SUS)	-0	-217	12	0.077	107	-3	-28	0.254	