

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	STRESS ANALYSIS CALCULATION REPORT							شماره صفحه : ۱ از ۵	
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
	BK	GCS	PEDCO	120	PI	RT	0002	D00	

طرح نگهداشت و افزایش تولید ۲۷ مخزن

STRESS ANALYSIS CALCULATION REPORT

نگهداشت و افزایش تولید میدان نفتی بینک

D00	FEB. 2023	IFI	M.Noori	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue/Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Class:3

CLIENT Doc. Number: F0Z-708906

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

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک																									
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D00	0002	RT	PI	120	PEDCO	GCS	BK																			

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	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	
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 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک																	
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پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
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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 Facilities; 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.

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	BK	GCS	PEDCO	120	PI	RT	0002	D00

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

4.0 ATTACHEMENT (stress analysis calculation report)

CN-006

Table of contents:

Line no.

Stress sketch

Input echo

Restraint summary

Stress summary

Nozzle load Table

LINE NO.:

GAS-111-0044A-CN05-6"-ET

GAS-111-0051A-FN05-6"-IS

GAS-111-0047A-FN05-2"-PT

GAS-111-0048A-FN05-2"-PT

FL-112-0020A-AN07-6"-PT

FL-112-0022A-AN07-6"-PT

GAS-111-0054A-FS00-2"-NP

GAS-111-0082A-FS00-2"-NP

FL-112-0023A-AN07-2"-PT

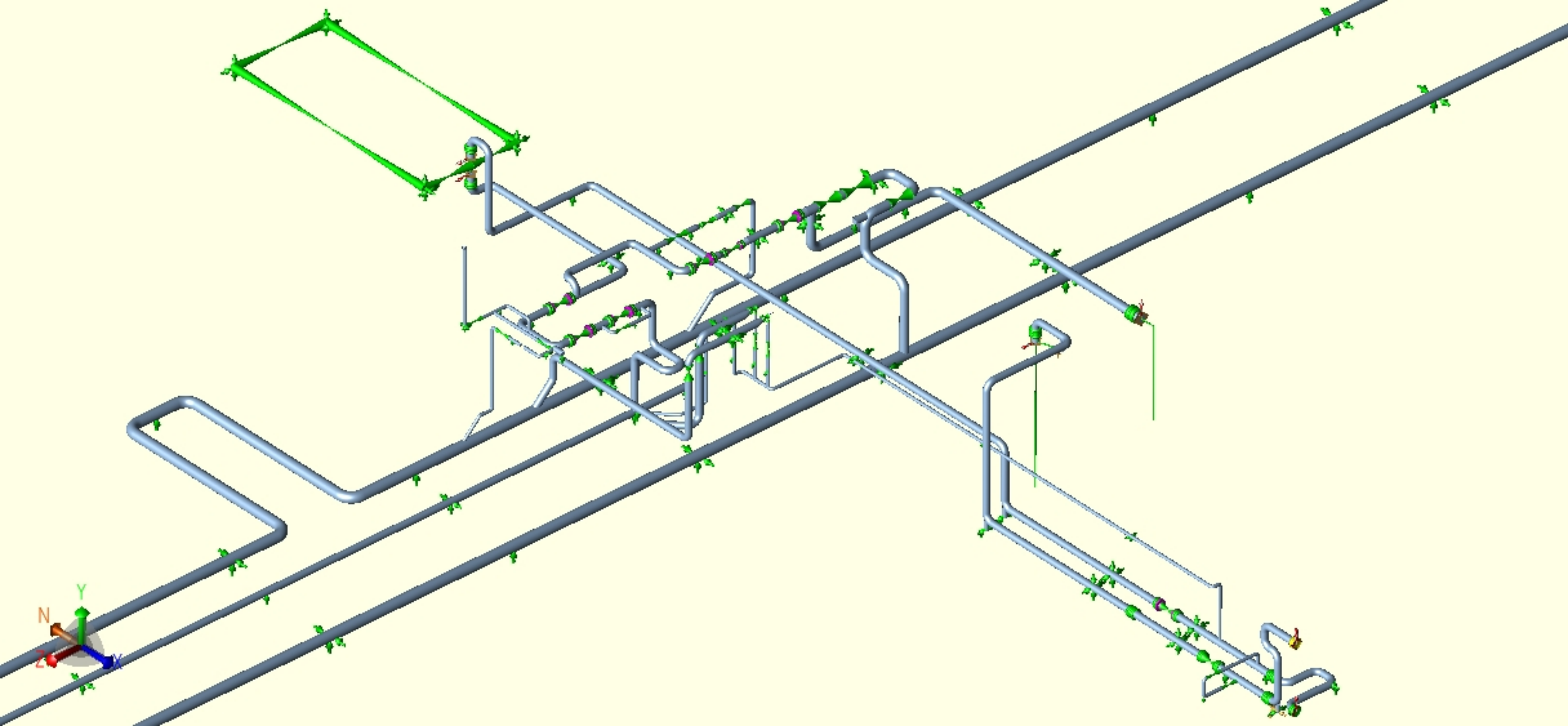
GAS-111-0058A-FS00-6"-NP

GAS-111-0055A-FS00-6"-NP

GAS-111-0057A-FS00-4"-NP

FL-112-0024A-AN07-4"-PT

FL-112-0001-AN07-10"-PT



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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+H
4 (OPE) W+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+T2+P1+H
7 (OPE) W+T3+P1+H
8 (Alt-SUS) W+P1+H
9 (OPE) W+T1+P2+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+T1+P1+H+U1+0.67U2
13 (OPE) W+T1+P1+H-U1-0.67U2
14 (OPE) W+T1+P1+H-U1+0.67U2
15 (OPE) W+T1+P1+H+U1-0.67U2
16 (OPE) W+T1+P1+H+0.67U2+U3
17 (OPE) W+T1+P1+H-0.67U2-U3
18 (OPE) W+T1+P1+H-0.67U2+U3
19 (OPE) W+T1+P1+H+0.67U2-U3
20 (OPE) W+T1+P1+H+F1
21 (OPE) W+T1+P1+H+F2
22 (OCC) L22=L12-L4
23 (OCC) L23=L13-L4
24 (OCC) L24=L14-L4
25 (OCC) L25=L15-L4
26 (OCC) L26=L16-L4
27 (OCC) L27=L17-L4
28 (OCC) L28=L18-L4
29 (OCC) L29=L19-L4
30 (OCC) L30=L20-L4
31 (OCC) L31=L21-L4
32 (OCC) L32=L22+L10
33 (OCC) L33=L23+L10
34 (OCC) L34=L24+L10
35 (OCC) L35=L25+L10
36 (OCC) L36=L26+L10
37 (OCC) L37=L27+L10
38 (OCC) L38=L28+L10
39 (OCC) L39=L29+L10
40 (OCC) L40=L30+L10
41 (OCC) L41=L31+L10
42 (EXP) L42=L4-L10
43 (EXP) L43=L6-L10
44 (EXP) L44=L7-L10
45 (EXP) L45=L6-L7
46 (OPE) L46=L4, L6, L7
47 (OCC) L47=L22, L23, L24, L25

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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 20 To 40 DX= -101.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm. Cor= 3.0000 mm.

Element Name= FLANGE_FLG_150

GENERAL

T1= 60 C T2= 115 C T3= 5 C P1= 22.0000 bars P2= 18.1000 bars

PHyd= 33.0000 bars Mat= (106)A106 Grade B E= 203,408 MPa

EH1= 200,651 MPa EH2= 197,207 MPa EH3= 204,236 MPa EH4= 203,408 MPa

EH5= 203,408 MPa EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa

EH9= 203,408 MPa v = .292 Pipe Den=7833.4399414 kg./m3

Fluid Den= 18.1000004 kg./m3 Insul Thk= 40.000 mm.

Insul Den= 136.1580048 kg./m3

RIGID Weight= 191.26 N.

RESTRAINTS

Node 20 ANC

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= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

EQUIPMENT LIMITS

Nozzle Node = 20 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,160.00 N.

FB= 2,160.00 N. FC= 2,160.00 N. MA= 1,155.00 N.m. MB= 1,155.00 N.m.

MC= 1,155.00 N.m. Equipment Major Direction Vector= .0000 1.0000 .0000

Interact. Mtd= Absolute

From 40 To 60 DX= -1,077.280 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= -629.133 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

From 80 To 100 DX= 500.000 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 99

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INPUT LISTING

Angle/Node @2= .00 98

From 100 To 120 DY= -1,258.270 mm.

From 120 To 140 DY= -229.000 mm.

RIGID Weight= .00 N.

From 140 To 160 DY= -200.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm.

GENERAL

T1= 21 C T2= 21 C P1= .0000 bars P2= .0000 bars PHyd= .0000 bars

Fluid Den= .0000000 kg./m3 Insul Thk= 40.000 mm.

RESTRAINTS

Node 160 -X Mu = .30

Node 160 Z

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./mm.

Theoretical Cold Load = .00 N.

SIF's & TEE's

Node 140 Unreinforced Tee

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 120 To 180 DY= -229.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

GENERAL

T1= 60 C T2= 115 C P1= 22.0000 bars P2= 18.1000 bars

PHyd= 33.0000 bars Fluid Den= 18.1000004 kg./m3 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= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 180 To 200 DX= -229.000 mm.

From 200 To 220 DX= -101.600 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 220 To 240 DX= -101.600 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 240 To 260 DX= -700.000 mm.

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INPUT LISTING

From 260 To 280 DX= -295.500 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= -203.000 mm.

From 320 To 340 DX= -101.600 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 340 To 360 DX= -489.000 mm.

Element Name= GATE_NOFLG_300

RIGID Weight= 1,023.36 N.

From 360 To 380 DX= -101.600 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 380 To 400 DX= -850.000 mm.

RESTRAINTS

Node 400 Y Mu = .30

Node 400 Z

From 400 To 420 DX= -1,568.590 mm.

From 420 To 440 DX= -107.000 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 440 To 460 DX= -107.000 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 460 To 480 DX= -1,350.000 mm.

RESTRAINTS

Node 480 Y Mu = .30

Node 480 Z

From 480 To 500 DX= -3,963.000 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 520 DY= 229.000 mm.

From 520 To 540 DY= -229.000 mm.

RIGID Weight= .00 N.

From 540 To 560 DY= -300.000 mm.

PIPE

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INPUT LISTING

Dia= 4.500 in. Wall= 6.020 mm.

GENERAL

T1= 21 C T2= 21 C P1= .0000 bars PHyd= .0000 bars

Fluid Den= .0000000 kg./m3 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= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 520 To 580 DY= 3,775.400 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

GENERAL

T1= 60 C T2= 115 C P1= 22.0000 bars PHyd= 33.0000 bars

Fluid Den= 18.1000004 kg./m3 Insul Thk= 40.000 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= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 580 To 600 DZ= -2,750.000 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 620 DX= -314.600 mm.

From 620 To 640 DY= -84.000 mm.

RIGID Weight= .00 N.

From 640 To 660 DY= -300.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm.

GENERAL

T1= 21 C T2= 21 C P1= .0000 bars P2= .0000 bars PHyd= .0000 bars

Fluid Den= .0000000 kg./m3 Insul Thk= 40.000 mm.

RESTRAINTS

Node 660 +Y Cnode 800 Mu = .30

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 620 To 680 DX= -995.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

GENERAL

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INPUT LISTING

```

T1= 60 C    T2= 115 C    P1= 22.0000 bars    P2= 18.1000 bars
Phyd= 33.0000 bars    Fluid Den= 18.1000004 kg./m3    Insul Thk= 40.000 mm.
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= 138 MPa    Sh1= 138 MPa
  Sh2= 138 MPa    Sh3= 138 MPa    Sh4= 138 MPa    Sh5= 138 MPa    Sh6= 138 MPa
  Sh7= 138 MPa    Sh8= 138 MPa    Sh9= 138 MPa    Sy= 241 MPa
-----
From 680 To 700 DY= -229.000 mm.
-----
From 700 To 720 DY= -101.600 mm.
  Element Name= FLANGE_FLG_300
RIGID Weight= 191.26 N.
-----
From 720 To 740 DY= -28.000 mm.
  Element Name= FLANGE_FLG_300
RIGID Weight= 60.00 N.
-----
From 740 To 760 DY= -101.600 mm.
  Element Name= FLANGE_FLG_300
RIGID Weight= 191.26 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= 8,400.00 N.
  FB= 8,400.00 N.    FC= 6,300.00 N.    MA= 3,780.00 N.m.    MB= 2,520.00 N.m.
  MC= 3,280.00 N.m.    Equipment Major Direction Vector= .0000 .0000 1.0000
  Interact. Mtd= Absolute
-----
From 780 To 800 DX= 995.000 mm.    DY= 257.000 mm.
RIGID Weight= .00 N.
-----
From 820 To 840 DY= -3,065.000 mm.
PIPE
  Dia= 36.000 in.    Wall= 15.000 mm.
GENERAL
  Mat= (383)A516 70    E= 203,408 MPa    EH1= 200,651 MPa    EH2= 197,207 MPa
  EH3= 204,236 MPa    EH4= 203,408 MPa    EH5= 203,408 MPa    EH6= 203,408 MPa
  EH7= 203,408 MPa    EH8= 203,408 MPa    EH9= 203,408 MPa    v = .292
  Pipe Den=7833.4399414 kg./m3    Insul Thk= 40.000 mm.
RIGID Weight= .00 N.
ALLOWABLE STRESSES
  B31.3 (2016)          Cycle Max Switch = ---    Sc= 161 MPa    Sh1= 160 MPa
  Sh2= 158 MPa    Sh3= 161 MPa    Sh4= 161 MPa    Sh5= 161 MPa    Sh6= 161 MPa
  Sh7= 161 MPa    Sh8= 161 MPa    Sh9= 161 MPa    Sy= 262 MPa
-----
From 840 To 860 DY= -1,200.000 mm.
PIPE
  Dia= 36.000 in.    Wall= 12.000 mm.
  Insul Thk= 40.000 mm.
RIGID Weight= .00 N.

```

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INPUT LISTING

RESTRAINTS

Node 860 ANC

From 280 To 880 DZ= 122.140 mm.

PIPE

Dia= 2.375 in. Wall= 8.738 mm.

GENERAL

Mat= (106)A106 Grade B E= 203,408 MPa EH1= 200,651 MPa
EH2= 197,207 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa
EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa
v = .292 Pipe Den=7833.4399414 kg./m3 Insul Thk= 40.000 mm.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 880 To 900 DZ= 459.400 mm.

Element Name= BALL_FLG_600

GENERAL

T1= 142 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars
PHyd= 93.0000 bars Fluid Den= 43.0000000 kg./m3

RIGID Weight= 311.36 N.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 900 To 920 DZ= 576.200 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 919
Angle/Node @2= .00 918

RESTRAINTS

Node 920 +Y Mu = .30

From 920 To 940 DY= 514.340 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 939
Angle/Node @2= .00 938

From 940 To 960 DZ= -79.200 mm.

From 960 To 980 DZ= -459.740 mm.

Element Name= CHECK_FLG_600

RIGID Weight= 427.01 N.

From 980 To 1000 DZ= -1,222.140 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 999
Angle/Node @2= .00 998

From 1000 To 1020 DY= -398.340 mm.

SIF's & TEE's

Node 1020 Weldolet

From 1020 To 1040 DX= 300.000 mm.

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INPUT LISTING

PIPE

Dia= 6.625 in. Wall= 10.973 mm.

Insul Thk= 40.000 mm.

RESTRAINTS

Node 1040 +Y Mu = .30

From 1040 To 1060 DX= 168.010 mm.

From 1060 To 1080 DX= 126.000 mm.

Element Name= FLG.PR_FLG_150

RIGID Weight= 364.74 N.

From 1080 To 1100 DX= 126.000 mm.

Element Name= FLG.PR_FLG_150

RIGID Weight= 364.74 N.

From 1100 To 1120 DX= 330.000 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 DZ= -1,000.000 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= 465.734 mm.

From 1160 To 1180 DX= 232.867 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

RESTRAINTS

Node 1180 -X Mu = .30

Node 1180 +Y Mu = .30

From 1180 To 1200 DZ= 1,600.000 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= 364.74 N.

RESTRAINTS

Node 1240 ANC

EQUIPMENT LIMITS

Nozzle Node = 1240

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,160.00 N. FB= 2,160.00 N.

FC= 2,160.00 N. MA= 1,155.00 N.m. MB= 1,155.00 N.m. MC= 1,155.00 N.m.

Equipment Major Direction Vector= .0000 1.0000 .0000

Interact. Mtd= Absolute

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INPUT LISTING

From 1020 To 1260 DX= -1,400.000 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

From 1280 To 1300 DX= -650.000 mm.

From 1300 To 1320 DX= -127.000 mm.

Element Name= FLANGE_FLG_600

RIGID Weight= 364.74 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-1.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 102.0 bars (2)= 93.3 C -> 93.8 bars

(3)= 148.9 C -> 90.3 bars (4)= 204.5 C -> 87.2 bars

(5)= 260.0 C -> 83.1 bars (6)= 315.6 C -> 78.3 bars

(7)= 343.4 C -> 75.8 bars (8)= 371.1 C -> 73.1 bars

(9)= 398.9 C -> 70.0 bars (10)= 426.7 C -> 56.9 bars

(11)= 454.5 C -> 44.1 bars (12)= 482.3 C -> 31.7 bars

(13)= 510.0 C -> 19.0 bars (14)= 537.8 C -> 11.7 bars

From 1320 To 1340 DX= -567.000 mm.

Element Name= CHECK_NOFLG_600

RIGID Weight= 2,357.44 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-1.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 102.0 bars (2)= 93.3 C -> 93.8 bars

(3)= 148.9 C -> 90.3 bars (4)= 204.5 C -> 87.2 bars

(5)= 260.0 C -> 83.1 bars (6)= 315.6 C -> 78.3 bars

(7)= 343.4 C -> 75.8 bars (8)= 371.1 C -> 73.1 bars

(9)= 398.9 C -> 70.0 bars (10)= 426.7 C -> 56.9 bars

(11)= 454.5 C -> 44.1 bars (12)= 482.3 C -> 31.7 bars

(13)= 510.0 C -> 19.0 bars (14)= 537.8 C -> 11.7 bars

From 1340 To 1360 DX= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

From 1360 To 1380 DX= -1,650.000 mm.

RESTRAINTS

Node 1380 Y Mu = .30

Node 1380 Z

From 1380 To 1400 DX= -3,969.000 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.

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INPUT LISTING

From 1440 To 1460 DY= -300.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm.

GENERAL

T1= 21 C T2= 21 C P1= .0000 bars P2= .0000 bars PHyd= .0000 bars

Fluid Den= .0000000 kg./m3 Insul Thk= .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= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 1420 To 1480 DY= 1,555.400 mm.

PIPE

Dia= 6.625 in. Wall= 10.973 mm.

GENERAL

T1= 142 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars

PHyd= 93.0000 bars Fluid Den= 43.0000000 kg./m3 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= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 1480 To 1500 DX= -5,309.600 mm.

RESTRAINTS

Node 1500 +Y

Node 1500 Z

From 1500 To 1520 DX= -6,000.000 mm.

RESTRAINTS

Node 1520 +Y Mu = .30

From 1520 To 1540 DX= -3,981.300 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= 600.000 mm.

RESTRAINTS

Node 1560 +Y Mu = .30

From 1560 To 1580 DZ= 2,750.000 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= 2,519.920 mm.

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INPUT LISTING

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BEND at "TO" end
  Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1599
  Angle/Node @2= .00 1598
-----
From 1600 To 1620 DX= -657.200 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= -229.000 mm.
-----
From 1640 To 1660 DY= -127.000 mm.
  Element Name= FLANGE_NOFLG_600
RIGID Weight= 364.74 N.
-----
From 1660 To 1680 DY= -35.000 mm.
  Element Name= FLANGE_NOFLG_600
RIGID Weight= 111.20 N.
-----
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= 15,090.00 N.   FB= 15,090.00 N.
  FC= 12,000.00 N.   MA= 9,150.00 N.m.   MB= 4,890.00 N.m.   MC= 6,420.00 N.m.
  Equipment Major Direction Vector= .0000 .0000 1.0000
  Interact. Mtd= Absolute
-----
From 1720 To 1740 DY= -240.000 mm.
RIGID Weight= .00 N.
-----
From 1740 To 1760 DY= -240.000 mm.
RIGID Weight= .00 N.
-----
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= 15,090.00 N.   FB= 15,090.00 N.
  FC= 12,000.00 N.   MA= 9,150.00 N.m.   MB= 4,890.00 N.m.   MC= 6,420.00 N.m.
  Equipment Major Direction Vector= .0000 .0000 1.0000
  Interact. Mtd= Absolute
-----
From 1800 To 1820 DY= -35.000 mm.
  Element Name= FLANGE_NOFLG_150
RIGID Weight= 111.20 N.
-----
From 1740 To 1840 DZ= 1,500.000 mm.
RIGID Weight= 2,250.00 N.
RESTRAINTS
  Node 1840 Y Mu = .10
  Node 1840 X Mu = .30
  Node 1840 Z Gap= 6.000 mm.

```

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INPUT LISTING

From 1840 To 1860 DX= -7,035.000 mm.

RIGID Weight=10,500.00 N.

RESTRAINTS

Node 1860 Y Mu = .10

Node 1860 Z Gap= 6.000 mm. Mu = .30

From 1860 To 1880 DZ= -3,000.000 mm.

RIGID Weight= 4,500.00 N.

RESTRAINTS

Node 1880 Y Mu = .10

Node 1880 Z Gap= 6.000 mm.

From 1880 To 1900 DX= 7,035.000 mm.

RIGID Weight=10,500.00 N.

RESTRAINTS

Node 1900 Y Mu = .10

Node 1900 X Mu = .30

Node 1900 Z Gap= 6.000 mm. Mu = .30

From 1900 To 1740 DZ= 1,500.000 mm.

RIGID Weight= 2,250.00 N.

From 1820 To 1920 DY= -127.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm. Cor= .0000 mm.

Element Name= FLANGE_NOFLG_150

GENERAL

T1= 60 C Mat= (165)A312 TP316L E= 195,134 MPa EH1= 192,371 MPa

EH2= 184,546 MPa EH3= 195,962 MPa EH4= 195,134 MPa EH5= 195,134 MPa

EH6= 195,134 MPa EH7= 195,134 MPa EH8= 195,134 MPa EH9= 195,134 MPa

v = .292 Pipe Den=8027.1997070 kg./m3 Fluid Den= 59.5999985 kg./m3

Insul Thk= .000 mm.

RIGID Weight= 364.74 N.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa

Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa

Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

From 1920 To 1940 DY= -229.000 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 1960 DZ= -657.200 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1959

Angle/Node @2= .00 1958

From 1960 To 1980 DX= 4,441.000 mm.

RESTRAINTS

Node 1980 +Y Mu = .30

Node 1980 Z Gap= 3.000 mm.

From 1980 To 2000 DX= 600.000 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 1999
Angle/Node @2= .00 1998

From 2000 To 2020 DY= -8.750 mm. DZ= 1,675.000 mm.

SIF's & TEE's

Node 2020 Welding Tee

From 2020 To 2040 DY= -.710 mm. DZ= 142.800 mm.

From 2040 To 2060 DY= -.631 mm. DZ= 126.998 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars

(5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars

(7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars

(9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars

(11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars

(13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars

(15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars

(17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars

(19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars

(21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars

(23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

From 2060 To 2080 DY= -2.778 mm. DZ= 558.793 mm.

Element Name= CHECK_NOFLG_600

RIGID Weight= 2,357.44 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars

(5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars

(7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars

(9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars

(11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars

(13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars

(15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars

(17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars

(19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars

(21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars

(23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

From 2080 To 2100 DY= -.631 mm. DZ= 126.998 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

From 2100 To 2120 DY= -2.506 mm. DZ= 499.994 mm.

RESTRAINTS

Node 2120 +Y Mu = .30

From 2120 To 2140 DY= -2.294 mm. DZ= 457.606 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 2139
Angle/Node @2= .00 2138

From 2140 To 2160 DX= 442.770 mm.

SIF's & TEE's

Node 2160 Weldolet

From 2160 To 2180 DX= 699.580 mm.

From 2180 To 2200 DX= 229.000 mm.

RIGID Weight= .00 N.

From 2200 To 2220 DX= 300.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm.

GENERAL

T1= 21 C T2= 21 C P1= .0000 bars P2= .0000 bars PHyd= .0000 bars

Fluid Den= .0000000 kg./m3 Insul Thk= .000 mm.

RESTRAINTS

Node 2220 +Y Mu = .30

SIF's & TEE's

Node 2200 Unreinforced Tee

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa
Sh2= 115 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa
Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

From 2180 To 2240 DX= 229.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

GENERAL

T1= 60 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars

PHyd= 93.0000 bars Fluid Den= 59.5999985 kg./m3 Insul Thk= .000 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2239

FORCES & MOMENTS

Node 2240

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa
Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa
Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

From 2240 To 2260 DZ= -428.510 mm.

From 2260 To 2280 DZ= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars

(5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars

(7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars

(9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars

(11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars

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INPUT LISTING

(13)= 510.0 C	-> 52.7 bars	(14)= 537.8 C	-> 49.0 bars
(15)= 565.6 C	-> 44.8 bars	(16)= 593.4 C	-> 35.5 bars
(17)= 621.2 C	-> 28.3 bars	(18)= 648.9 C	-> 22.8 bars
(19)= 676.7 C	-> 18.3 bars	(20)= 704.5 C	-> 15.5 bars
(21)= 732.3 C	-> 12.8 bars	(22)= 760.1 C	-> 10.3 bars
(23)= 787.8 C	-> 7.9 bars	(24)= 815.6 C	-> 5.9 bars

From 2280 To 2300 DZ= -568.000 mm.

Element Name= GATE_NOFLG_600

RIGID Weight= 4,846.72 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C	-> 74.1 bars	(4)= 204.5 C	-> 68.6 bars
(5)= 260.0 C	-> 64.1 bars	(6)= 315.6 C	-> 61.0 bars
(7)= 343.4 C	-> 59.6 bars	(8)= 371.1 C	-> 58.3 bars
(9)= 398.9 C	-> 56.9 bars	(10)= 426.7 C	-> 55.8 bars
(11)= 454.5 C	-> 54.5 bars	(12)= 482.3 C	-> 53.8 bars
(13)= 510.0 C	-> 52.7 bars	(14)= 537.8 C	-> 49.0 bars
(15)= 565.6 C	-> 44.8 bars	(16)= 593.4 C	-> 35.5 bars
(17)= 621.2 C	-> 28.3 bars	(18)= 648.9 C	-> 22.8 bars
(19)= 676.7 C	-> 18.3 bars	(20)= 704.5 C	-> 15.5 bars
(21)= 732.3 C	-> 12.8 bars	(22)= 760.1 C	-> 10.3 bars
(23)= 787.8 C	-> 7.9 bars	(24)= 815.6 C	-> 5.9 bars

From 2300 To 2320 DZ= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

From 2320 To 2340 DZ= -256.220 mm.

SIF's & TEE's

Node 2340 Weldolet

From 2340 To 2360 DZ= -200.000 mm.

From 2360 To 2380 DZ= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C	-> 74.1 bars	(4)= 204.5 C	-> 68.6 bars
(5)= 260.0 C	-> 64.1 bars	(6)= 315.6 C	-> 61.0 bars
(7)= 343.4 C	-> 59.6 bars	(8)= 371.1 C	-> 58.3 bars
(9)= 398.9 C	-> 56.9 bars	(10)= 426.7 C	-> 55.8 bars
(11)= 454.5 C	-> 54.5 bars	(12)= 482.3 C	-> 53.8 bars
(13)= 510.0 C	-> 52.7 bars	(14)= 537.8 C	-> 49.0 bars
(15)= 565.6 C	-> 44.8 bars	(16)= 593.4 C	-> 35.5 bars
(17)= 621.2 C	-> 28.3 bars	(18)= 648.9 C	-> 22.8 bars
(19)= 676.7 C	-> 18.3 bars	(20)= 704.5 C	-> 15.5 bars
(21)= 732.3 C	-> 12.8 bars	(22)= 760.1 C	-> 10.3 bars
(23)= 787.8 C	-> 7.9 bars	(24)= 815.6 C	-> 5.9 bars

From 2380 To 2400 DZ= -598.000 mm.

Element Name= GATE_NOFLG_600

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INPUT LISTING

RIGID Weight= 1,979.36 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars

(5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars

(7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars

(9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars

(11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars

(13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars

(15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars

(17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars

(19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars

(21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars

(23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

From 2400 To 2420 DZ= -127.000 mm.

Element Name= FLANGE_FLG_600

RIGID Weight= 364.74 N.

From 2420 To 2440 DZ= -200.000 mm.

RESTRAINTS

Node 2440 +Y

SIF's & TEE's

Node 2440 Weldolet

From 2440 To 2460 DZ= -428.600 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2459

Angle/Node @2= .00 2458

From 2460 To 2480 DY= -1,282.570 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2479

Angle/Node @2= .00 2478

From 2480 To 2500 DX= 1,200.600 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2499

Angle/Node @2= .00 2498

From 2500 To 2520 DZ= 560.000 mm.

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 DX= -1,200.600 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2539

Angle/Node @2= .00 2538

From 2540 To 2560 DY= -1,739.400 mm.

SIF's & TEE's

Node 2560 Welding Tee

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INPUT LISTING

From 2340 To 2580 DX= 448.460 mm.

PIPE

Dia= 2.375 in. Wall= 3.912 mm.

Insul Thk= .000 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2579

Angle/Node @2= .00 2578

From 2580 To 2600 DZ= -76.200 mm.

From 2600 To 2620 DZ= -447.240 mm.

Element Name= GLOBE_FLG_600

RIGID Weight= 515.97 N.

From 2620 To 2640 DZ= -200.000 mm.

RESTRAINTS

Node 2640 +Y Mu = .30

From 2640 To 2660 DZ= -528.500 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2659

Angle/Node @2= .00 2658

From 2660 To 2440 DX= -448.460 mm.

From 2680 To 2700 DZ= -1,460.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

Insul Thk= .000 mm.

RESTRAINTS

Node 2700 +Y Mu = .30

From 2680 To 2720 DZ= 185.000 mm.

RESTRAINTS

Node 2720 +Y

From 2720 To 2560 DZ= 6.000 mm.

From 2560 To 2740 DZ= 5,994.000 mm.

RESTRAINTS

Node 2740 +Y

Node 2740 X

From 2740 To 2760 DZ= 6,000.000 mm.

RESTRAINTS

Node 2760 +Y

From 2760 To 2780 DZ= 6,000.000 mm.

RESTRAINTS

Node 2780 +Y Mu = .30

Node 2780 X Gap= 3.000 mm. Mu = .30

From 2780 To 2800 DZ= 6,000.000 mm.

RESTRAINTS

Node 2800 +Y Mu = .30

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INPUT LISTING

From 2800 To 2820 DZ= 6,000.000 mm.

RESTRAINTS

Node 2820 +Y Mu = .30

From 2820 To 2840 DZ= 6,000.000 mm.

RESTRAINTS

Node 2840 +Y Mu = .30
Node 2840 X Gap= 3.000 mm. Mu = .30
Node 2840 Z Gap= 3.000 mm. Mu = .30

From 2020 To 2860 DY= 371.500 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2859
Angle/Node @2= .00 2858

From 2860 To 2880 DX= -457.200 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2879

From 2880 To 2900 DZ= -2,216.000 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2899
Angle/Node @2= .00 2898

From 2900 To 2920 DX= 557.200 mm.

SIF's & TEE's

Node 2920 Welding Tee

From 2920 To 2940 DX= 871.470 mm.

RESTRAINTS

Node 2940 +Y Mu = .30

From 2940 To 2960 DX= 400.000 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2959
Angle/Node @2= .00 2958

From 2960 To 2980 DZ= -229.000 mm.

Element Name= GLOBE_FLG_600

From 2980 To 3000 DZ= -127.000 mm.

Element Name= FLANGE_FLG_600

RIGID Weight= 364.74 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.
T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars
(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars
(5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars
(7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars
(9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars

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INPUT LISTING

(19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars
 (21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars
 (23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

 From 3000 To 3020 DZ= -567.800 mm.

Element Name= GLOBE_NOFLG_600

RIGID Weight= 2,846.72 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars
 (5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars
 (7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars
 (9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars
 (11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars
 (13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars
 (15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars
 (17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars
 (19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars
 (21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars
 (23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

 From 3020 To 3040 DZ= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

 From 3040 To 3060 DZ= -150.000 mm.

 From 3060 To 3080 DY= -27.000 mm. DZ= -139.700 mm.

REDUCER

Diam2= 4.500 in. Wall2= 6.020 mm.

 From 3080 To 3100 DZ= -111.125 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm. Element Name= GLOBE_FLG_600

Insul Thk= .000 mm.

RIGID Weight= 191.26 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars
 (5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars
 (7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars
 (9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars
 (11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars
 (13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars
 (15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars
 (17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars
 (19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars
 (21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars
 (23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

 From 3100 To 3120 DZ= -441.800 mm.

Element Name= GLOBE_NOFLG_600

RIGID Weight= 2,423.36 N.

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INPUT LISTING

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.
 T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars
 (3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars
 (5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars
 (7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars
 (9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars
 (11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars
 (13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars
 (15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars
 (17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars
 (19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars
 (21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars
 (23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

 From 3120 To 3140 DZ= -111.125 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 191.26 N.

 From 3140 To 3160 DY= 27.000 mm. DZ= -139.700 mm.

REDUCER

Diam2= 6.625 in. Wall2= 7.112 mm.

 From 3160 To 3180 DZ= -350.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

Insul Thk= .000 mm.

RESTRAINTS

Node 3180 +Y Mu = .30

Node 3180 X Mu = .30

 From 3180 To 3200 DZ= -582.480 mm.

 From 3200 To 3220 DZ= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.
 T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars
 (3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars
 (5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars
 (7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars
 (9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars
 (11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars
 (13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars
 (15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars
 (17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars
 (19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars
 (21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars
 (23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

 From 3220 To 3240 DZ= -567.800 mm.

Element Name= BALL_NOFLG_600

RIGID Weight= 1,979.36 N.

FLANGES

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INPUT LISTING

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.
 T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars
 (3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars
 (5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars
 (7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars
 (9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars
 (11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars
 (13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars
 (15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars
 (17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars
 (19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars
 (21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars
 (23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

 From 3240 To 3260 DZ= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

From 3260 To 3280 DZ= -152.400 mm.

PIPE

Cor= 6.0000 mm.

GENERAL

T1= 37 C T2= 85 C P1= 9.0000 bars P2= 5.1000 bars PHyd= 13.5000 bars

Mat= (106)A106 Grade B E= 203,408 MPa EH1= 202,088 MPa

EH2= 199,094 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa

EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa

v = .292 Pipe Den=7833.4399414 kg./m3 Fluid Den= 6.0000000 kg./m3

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

REDUCER

Diam2= 8.625 in. Wall2= 8.179 mm.

From 3280 To 3300 DZ= -177.800 mm.

PIPE

Dia= 8.625 in. Wall= 8.179 mm.

Insul Thk= .000 mm.

SIF's & TEE's

Node 3300 Welding Tee

From 3300 To 3320 DZ= -177.800 mm.

From 3320 To 3340 DZ= -707.500 mm.

Element Name= CHECK_FLG_600

RIGID Weight= 5,052.93 N.

From 3340 To 3360 DZ= -157.000 mm.

From 3360 To 3380 DZ= -828.000 mm.

Element Name= GLOBE_FLG_600

RIGID Weight= 4,224.00 N.

From 3380 To 3400 DZ= -200.000 mm.

RESTRAINTS

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INPUT LISTING

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Node 3400 +Y Mu = .30
Node 3400 X Gap= 3.000 mm. Mu = .30
-----
From 3400 To 3420 DZ= -504.800 mm.
BEND at "TO" end
  Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3419
  Angle/Node @2= .00 3418
-----
From 3420 To 3440 DX= 1,068.900 mm.
BEND at "TO" end
  Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3439
  Angle/Node @2= .00 3438
-----
From 3440 To 3460 DZ= 305.000 mm.
-----
From 3460 To 3480 DZ= 689.700 mm.
  Element Name= BALL_FLG_150
RIGID Weight= 2,259.58 N.
-----
From 3480 To 3500 DZ= 450.000 mm.
-----
From 3500 To 3520 DZ= 305.000 mm.
RIGID Weight= .00 N.
-----
From 3520 To 3540 DZ= 350.000 mm.
PIPE
  Dia= 6.625 in. Wall= 7.112 mm.
GENERAL
  T1= 21 C T2= 21 C P1= .0000 bars P2= .0000 bars PHyd= .0000 bars
  Fluid Den= .0000000 kg./m3 Insul Thk= .000 mm.
RESTRAINTS
  Node 3540 +Y Mu = .30
SIF's & TEE's
  Node 3520 Unreinforced Tee
ALLOWABLE STRESSES
  B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
  Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
  Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
-----
From 3500 To 3560 DZ= 305.000 mm.
PIPE
  Dia= 8.625 in. Wall= 8.179 mm.
GENERAL
  T1= 37 C T2= 85 C P1= 9.0000 bars P2= 5.1000 bars PHyd= 13.5000 bars
  Fluid Den= 6.0000000 kg./m3 Insul Thk= .000 mm.
BEND at "TO" end
  Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3559
ALLOWABLE STRESSES
  B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
  Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
  Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
-----
From 3560 To 3580 DY= -1,177.000 mm.
BEND at "TO" end
  Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3579

```

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INPUT LISTING

Angle/Node @2= .00 3578

From 3580 To 3600 DX= 1,459.600 mm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3599

Angle/Node @2= .00 3598

From 3600 To 3620 DY= -2,173.000 mm.

SIF's & TEE's

Node 3620 Welding Tee

From 3300 To 3640 DY= -350.000 mm.

RESTRAINTS

Node 3640 +Y Mu = .30

Node 3640 X

Node 3640 Z

From 3640 To 3660 DY= -837.000 mm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3659

Angle/Node @2= .00 3658

From 3660 To 3680 DZ= -3,091.540 mm.

RESTRAINTS

Node 3680 +Y Mu = .30

From 3680 To 3700 DZ= -1,000.000 mm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3699

Angle/Node @2= .00 3698

From 3700 To 3720 DX= 4,028.500 mm.

RESTRAINTS

Node 3720 +Y Mu = .30

Node 3720 Z Gap= 3.000 mm. Mu = .30

From 3720 To 3740 DX= 3,153.400 mm.

From 3740 To 3760 DX= 104.775 mm.

Element Name= FLANGE_FLG_150

RIGID Weight= 177.92 N.

From 3760 To 3780 DX= 25.000 mm.

Element Name= FLANGE_FLG_150

RIGID Weight= 100.00 N.

From 3780 To 3800 DX= 104.000 mm.

Element Name= FLANGE_FLG_150

RIGID Weight= 177.92 N.

From 3800 To 3820 DX= 156.000 mm.

RESTRAINTS

Node 3820 ANC Cnode 3840

EQUIPMENT LIMITS

Nozzle Node = 3820

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INPUT LISTING

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 9,600.00 N. FB= 9,600.00 N.
 FC= 7,200.00 N. MA= 5,760.00 N.m. MB= 3,840.00 N.m. MC= 4,990.00 N.m.
 Equipment Major Direction Vector= .0000 1.0000 .0000
 Interact. Mtd= Absolute

 From 3840 To 3860 DX= 460.000 mm.

PIPE

Dia= 36.220 in. Wall= 12.000 mm.

GENERAL

Mat= (381)A516 60 E= 203,408 MPa EH1= 202,088 MPa EH2= 199,094 MPa
 EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa EH6= 203,408 MPa
 EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa v = .292
 Pipe Den=7833.4399414 kg./m3 Insul Thk= .000 mm.

RIGID Weight= .00 N.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
 Sh2= 135 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
 Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 221 MPa

 From 3860 To 3880 DY= -1,560.000 mm.

RIGID Weight= .00 N.

 From 3880 To 3900 DY= -1,200.000 mm.

RIGID Weight= .00 N.

RESTRAINTS

Node 3900 ANC

 From 3620 To 3920 DZ= 733.000 mm.

PIPE

Dia= 10.750 in. Wall= 9.271 mm.

GENERAL

Mat= (106)A106 Grade B E= 203,408 MPa EH1= 202,088 MPa
 EH2= 199,094 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa
 EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa
 v = .292 Pipe Den=7833.4399414 kg./m3 Insul Thk= .000 mm.

RESTRAINTS

Node 3920 +Y Mu = .30

Node 3920 Z Gap= 3.000 mm. Mu = .30

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
 Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
 Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

 From 3620 To 3940 DZ= -5,266.000 mm.

RESTRAINTS

Node 3940 +Y Mu = .30

Node 3940 X Gap= 3.000 mm. Mu = .30

 From 2920 To 3960 DZ= -400.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm. Cor= .0000 mm.

GENERAL

T1= 60 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars
 Phyd= 93.0000 bars Mat= (165)A312 TP316L E= 195,134 MPa
 EH1= 192,371 MPa EH2= 184,546 MPa EH3= 195,962 MPa EH4= 195,134 MPa

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INPUT LISTING

EH5= 195,134 MPa EH6= 195,134 MPa EH7= 195,134 MPa EH8= 195,134 MPa

EH9= 195,134 MPa v = .292 Pipe Den=8027.1997070 kg./m3

Fluid Den= 59.5999985 kg./m3 Insul Thk= .000 mm.

RESTRAINTS

Node 3960 +Y

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa

Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa

Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

From 3960 To 3980 DZ= -230.000 mm.

From 3980 To 4000 DZ= -654.050 mm.

Element Name= BALL_FLG_600

RIGID Weight= 1,116.45 N.

From 4000 To 4020 DZ= -150.000 mm.

RESTRAINTS

Node 4020 +Y Mu = .30

From 4020 To 4040 DZ= -150.000 mm.

From 4040 To 4060 DY= -12.700 mm. DZ= -101.600 mm.

REDUCER

Diam2= 3.500 in. Wall2= 5.486 mm.

From 4060 To 4080 DZ= -92.075 mm.

PIPE

Dia= 3.500 in. Wall= 5.486 mm. Element Name= FLANGE_FLG_600

Insul Thk= .000 mm.

RIGID Weight= 106.75 N.

From 4080 To 4100 DZ= -365.000 mm.

Element Name= GLOBE_NOFLG_600

RIGID Weight= 1,211.68 N.

From 4100 To 4120 DZ= -92.075 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 106.75 N.

From 4120 To 4140 DY= 12.700 mm. DZ= -101.600 mm.

REDUCER

Diam2= 4.500 in. Wall2= 6.020 mm.

From 4140 To 4160 DZ= -250.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm.

Insul Thk= .000 mm.

RESTRAINTS

Node 4160 +Y Mu = .30

Node 4160 X

From 4160 To 4180 DZ= -266.940 mm.

From 4180 To 4200 DZ= -453.000 mm.

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INPUT LISTING

```

Element Name= BALL_FLG_600
RIGID Weight= 1,116.45 N.
-----
From 4200 To 4220 DZ= -153.000 mm.
PIPE
Dia= 4.500 in. Wall= 8.560 mm. Cor= 6.0000 mm.
GENERAL
T1= 350 C T2= 350 C P1= 7.5000 bars P2= .5000 bars PHyd= 8.2500 bars
Mat= (106)A106 Grade B E= 203,408 MPa EH1= 178,971 MPa
EH2= 178,971 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa
EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa
v = .292 Pipe Den=7833.4399414 kg./m3 Fluid Den= 1.5000000 kg./m3
Insul Thk= .000 mm.
SINGLE FLANGED BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4219
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 118 MPa
Sh2= 118 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
-----
From 4220 To 4240 DY= -2,196.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4239
Angle/Node @2= .00 4238
-----
From 4240 To 4260 DZ= 1,300.000 mm.
BEND at "TO" end
Radius= 152.400 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 4259
Angle/Node @2= .00 4258
-----
From 4260 To 4280 DY= -875.000 mm. DZ= 875.000 mm.
SIF's & TEE's
Node 4280 <No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460
-----
From 4280 To 4300 DZ= -3,220.000 mm.
PIPE
Dia= 10.750 in. Wall= 9.271 mm.
Insul Thk= .000 mm.
RESTRAINTS
Node 4300 +Y Mu = .30
SIF's & TEE's
Node 4280 <No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460
-----
From 4280 To 4320 DZ= 2,780.000 mm.
RESTRAINTS
Node 4320 +Y Mu = .30
Node 4320 X Gap= 3.000 mm. Mu = .30
Node 4320 Z
SIF's & TEE's
Node 4280 <No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460
-----
From 4320 To 4340 DZ= 2,206.670 mm.
SIF's & TEE's
Node 4340 <No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160
-----

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INPUT LISTING

From 4340 To 4360 DZ= 2,376.210 mm.

SIF's & TEE's

Node 4340 <No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160

Pad= 9.270 mm.

Node 4360 <No Type Specified> SIF(in)= 2.130 SIF(out)= 2.520

From 4360 To 4380 DZ= 1,417.120 mm.

RESTRAINTS

Node 4380 +Y Mu = .30

SIF's & TEE's

Node 4360 <No Type Specified> SIF(in)= 2.130 SIF(out)= 2.520

From 2160 To 4400 DY= 376.600 mm.

PIPE

Dia= 2.375 in. Wall= 3.912 mm. Cor= .0000 mm.

GENERAL

T1= 60 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars

Phyd= 93.0000 bars Mat= (165)A312 TP316L E= 195,134 MPa

EH1= 192,371 MPa EH2= 184,546 MPa EH3= 195,962 MPa EH4= 195,134 MPa

EH5= 195,134 MPa EH6= 195,134 MPa EH7= 195,134 MPa EH8= 195,134 MPa

EH9= 195,134 MPa v = .292 Pipe Den=8027.1997070 kg./m3

Fluid Den= 59.5999985 kg./m3 Insul Thk= .000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4399

Angle/Node @2= .00 4398

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa

Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa

Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

From 4400 To 4420 DX= -812.700 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4419

Angle/Node @2= .00 4418

From 4420 To 4440 DZ= 226.200 mm.

RESTRAINTS

Node 4440 +Y Mu = .30

From 4440 To 4460 DZ= 226.200 mm.

SIF's & TEE's

Node 4460 Welding Tee

From 4460 To 4480 DX= 1,665.900 mm.

From 4480 To 4500 DX= 459.000 mm.

Element Name= BALL_FLG_600

RIGID Weight= 311.36 N.

From 4500 To 4520 DX= 77.000 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4519

Angle/Node @2= .00 4518

From 4520 To 4540 DZ= 226.200 mm.

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INPUT LISTING

RESTRAINTS

Node 4540 +Y

Node 4540 Z Gap= 3.000 mm.

From 4540 To 4560 DZ= 226.200 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4559

Angle/Node @2= .00 4558

From 4560 To 4580 DX= -547.200 mm.

From 4580 To 4600 DX= -75.000 mm.

Element Name= FLG.PR_FLG_600

RIGID Weight= 55.60 N.

From 4600 To 4620 DX= -75.000 mm.

Element Name= FLANGE_FLG_600

RIGID Weight= 57.82 N.

From 4620 To 4640 DX= -300.000 mm.

RESTRAINTS

Node 4640 +Y

From 4640 To 4660 DX= -100.000 mm.

From 4660 To 4680 DX= -477.000 mm.

Element Name= BALL_FLG_600

RIGID Weight= 311.36 N.

From 4680 To 4700 DX= -157.770 mm.

PIPE

Dia= 2.375 in. Wall= 8.738 mm. Cor= 6.0000 mm.

GENERAL

T1= 350 C T2= 350 C T3= -28 C P1= 7.5000 bars P2= .5000 bars

Phyd= 8.2500 bars Mat= (106)A106 Grade B E= 203,408 MPa

EH1= 178,971 MPa EH2= 178,971 MPa EH3= 205,942 MPa EH4= 203,408 MPa

EH5= 203,408 MPa EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa

EH9= 203,408 MPa v = .292 Pipe Den=7833.4399414 kg./m3

Fluid Den= 1.5000000 kg./m3 Insul Thk= .000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4699

Angle/Node @2= .00 4698

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 118 MPa

Sh2= 118 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 4700 To 4720 DY= -2,422.000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4719

Angle/Node @2= .00 4718

From 4720 To 4740 DZ= 400.000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 4739

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INPUT LISTING

Angle/Node @2= .00 4738

From 4740 To 4360 DY= -644.550 mm. DZ= 644.550 mm.

SIF's & TEE's

Node 4360 <No Type Specified> SIF(in)= 2.130 SIF(out)= 2.520

From 4460 To 4760 DZ= 376.200 mm.

PIPE

Dia= 2.375 in. Wall= 3.912 mm. Cor= .0000 mm.

GENERAL

T1= 60 C T2= 175 C T3= 5 C P1= 62.0000 bars P2= 54.1000 bars

PHyd= 93.0000 bars Mat= (165)A312 TP316L E= 195,134 MPa

EH1= 192,371 MPa EH2= 184,546 MPa EH3= 195,962 MPa EH4= 195,134 MPa

EH5= 195,134 MPa EH6= 195,134 MPa EH7= 195,134 MPa EH8= 195,134 MPa

EH9= 195,134 MPa v = .292 Pipe Den=8027.1997070 kg./m3

Fluid Den= 59.5999985 kg./m3 Insul Thk= .000 mm.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa

Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa

Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

From 4760 To 4780 DZ= 477.200 mm.

Element Name= BALL_FLG_600

RIGID Weight= 311.36 N.

From 4780 To 4800 DZ= 77.000 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4799

Angle/Node @2= .00 4798

RESTRAINTS

Node 4800 +Y Mu = .30

Node 4800 X Mu = .30

Node 4800 Z Mu = .30

From 4800 To 4820 DY= 2,292.000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 4819

Angle/Node @2= .00 4818

From 4820 To 4840 DY= 50.000 mm. DZ= 50.000 mm.

From 1260 To 4860 DY= 1,730.000 mm.

PIPE

Dia= 2.375 in. Wall= 8.738 mm. Cor= 3.0000 mm.

GENERAL

T1= 142 C Mat= (106)A106 Grade B E= 203,408 MPa EH1= 195,538 MPa

EH2= 193,185 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa

EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa

v = .292 Pipe Den=7833.4399414 kg./m3 Fluid Den= 43.0000000 kg./m3

Insul Thk= .000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4859

Angle/Node @2= .00 4858

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa

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INPUT LISTING

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 4860 To 4880 DZ= 252.400 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4879
Angle/Node @2= .00 4878

From 4880 To 4900 DX= -3,000.000 mm.

RESTRAINTS

Node 4900 +Y

Node 4900 Z Gap= 3.000 mm.

From 4900 To 4920 DX= -5,500.000 mm.

RESTRAINTS

Node 4920 +Y Mu = .30

From 4920 To 4940 DX= -4,744.000 mm.

RESTRAINTS

Node 4940 +Y Mu = .30

Node 4940 Z Gap= 3.000 mm.

From 4940 To 4960 DX= -360.000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4959
Angle/Node @2= .00 4958

From 4960 To 4980 DZ= 2,352.000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4979
Angle/Node @2= .00 4978

From 4980 To 5000 DX= -139.700 mm.

SIF's & TEE's

Node 5000 Welding Tee

From 5000 To 5020 DX= -471.440 mm.

SIF's & TEE's

Node 5020 Welding Tee

From 5000 To 5040 DY= 458.000 mm.

RESTRAINTS

Node 5040 +Y

From 5040 To 5060 DY= 442.000 mm.

From 5060 To 5080 DY= 459.000 mm.

Element Name= GATE_FLG_600

RIGID Weight= 311.36 N.

From 5080 To 5100 DY= 400.000 mm.

From 5100 To 5120 DY= 165.000 mm.

SIF's & TEE's

Node 5120 <No Type Specified> SIF(in)= 1.300 SIF(out)= 1.300

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INPUT LISTING

REDUCER

Diam2= 1.900 in. Wall2= 7.137 mm.

From 5120 To 5140 DY= 166.000 mm.

PIPE

Dia= 1.900 in. Wall= 7.137 mm.

Insul Thk= .000 mm.

RIGID Weight= 100.00 N.

FORCES & MOMENTS

Node 5140 FY1= 1,000.00 N. FZ1= -2,000.00 N.

From 5140 To 5160 DZ= 152.000 mm.

PIPE

Dia= 3.500 in. Wall= 7.620 mm.

Insul Thk= .000 mm.

RIGID Weight= 100.00 N.

From 5160 To 5180 DZ= 73.025 mm.

PIPE

Cor= 6.0000 mm. Element Name= FLANGE_FLG_150

GENERAL

T1= 350 C T2= 350 C P1= 7.5000 bars P2= .5000 bars PHyd= 8.2500 bars

Fluid Den= 1.5000000 kg./m3

RIGID Weight= 54.49 N.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 118 MPa
 Sh2= 118 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
 Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 5180 To 5200 DY= -39.700 mm. DZ= 139.700 mm.

REDUCER

Diam2= 6.625 in. Wall2= 10.973 mm.

From 5200 To 5220 DZ= 800.000 mm.

PIPE

Dia= 6.625 in. Wall= 10.973 mm.

Insul Thk= .000 mm.

RESTRAINTS

Node 5220 +Y Mu = .30

Node 5220 Z

Node 5220 X

From 5220 To 5240 DZ= 1,428.000 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5239

Angle/Node @2= .00 5238

From 5240 To 5260 DY= -229.000 mm.

From 5260 To 5280 DY= -450.850 mm.

Element Name= BALL_FLG_150

RIGID Weight= 1,005.25 N.

From 5280 To 5300 DY= -1,786.000 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 5299
Angle/Node @2= .00 5298

From 5300 To 5320 DX= -919.700 mm.

SIF's & TEE's

Node 5320 Unreinforced Tee

From 5020 To 5340 DY= 458.000 mm.

PIPE

Dia= 2.375 in. Wall= 8.738 mm. Cor= 3.0000 mm.

GENERAL

T1= 142 C T2= 175 C P1= 62.0000 bars PHyd= 93.0000 bars

Fluid Den= 43.0000000 kg./m3 Insul Thk= .000 mm.

RESTRAINTS

Node 5340 +Y

From 5340 To 5360 DY= 442.000 mm.

From 5360 To 5380 DY= 459.000 mm.

Element Name= GATE_FLG_600

RIGID Weight= 311.36 N.

From 5380 To 5400 DY= 400.000 mm.

From 5400 To 5420 DY= 165.000 mm.

SIF's & TEE's

Node 5420 <No Type Specified> SIF(in)= 1.300 SIF(out)= 1.300

REDUCER

Diam2= 1.900 in. Wall2= 7.137 mm.

From 5420 To 5440 DY= 166.000 mm.

PIPE

Dia= 1.900 in. Wall= 7.137 mm.

Insul Thk= .000 mm.

RIGID Weight= 100.00 N.

FORCES & MOMENTS

Node 5440 FY2= 1,000.00 N. FZ2= -2,000.00 N.

From 5440 To 5460 DZ= 152.000 mm.

PIPE

Dia= 3.500 in. Wall= 7.620 mm.

Insul Thk= .000 mm.

RIGID Weight= 100.00 N.

From 5460 To 5480 DZ= 73.025 mm.

PIPE

Cor= 6.0000 mm. Element Name= FLANGE_FLG_150

GENERAL

T1= 350 C T2= 350 C P1= 7.5000 bars PHyd= 8.2500 bars

Fluid Den= 1.5000000 kg./m3

RIGID Weight= 54.49 N.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 118 MPa
Sh2= 118 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

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INPUT LISTING

From 5480 To 5500 DY= -39.700 mm. DZ= 139.700 mm.

REDUCER

Diam2= 6.625 in. Wall2= 10.973 mm.

From 5500 To 5520 DZ= 800.000 mm.

PIPE

Dia= 6.625 in. Wall= 10.973 mm.

Insul Thk= .000 mm.

RESTRAINTS

Node 5520 +Y

Node 5520 Z

Node 5520 X

From 5520 To 5540 DZ= 656.500 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5539

Angle/Node @2= .00 5538

From 5540 To 5560 DY= -229.000 mm.

From 5560 To 5580 DY= -450.850 mm.

Element Name= BALL_FLG_150

RIGID Weight= 1,005.25 N.

From 5580 To 5600 DY= -1,786.000 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5599

Angle/Node @2= .00 5598

From 5600 To 5620 DZ= 323.850 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 45.039 Angle/Node @1= 22.52 5619

From 5620 To 5320 DX= -448.260 mm. DZ= 447.650 mm.

SIF's & TEE's

Node 5320 Unreinforced Tee

From 5320 To 5640 DX= -660.540 mm.

SIF's & TEE's

Node 5640 Unreinforced Tee

From 5640 To 5660 DX= -310.000 mm.

RESTRAINTS

Node 5660 +Y Mu = .30

From 5660 To 5680 DX= -3,113.160 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5679

Angle/Node @2= .00 5678

From 5680 To 5700 DY= -723.380 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 5699

Angle/Node @2= .00 5698

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INPUT LISTING

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-----
From 5700 To 4340 DY= -657.000 mm. DZ= 657.000 mm.
SIF's & TEE's
  Node 4340 <No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160
-----
From 5020 To 5720 DX= -500.000 mm.
PIPE
  Dia= 2.375 in. Wall= 8.738 mm. Cor= 3.0000 mm.
GENERAL
  T1= 142 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars
  PHyd= 93.0000 bars Fluid Den= 43.0000000 kg./m3 Insul Thk= .000 mm.
BEND at "TO" end
  Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5719
  Angle/Node @2= .00 5718
ALLOWABLE STRESSES
  B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
  Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
  Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
-----
From 5720 To 5740 DZ= 252.400 mm.
BEND at "TO" end
  Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5739
  Angle/Node @2= .00 5738
-----
From 5740 To 5760 DY= 458.000 mm.
RESTRAINTS
  Node 5760 +Y
-----
From 5760 To 5780 DY= 392.000 mm.
-----
From 5780 To 5800 DY= 459.000 mm.
  Element Name= BALL_FLG_600
RIGID Weight= 311.36 N.
-----
From 5800 To 5820 DY= 376.700 mm.
BEND at "TO" end
  Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5819
  Angle/Node @2= .00 5818
-----
From 5820 To 5840 DZ= 188.300 mm.
RESTRAINTS
  Node 5840 X
  Node 5840 Z
-----
From 5840 To 5860 DZ= 188.300 mm.
-----
From 5860 To 5880 DZ= 459.000 mm.
  Element Name= GLOBE_FLG_600
RIGID Weight= 515.97 N.
-----
From 5880 To 5900 DZ= 77.000 mm.
PIPE
  Cor= 6.0000 mm.
GENERAL
  T1= 350 C T2= 350 C P1= 7.5000 bars P2= .5000 bars PHyd= 8.2500 bars

```

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INPUT LISTING

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Fluid Den= 1.5000000 kg./m3
BEND at "TO" end
  Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5899
  Angle/Node @2= .00 5898
ALLOWABLE STRESSES
  B31.3 (2016)           Cycle Max Switch = ---   Sc= 138 MPa   Sh1= 118 MPa
  Sh2= 118 MPa   Sh3= 138 MPa   Sh4= 138 MPa   Sh5= 138 MPa   Sh6= 138 MPa
  Sh7= 138 MPa   Sh8= 138 MPa   Sh9= 138 MPa   Sy= 241 MPa
-----
From 5900 To 5920 DY= -1,227.700 mm.
RESTRAINTS
  Node 5920 +Y   Mu = .30
-----
From 5920 To 5940 DY= -873.550 mm.
BEND at "TO" end
  Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5939
  Angle/Node @2= .00 5938
-----
From 5940 To 5960 DZ= 811.120 mm.
BEND at "TO" end
  Radius= 76.200 mm. (LONG)   Bend Angle= 45.000   Angle/Node @1= 22.50 5959
  Angle/Node @2= .00 5958
-----
From 5960 To 5640 DX= -616.600 mm.   DZ= 616.600 mm.
-----
From 4380 To 4701 DZ= 2,174.600 mm.
PIPE
  Dia= 10.750 in.   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 4702
  Angle/Node @2= .00 4703
-----
From 4701 To 5021 DX= -6,000.000 mm.
BEND at "TO" end
  Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5022
  Angle/Node @2= .00 5019
-----
From 5021 To 5181 DZ= 1,000.000 mm.
RESTRAINTS
  Node 5181 +Y   Mu = .30
-----
From 5181 To 5341 DZ= 1,000.000 mm.
BEND at "TO" end
  Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5342
  Angle/Node @2= .00 5339
-----
From 5341 To 5661 DX= 6,000.000 mm.
BEND at "TO" end
  Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5662
  Angle/Node @2= .00 5659
-----
From 5661 To 5980 DZ= 1,825.400 mm.
RESTRAINTS
  Node 5980 +Y   Mu = .30

```

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INPUT LISTING

```

Node 5980 X
-----
From 5980 To 6000 DZ= 6,000.000 mm.
RESTRAINTS
Node 6000 +Y Mu = .30
-----
From 6000 To 6020 DZ= 6,000.000 mm.
RESTRAINTS
Node 6020 +Y Mu = .30
Node 6020 X Gap= 3.000 mm.
-----
From 6020 To 6040 DZ= 6,000.000 mm.
RESTRAINTS
Node 6040 +Y Mu = .30
Node 6040 X Gap= 3.000 mm.
Node 6040 Z
-----
From 6040 To 6060 DZ= 6,000.000 mm.
RESTRAINTS
Node 6060 +Y Mu = .30
-----
From 6060 To 6180 DZ= 1,250.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6179
Angle/Node @2= .00 6178
-----
From 6180 To 6185 DX= -6,000.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6184
Angle/Node @2= .00 6183
-----
From 6185 To 6187 DZ= 1,000.000 mm.
RESTRAINTS
Node 6187 +Y Mu = .30
-----
From 6187 To 6190 DZ= 1,000.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6189
Angle/Node @2= .00 6188
-----
From 6190 To 6195 DX= 6,000.000 mm.
BEND at "TO" end
Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6194
Angle/Node @2= .00 6193
RESTRAINTS
Node 6195 +Y Mu = .30
-----
From 6195 To 6200 DZ= 2,750.000 mm.
RESTRAINTS
Node 6200 +Y Mu = .30
Node 6200 X Gap= 3.000 mm.
-----
From 6200 To 6220 DZ= 6,000.000 mm.
RESTRAINTS
Node 6220 +Y Mu = .30

```

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INPUT LISTING

From 6220 To 6240 DZ= 6,000.000 mm.

RESTRAINTS

Node 6240 +Y Mu = .30

Node 6240 X Gap= 3.000 mm.

From 6240 To 6260 DZ= 6,000.000 mm.

RESTRAINTS

Node 6260 +Y

Node 6260 Z

From 6260 To 6280 DZ= 6,000.000 mm.

RESTRAINTS

Node 6280 +Y Mu = .30

Node 6280 X Gap= 3.000 mm.

From 6280 To 6300 DZ= 6,000.000 mm.

RESTRAINTS

Node 6300 +Y Mu = .30

Node 6300 X

From 6300 To 6310 DZ= 5,483.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6309

Angle/Node @2= .00 6308

RESTRAINTS

Node 6310 +Y Mu = .30

From 6310 To 6320 DX= -6,000.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6319

Angle/Node @2= .00 6318

From 6320 To 6323 DZ= 517.000 mm.

From 6323 To 6327 DZ= 500.000 mm.

RESTRAINTS

Node 6327 +Y Mu = .30

From 6327 To 6326 DZ= 983.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6325

Angle/Node @2= .00 6324

From 6326 To 6332 DX= 6,000.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6331

Angle/Node @2= .00 6330

RESTRAINTS

Node 6332 +Y Mu = .30

From 6332 To 6340 DZ= 4,517.000 mm.

RESTRAINTS

Node 6340 +Y Mu = .30

Node 6340 X

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INPUT LISTING

From 6340 To 6360 DZ= 6,000.000 mm.

RESTRAINTS

Node 6360 +Y Mu = .30

Node 6360 Z Gap= 3.000 mm.

From 6360 To 6380 DZ= 4,200.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 6379

Angle/Node @2= .00 6378

RESTRAINTS

Node 6380 +Y Mu = .30

From 6380 To 6400 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 6399

Angle/Node @2= .00 6398

From 6400 To 6420 DX= -6,200.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6419

Angle/Node @2= .00 6418

From 6420 To 6440 DY= -1,700.000 mm.

From 6440 To 6460 DY= -178.000 mm.

REDUCER

Diam2= 8.625 in. Wall2= 8.179 mm.

From 6460 To 6480 DY= -104.775 mm.

PIPE

Dia= 8.625 in. Wall= 8.179 mm. Element Name= FLANGE_FLG_150

Insul Thk= .000 mm.

RIGID Weight= 177.92 N.

RESTRAINTS

Node 6480 ANC

From 4300 To 6500 DZ= -6,000.000 mm.

PIPE

Dia= 10.750 in. Wall= 9.271 mm.

Insul Thk= .000 mm.

RESTRAINTS

Node 6500 +Y Mu = .30

Node 6500 X Gap= 3.000 mm.

From 6500 To 6520 DZ= -6,000.000 mm.

RESTRAINTS

Node 6520 +Y Mu = .30

From 6520 To 6540 DZ= -6,000.000 mm.

RESTRAINTS

Node 6540 +Y Mu = .30

Node 6540 X Gap= 3.000 mm.

From 6540 To 6560 DZ= -6,000.000 mm.

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INPUT LISTING

RESTRAINTS

Node 6560 +Y Mu = .30

From 6560 To 6580 DZ= -6,000.000 mm.

RESTRAINTS

Node 6580 +Y Mu = .30

Node 6580 X Gap= 3.000 mm.

From 6580 To 6600 DZ= -6,000.000 mm.

RESTRAINTS

Node 6600 +Y Mu = .30

From 6600 To 6620 DZ= -6,000.000 mm.

RESTRAINTS

Node 6620 +Y Mu = .30

Node 6620 X Gap= 3.000 mm.

From 2840 To 6640 DZ= 6,000.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm. Cor= .0000 mm.

GENERAL

T1= 60 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars

PHyd= 93.0000 bars Mat= (165)A312 TP316L E= 195,134 MPa

EH1= 192,371 MPa EH2= 184,546 MPa EH3= 195,962 MPa EH4= 195,134 MPa

EH5= 195,134 MPa EH6= 195,134 MPa EH7= 195,134 MPa EH8= 195,134 MPa

EH9= 195,134 MPa v = .292 Pipe Den=8027.1997070 kg./m3

Fluid Den= 59.5999985 kg./m3 Insul Thk= .000 mm.

RESTRAINTS

Node 6640 +Y Mu = .30

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa

Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa

Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

From 6640 To 6660 DZ= 6,000.000 mm.

RESTRAINTS

Node 6660 +Y Mu = .30

Node 6660 X Gap= 3.000 mm.

From 6660 To 6680 DZ= 6,000.000 mm.

RESTRAINTS

Node 6680 +Y Mu = .30

From 6680 To 6700 DZ= 6,000.000 mm.

RESTRAINTS

Node 6700 +Y Mu = .30

Node 6700 X Gap= 3.000 mm.

From 3920 To 6720 DZ= 6,000.000 mm.

PIPE

Dia= 10.750 in. Wall= 9.271 mm. Cor= 6.0000 mm.

GENERAL

T1= 60 C T2= 85 C P1= 9.0000 bars P2= 5.1000 bars PHyd= 13.5000 bars

Mat= (106)A106 Grade B E= 203,408 MPa EH1= 200,645 MPa

EH2= 199,094 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa

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INPUT LISTING

EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa
v = .292 Pipe Den=7833.4399414 kg./m3 Fluid Den= 6.0000000 kg./m3
Insul Thk= .000 mm.

RESTRAINTS

Node 6720 +Y Mu = .30
Node 6720 X Gap= 3.000 mm.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 6720 To 6740 DZ= 6,000.000 mm.

RESTRAINTS

Node 6740 +Y Mu = .30

From 6740 To 6760 DZ= 6,000.000 mm.

RESTRAINTS

Node 6760 +Y Mu = .30
Node 6760 X Gap= 3.000 mm.

From 6760 To 6780 DZ= 6,000.000 mm.

RESTRAINTS

Node 6780 +Y Mu = .30

From 6780 To 6800 DZ= 6,000.000 mm.

RESTRAINTS

Node 6800 +Y Mu = .30
Node 6800 X Gap= 3.000 mm.

From 6800 To 6820 DZ= 6,000.000 mm.

RESTRAINTS

Node 6820 +Y Mu = .30
Node 6820 X Gap= 3.000 mm.

From 6820 To 6840 DZ= 4,200.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6839
Angle/Node @2= .00 6838

RESTRAINTS

Node 6840 +Y Mu = .30

From 6840 To 6860 DX= 6,430.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6859
Angle/Node @2= .00 6858

From 6860 To 6880 DZ= 1,800.000 mm.

RESTRAINTS

Node 6880 +Y Mu = .30

From 6880 To 6900 DZ= 1,800.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6899
Angle/Node @2= .00 6898

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INPUT LISTING

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From 6900 To 6920 DX= -6,430.000 mm.
BEND at "TO" end
    Radius= 381.000 mm. (LONG)    Bend Angle= 90.000    Angle/Node @1= 45.00 6919
    Angle/Node @2= .00 6918
RESTRAINTS
    Node 6920 +Y Mu = .30
-----
From 6920 To 6940 DZ= 4,200.000 mm.
RESTRAINTS
    Node 6940 +Y Mu = .30
    Node 6940 X Gap= 3.000 mm.
-----
From 6940 To 6960 DZ= 6,000.000 mm.
RESTRAINTS
    Node 6960 +Y Mu = .30
    Node 6960 Z Gap= 3.000 mm. Mu = .30
-----
From 6960 To 6980 DZ= 6,000.000 mm.
RESTRAINTS
    Node 6980 +Y Mu = .30
    Node 6980 X Gap= 3.000 mm.
-----
From 6980 To 7000 DZ= 700.000 mm.
-----
From 7000 To 7020 DZ= 104.775 mm.
    Element Name= FLANGE_FLG_150
RIGID Weight= 235.74 N.
-----
From 3940 To 7040 DZ= -6,000.000 mm.
RESTRAINTS
    Node 7040 +Y Mu = .30
-----
From 7040 To 7060 DZ= -6,000.000 mm.
RESTRAINTS
    Node 7060 +Y Mu = .30
    Node 7060 X Gap= 3.000 mm.
-----
From 7060 To 7080 DZ= -6,000.000 mm.
RESTRAINTS
    Node 7080 +Y Mu = .30
-----
From 7080 To 7100 DZ= -6,000.000 mm.
RESTRAINTS
    Node 7100 +Y Mu = .30
    Node 7100 X Gap= 3.000 mm.
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MATERIAL Changes:

20	40	Mat= (106)A106 Grade B E= 203,408 MPa
		v = .292 Density= 7,833.4399 kg./m3
820	840	Mat= (383)A516 70 E= 203,408 MPa
		v = .292 Density= 7,833.4399 kg./m3
280	880	Mat= (106)A106 Grade B E= 203,408 MPa

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INPUT LISTING

1820	1920	v = .292 Density= 7,833.4399 kg./m3 Mat= (165)A312 TP316L E= 195,134 MPa
3260	3280	v = .292 Density= 8,027.1997 kg./m3 Mat= (106)A106 Grade B E= 203,408 MPa
3840	3860	v = .292 Density= 7,833.4399 kg./m3 Mat= (381)A516 60 E= 203,408 MPa
3620	3920	v = .292 Density= 7,833.4399 kg./m3 Mat= (106)A106 Grade B E= 203,408 MPa
2920	3960	v = .292 Density= 7,833.4399 kg./m3 Mat= (165)A312 TP316L E= 195,134 MPa
4200	4220	v = .292 Density= 8,027.1997 kg./m3 Mat= (106)A106 Grade B E= 203,408 MPa
2160	4400	v = .292 Density= 7,833.4399 kg./m3 Mat= (165)A312 TP316L E= 195,134 MPa
4680	4700	v = .292 Density= 8,027.1997 kg./m3 Mat= (106)A106 Grade B E= 203,408 MPa
4460	4760	v = .292 Density= 7,833.4399 kg./m3 Mat= (165)A312 TP316L E= 195,134 MPa
1260	4860	v = .292 Density= 8,027.1997 kg./m3 Mat= (106)A106 Grade B E= 203,408 MPa
2840	6640	v = .292 Density= 7,833.4399 kg./m3 Mat= (165)A312 TP316L E= 195,134 MPa
3920	6720	v = .292 Density= 8,027.1997 kg./m3 Mat= (106)A106 Grade B E= 203,408 MPa

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ALLOWABLE STRESS Changes

20	40	B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
140	160	B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
120	180	B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
540	560	B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
520	580	B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
640	660	B31.3 (2016) Cycle Max Switch = ---

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INPUT LISTING

		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
620	680	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
820	840	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 161 MPa	Sh1= 160 MPa	Sh2= 158 MPa
		Sh3= 161 MPa	Sh4= 161 MPa	Sh5= 161 MPa
		Sh6= 161 MPa	Sh7= 161 MPa	Sh8= 161 MPa
		Sh9= 161 MPa	Sy= 262 MPa	
280	880	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
880	900	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
1440	1460	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
1420	1480	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
1820	1920	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 115 MPa	Sh1= 115 MPa	Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa	Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa	Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa	
2200	2220	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 115 MPa	Sh1= 115 MPa	Sh2= 115 MPa
		Sh3= 115 MPa	Sh4= 115 MPa	Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa	Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa	
2180	2240	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 115 MPa	Sh1= 115 MPa	Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa	Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa	Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa	
3260	3280	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
3520	3540	B31.3 (2016)	Cycle Max Switch = ---	

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INPUT LISTING

		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
3500	3560	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
3840	3860	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 135 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 221 MPa	
3620	3920	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
2920	3960	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 115 MPa	Sh1= 115 MPa	Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa	Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa	Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa	
4200	4220	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 118 MPa	Sh2= 118 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
2160	4400	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 115 MPa	Sh1= 115 MPa	Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa	Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa	Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa	
4680	4700	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 118 MPa	Sh2= 118 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
4460	4760	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 115 MPa	Sh1= 115 MPa	Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa	Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa	Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa	
1260	4860	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
5160	5180	B31.3 (2016)	Cycle Max Switch = ---	
		Sc= 138 MPa	Sh1= 118 MPa	Sh2= 118 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
5460	5480	B31.3 (2016)	Cycle Max Switch = ---	

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		Sc= 138 MPa	Sh1= 118 MPa	Sh2= 118 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
5020	5720	B31.3 (2016) Cycle Max Switch = ---		
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
5880	5900	B31.3 (2016) Cycle Max Switch = ---		
		Sc= 138 MPa	Sh1= 118 MPa	Sh2= 118 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	
2840	6640	B31.3 (2016) Cycle Max Switch = ---		
		Sc= 115 MPa	Sh1= 115 MPa	Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa	Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa	Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa	
3920	6720	B31.3 (2016) Cycle Max Switch = ---		
		Sc= 138 MPa	Sh1= 138 MPa	Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa	Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa	Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa	

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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
80	100	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 99
		Angle/Node @2= .00 98
120	180	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		179
480	500	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		499 Angle/Node @2= .00 498
520	580	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		579 Angle/Node @2= .00 578
580	600	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		599 Angle/Node @2= .00 598
620	680	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		679 Angle/Node @2= .00 678
900	920	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00

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920	940	919 Angle/Node @2= .00 918 Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
980	1000	939 Angle/Node @2= .00 938 Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1100	1120	999 Angle/Node @2= .00 998 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1120	1140	1119 Angle/Node @2= .00 1118 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1160	1180	1139 Angle/Node @2= .00 1138 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1180	1200	1179 Angle/Node @2= .00 1178 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1380	1400	1199 Angle/Node @2= .00 1198 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1420	1480	1399 Angle/Node @2= .00 1398 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1520	1540	1479 Angle/Node @2= .00 1478 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1560	1580	1539 Angle/Node @2= .00 1538 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1580	1600	1579 Angle/Node @2= .00 1578 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1600	1620	1599 Angle/Node @2= .00 1598 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1920	1940	1619 Angle/Node @2= .00 1618 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1940	1960	1939 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
1980	2000	1959 Angle/Node @2= .00 1958 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2120	2140	1999 Angle/Node @2= .00 1998 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2180	2240	2139 Angle/Node @2= .00 2138 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2440	2460	2239 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
		2459 Angle/Node @2= .00 2458

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2460	2480	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2479 Angle/Node @2= .00 2478
2480	2500	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2499 Angle/Node @2= .00 2498
2500	2520	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2519 Angle/Node @2= .00 2518
2520	2540	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2539 Angle/Node @2= .00 2538
2340	2580	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2579 Angle/Node @2= .00 2578
2640	2660	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2659 Angle/Node @2= .00 2658
2020	2860	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2859 Angle/Node @2= .00 2858
2860	2880	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2879
2880	2900	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2899 Angle/Node @2= .00 2898
2940	2960	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		2959 Angle/Node @2= .00 2958
3400	3420	Radius= 304.800 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		3419 Angle/Node @2= .00 3418
3420	3440	Radius= 304.800 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		3439 Angle/Node @2= .00 3438
3500	3560	Radius= 304.800 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		3559
3560	3580	Radius= 304.800 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		3579 Angle/Node @2= .00 3578
3580	3600	Radius= 304.800 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		3599 Angle/Node @2= .00 3598
3640	3660	Radius= 304.800 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		3659 Angle/Node @2= .00 3658
3680	3700	Radius= 304.800 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		3699 Angle/Node @2= .00 3698
4200	4220	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4219
4220	4240	Radius= 152.400 mm. (LONG)

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		Bend Angle= 90.000 Angle/Node @1= 45.00
		4239 Angle/Node @2= .00 4238
4240	4260	Radius= 152.400 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		4259 Angle/Node @2= .00 4258
2160	4400	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4399 Angle/Node @2= .00 4398
4400	4420	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4419 Angle/Node @2= .00 4418
4500	4520	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4519 Angle/Node @2= .00 4518
4540	4560	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4559 Angle/Node @2= .00 4558
4680	4700	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4699 Angle/Node @2= .00 4698
4700	4720	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4719 Angle/Node @2= .00 4718
4720	4740	Radius= 76.200 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		4739 Angle/Node @2= .00 4738
4780	4800	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4799 Angle/Node @2= .00 4798
4800	4820	Radius= 76.200 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		4819 Angle/Node @2= .00 4818
1260	4860	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4859 Angle/Node @2= .00 4858
4860	4880	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4879 Angle/Node @2= .00 4878
4940	4960	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4959 Angle/Node @2= .00 4958
4960	4980	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4979 Angle/Node @2= .00 4978
5220	5240	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5239 Angle/Node @2= .00 5238
5280	5300	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5299 Angle/Node @2= .00 5298
5520	5540	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5539 Angle/Node @2= .00 5538
5580	5600	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00

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5600	5620	5599 Angle/Node @2= .00 5598 Radius= 228.600 mm. (LONG) Bend Angle= 45.039 Angle/Node @1= 22.52
5660	5680	5619 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
5680	5700	5679 Angle/Node @2= .00 5678 Radius= 228.600 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50
5020	5720	5699 Angle/Node @2= .00 5698 Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
5720	5740	5719 Angle/Node @2= .00 5718 Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
5800	5820	5739 Angle/Node @2= .00 5738 Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
5880	5900	5819 Angle/Node @2= .00 5818 Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
5920	5940	5899 Angle/Node @2= .00 5898 Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
5940	5960	5939 Angle/Node @2= .00 5938 Radius= 76.200 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50
4380	4701	5959 Angle/Node @2= .00 5958 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
4701	5021	4702 Angle/Node @2= .00 4703 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
5181	5341	5022 Angle/Node @2= .00 5019 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
5341	5661	5342 Angle/Node @2= .00 5339 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6060	6180	5662 Angle/Node @2= .00 5659 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6180	6185	6179 Angle/Node @2= .00 6178 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6187	6190	6184 Angle/Node @2= .00 6183 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6190	6195	6189 Angle/Node @2= .00 6188 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6300	6310	6194 Angle/Node @2= .00 6193 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
		6309 Angle/Node @2= .00 6308

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6310	6320	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		6319 Angle/Node @2= .00 6318
6327	6326	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		6325 Angle/Node @2= .00 6324
6326	6332	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		6331 Angle/Node @2= .00 6330
6360	6380	Radius= 381.000 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		6379 Angle/Node @2= .00 6378
6380	6400	Radius= 381.000 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		6399 Angle/Node @2= .00 6398
6400	6420	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		6419 Angle/Node @2= .00 6418
6820	6840	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		6839 Angle/Node @2= .00 6838
6840	6860	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		6859 Angle/Node @2= .00 6858
6880	6900	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		6899 Angle/Node @2= .00 6898
6900	6920	Radius= 381.000 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		6919 Angle/Node @2= .00 6918

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RIGIDS

20	40	RIGID Weight= 191.26 N.
120	140	RIGID Weight= .00 N.
200	220	RIGID Weight= 191.26 N.
220	240	RIGID Weight= 191.26 N.
320	340	RIGID Weight= 191.26 N.
340	360	RIGID Weight= 1,023.36 N.
360	380	RIGID Weight= 191.26 N.
420	440	RIGID Weight= 191.26 N.
440	460	RIGID Weight= 191.26 N.
520	540	RIGID Weight= .00 N.
620	640	RIGID Weight= .00 N.
700	720	RIGID Weight= 191.26 N.
720	740	RIGID Weight= 60.00 N.
740	760	RIGID Weight= 191.26 N.
780	800	RIGID Weight= .00 N.
820	840	RIGID Weight= .00 N.
840	860	RIGID Weight= .00 N.
880	900	RIGID Weight= 311.36 N.
960	980	RIGID Weight= 427.01 N.
1060	1080	RIGID Weight= 364.74 N.

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1080	1100	RIGID	Weight= 364.74 N.
1220	1240	RIGID	Weight= 364.74 N.
1300	1320	RIGID	Weight= 364.74 N.
1320	1340	RIGID	Weight= 2,357.44 N.
1340	1360	RIGID	Weight= 364.74 N.
1420	1440	RIGID	Weight= .00 N.
1640	1660	RIGID	Weight= 364.74 N.
1660	1680	RIGID	Weight= 111.20 N.
1720	1740	RIGID	Weight= .00 N.
1740	1760	RIGID	Weight= .00 N.
1800	1820	RIGID	Weight= 111.20 N.
1740	1840	RIGID	Weight= 2,250.00 N.
1840	1860	RIGID	Weight=10,500.00 N.
1860	1880	RIGID	Weight= 4,500.00 N.
1880	1900	RIGID	Weight=10,500.00 N.
1900	1740	RIGID	Weight= 2,250.00 N.
1820	1920	RIGID	Weight= 364.74 N.
2040	2060	RIGID	Weight= 364.74 N.
2060	2080	RIGID	Weight= 2,357.44 N.
2080	2100	RIGID	Weight= 364.74 N.
2180	2200	RIGID	Weight= .00 N.
2260	2280	RIGID	Weight= 364.74 N.
2280	2300	RIGID	Weight= 4,846.72 N.
2300	2320	RIGID	Weight= 364.74 N.
2360	2380	RIGID	Weight= 364.74 N.
2380	2400	RIGID	Weight= 1,979.36 N.
2400	2420	RIGID	Weight= 364.74 N.
2600	2620	RIGID	Weight= 515.97 N.
2980	3000	RIGID	Weight= 364.74 N.
3000	3020	RIGID	Weight= 2,846.72 N.
3020	3040	RIGID	Weight= 364.74 N.
3080	3100	RIGID	Weight= 191.26 N.
3100	3120	RIGID	Weight= 2,423.36 N.
3120	3140	RIGID	Weight= 191.26 N.
3200	3220	RIGID	Weight= 364.74 N.
3220	3240	RIGID	Weight= 1,979.36 N.
3240	3260	RIGID	Weight= 364.74 N.
3320	3340	RIGID	Weight= 5,052.93 N.
3360	3380	RIGID	Weight= 4,224.00 N.
3460	3480	RIGID	Weight= 2,259.58 N.
3500	3520	RIGID	Weight= .00 N.
3740	3760	RIGID	Weight= 177.92 N.
3760	3780	RIGID	Weight= 100.00 N.
3780	3800	RIGID	Weight= 177.92 N.
3840	3860	RIGID	Weight= .00 N.
3860	3880	RIGID	Weight= .00 N.
3880	3900	RIGID	Weight= .00 N.
3980	4000	RIGID	Weight= 1,116.45 N.
4060	4080	RIGID	Weight= 106.75 N.
4080	4100	RIGID	Weight= 1,211.68 N.
4100	4120	RIGID	Weight= 106.75 N.
4180	4200	RIGID	Weight= 1,116.45 N.
4480	4500	RIGID	Weight= 311.36 N.
4580	4600	RIGID	Weight= 55.60 N.
4600	4620	RIGID	Weight= 57.82 N.

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INPUT LISTING

4660	4680	RIGID	Weight=	311.36	N.
4760	4780	RIGID	Weight=	311.36	N.
5060	5080	RIGID	Weight=	311.36	N.
5120	5140	RIGID	Weight=	100.00	N.
5140	5160	RIGID	Weight=	100.00	N.
5160	5180	RIGID	Weight=	54.49	N.
5260	5280	RIGID	Weight=	1,005.25	N.
5360	5380	RIGID	Weight=	311.36	N.
5420	5440	RIGID	Weight=	100.00	N.
5440	5460	RIGID	Weight=	100.00	N.
5460	5480	RIGID	Weight=	54.49	N.
5560	5580	RIGID	Weight=	1,005.25	N.
5780	5800	RIGID	Weight=	311.36	N.
5860	5880	RIGID	Weight=	515.97	N.
6460	6480	RIGID	Weight=	177.92	N.
7000	7020	RIGID	Weight=	235.74	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	Weldolet
1440	1460	Node 1440	Unreinforced Tee
2000	2020	Node 2020	Welding Tee
2140	2160	Node 2160	Weldolet
2200	2220	Node 2200	Unreinforced Tee
2320	2340	Node 2340	Weldolet
2420	2440	Node 2440	Weldolet
2540	2560	Node 2560	Welding Tee
2900	2920	Node 2920	Welding Tee
3280	3300	Node 3300	Welding Tee
3520	3540	Node 3520	Unreinforced Tee
3600	3620	Node 3620	Welding Tee
4260	4280	Node 4280	<No Type Specified>
		SIF(in)= 2.080	SIF(out)= 2.460
4280	4300	Node 4280	<No Type Specified>
		SIF(in)= 2.080	SIF(out)= 2.460
4280	4320	Node 4280	<No Type Specified>
		SIF(in)= 2.080	SIF(out)= 2.460
4320	4340	Node 4340	<No Type Specified>
		SIF(in)= 2.660	SIF(out)= 3.160
4340	4360	Node 4340	<No Type Specified>
		SIF(in)= 2.660	SIF(out)= 3.160
		Pad= 9.270 mm.	
		Node 4360	<No Type Specified>
		SIF(in)= 2.130	SIF(out)= 2.520
4360	4380	Node 4360	<No Type Specified>
		SIF(in)= 2.130	SIF(out)= 2.520
4440	4460	Node 4460	Welding Tee
4740	4360	Node 4360	<No Type Specified>
		SIF(in)= 2.130	SIF(out)= 2.520

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INPUT LISTING

4980	5000	Node 5000	Welding Tee
5000	5020	Node 5020	Welding Tee
5100	5120	Node 5120	<No Type Specified>
		SIF(in)= 1.300	SIF(out)= 1.300
5300	5320	Node 5320	Unreinforced Tee
5400	5420	Node 5420	<No Type Specified>
		SIF(in)= 1.300	SIF(out)= 1.300
5620	5320	Node 5320	Unreinforced Tee
5320	5640	Node 5640	Unreinforced Tee
5700	4340	Node 4340	<No Type Specified>
		SIF(in)= 2.660	SIF(out)= 3.160

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REDUCERS

3060	3080	Diam2= 4.500 in.	Wall2= 6.020 mm.
3140	3160	Diam2= 6.625 in.	Wall2= 7.112 mm.
3260	3280	Diam2= 8.625 in.	Wall2= 8.179 mm.
4040	4060	Diam2= 3.500 in.	Wall2= 5.486 mm.
4120	4140	Diam2= 4.500 in.	Wall2= 6.020 mm.
5100	5120	Diam2= 1.900 in.	Wall2= 7.137 mm.
5180	5200	Diam2= 6.625 in.	Wall2= 10.973 mm.
5400	5420	Diam2= 1.900 in.	Wall2= 7.137 mm.
5480	5500	Diam2= 6.625 in.	Wall2= 10.973 mm.
6440	6460	Diam2= 8.625 in.	Wall2= 8.179 mm.

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RESTRAINTS

NODE	TYPE	CNODE	STIF1	Len GAP STIF2	MU YIELD FORCE	Dir Vectors
20	ANC					.000 .000 .000
160	-X				.30	1.000 .000 .000
160	Z					.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
660	+Y	800			.30	.000 1.000 .000
780	ANC	820				.000 .000 .000
860	ANC					.000 .000 .000
920	+Y				.30	.000 1.000 .000
1040	+Y				.30	.000 1.000 .000
1180	-X				.30	1.000 .000 .000
1180	+Y				.30	.000 1.000 .000
1240	ANC					.000 .000 .000
1280	Y				.30	.000 1.000 .000
1280	Z					.000 .000 1.000
1380	Y				.30	.000 1.000 .000

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INPUT LISTING

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
1560	+Y			.30	.000	1.000	.000
1700	ANC	1720			.000	.000	.000
1780	ANC	1760			.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	.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			.30	1.000	.000	.000
1900	Z		6.00	.30	.000	.000	1.000
1980	+Y			.30	.000	1.000	.000
1980	Z		3.00		.000	.000	1.000
2120	+Y			.30	.000	1.000	.000
2220	+Y			.30	.000	1.000	.000
2440	+Y				.000	1.000	.000
2640	+Y			.30	.000	1.000	.000
2700	+Y			.30	.000	1.000	.000
2720	+Y				.000	1.000	.000
2740	+Y				.000	1.000	.000
2740	X				1.000	.000	.000
2760	+Y				.000	1.000	.000
2780	+Y			.30	.000	1.000	.000
2780	X		3.00	.30	1.000	.000	.000
2800	+Y			.30	.000	1.000	.000
2820	+Y			.30	.000	1.000	.000
2840	+Y			.30	.000	1.000	.000
2840	X		3.00	.30	1.000	.000	.000
2840	Z		3.00	.30	.000	.000	1.000
2940	+Y			.30	.000	1.000	.000
3180	+Y			.30	.000	1.000	.000
3180	X			.30	1.000	.000	.000
3400	+Y			.30	.000	1.000	.000
3400	X		3.00	.30	1.000	.000	.000
3540	+Y			.30	.000	1.000	.000
3640	+Y			.30	.000	1.000	.000
3640	X				1.000	.000	.000
3640	Z				.000	.000	1.000
3680	+Y			.30	.000	1.000	.000
3720	+Y			.30	.000	1.000	.000
3720	Z		3.00	.30	.000	.000	1.000
3820	ANC	3840			.000	.000	.000
3900	ANC				.000	.000	.000
3920	+Y			.30	.000	1.000	.000
3920	Z		3.00	.30	.000	.000	1.000
3940	+Y			.30	.000	1.000	.000
3940	X		3.00	.30	1.000	.000	.000

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INPUT LISTING

3960	+Y			.000	1.000	.000
4020	+Y		.30	.000	1.000	.000
4160	+Y		.30	.000	1.000	.000
4160	X			1.000	.000	.000
4300	+Y		.30	.000	1.000	.000
4320	+Y		.30	.000	1.000	.000
4320	X	3.00	.30	1.000	.000	.000
4320	Z			.000	.000	1.000
4380	+Y		.30	.000	1.000	.000
4440	+Y		.30	.000	1.000	.000
4540	+Y			.000	1.000	.000
4540	Z	3.00		.000	.000	1.000
4640	+Y			.000	1.000	.000
4800	+Y		.30	.000	1.000	.000
4800	X		.30	1.000	.000	.000
4800	Z		.30	.000	.000	1.000
4900	+Y			.000	1.000	.000
4900	Z	3.00		.000	.000	1.000
4920	+Y		.30	.000	1.000	.000
4940	+Y		.30	.000	1.000	.000
4940	Z	3.00		.000	.000	1.000
5040	+Y			.000	1.000	.000
5220	+Y		.30	.000	1.000	.000
5220	Z			.000	.000	1.000
5220	X			1.000	.000	.000
5340	+Y			.000	1.000	.000
5520	+Y			.000	1.000	.000
5520	Z			.000	.000	1.000
5520	X			1.000	.000	.000
5660	+Y		.30	.000	1.000	.000
5760	+Y			.000	1.000	.000
5840	X			1.000	.000	.000
5840	Z			.000	.000	1.000
5920	+Y		.30	.000	1.000	.000
5181	+Y		.30	.000	1.000	.000
5980	+Y		.30	.000	1.000	.000
5980	X			1.000	.000	.000
6000	+Y		.30	.000	1.000	.000
6020	+Y		.30	.000	1.000	.000
6020	X	3.00		1.000	.000	.000
6040	+Y		.30	.000	1.000	.000
6040	X	3.00		1.000	.000	.000
6040	Z			.000	.000	1.000
6060	+Y		.30	.000	1.000	.000
6187	+Y		.30	.000	1.000	.000
6195	+Y		.30	.000	1.000	.000
6200	+Y		.30	.000	1.000	.000
6200	X	3.00		1.000	.000	.000
6220	+Y		.30	.000	1.000	.000
6240	+Y		.30	.000	1.000	.000
6240	X	3.00		1.000	.000	.000
6260	+Y			.000	1.000	.000
6260	Z			.000	.000	1.000
6280	+Y		.30	.000	1.000	.000
6280	X	3.00		1.000	.000	.000

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INPUT LISTING

6300	+Y		.30	.000	1.000	.000
6300	X			1.000	.000	.000
6310	+Y		.30	.000	1.000	.000
6327	+Y		.30	.000	1.000	.000
6332	+Y		.30	.000	1.000	.000
6340	+Y		.30	.000	1.000	.000
6340	X			1.000	.000	.000
6360	+Y		.30	.000	1.000	.000
6360	Z	3.00		.000	.000	1.000
6380	+Y		.30	.000	1.000	.000
6480	ANC			.000	.000	.000
6500	+Y		.30	.000	1.000	.000
6500	X	3.00		1.000	.000	.000
6520	+Y		.30	.000	1.000	.000
6540	+Y		.30	.000	1.000	.000
6540	X	3.00		1.000	.000	.000
6560	+Y		.30	.000	1.000	.000
6580	+Y		.30	.000	1.000	.000
6580	X	3.00		1.000	.000	.000
6600	+Y		.30	.000	1.000	.000
6620	+Y		.30	.000	1.000	.000
6620	X	3.00		1.000	.000	.000
6640	+Y		.30	.000	1.000	.000
6660	+Y		.30	.000	1.000	.000
6660	X	3.00		1.000	.000	.000
6680	+Y		.30	.000	1.000	.000
6700	+Y		.30	.000	1.000	.000
6700	X	3.00		1.000	.000	.000
6720	+Y		.30	.000	1.000	.000
6720	X	3.00		1.000	.000	.000
6740	+Y		.30	.000	1.000	.000
6760	+Y		.30	.000	1.000	.000
6760	X	3.00		1.000	.000	.000
6780	+Y		.30	.000	1.000	.000
6800	+Y		.30	.000	1.000	.000
6800	X	3.00		1.000	.000	.000
6820	+Y		.30	.000	1.000	.000
6820	X	3.00		1.000	.000	.000
6840	+Y		.30	.000	1.000	.000
6880	+Y		.30	.000	1.000	.000
6920	+Y		.30	.000	1.000	.000
6940	+Y		.30	.000	1.000	.000
6940	X	3.00		1.000	.000	.000
6960	+Y		.30	.000	1.000	.000
6960	Z	3.00	.30	.000	.000	1.000
6980	+Y		.30	.000	1.000	.000
6980	X	3.00		1.000	.000	.000
7040	+Y		.30	.000	1.000	.000
7060	+Y		.30	.000	1.000	.000
7060	X	3.00		1.000	.000	.000
7080	+Y		.30	.000	1.000	.000
7100	+Y		.30	.000	1.000	.000
7100	X	3.00		1.000	.000	.000

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INPUT LISTING

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./mm. Theoretical Cold Load = .00 N.
-----	-----	---

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FLANGES

1300	1320	Location= To Method= Peq Class/Grade= ASME-2009-600-1.1 G/C= 7.565 in. T/P table (1)= 37.8 C -> 102.0 bars (2)= 93.3 C -> 93.8 bars (3)= 148.9 C -> 90.3 bars (4)= 204.5 C -> 87.2 bars (5)= 260.0 C -> 83.1 bars (6)= 315.6 C -> 78.3 bars (7)= 343.4 C -> 75.8 bars (8)= 371.1 C -> 73.1 bars (9)= 398.9 C -> 70.0 bars (10)= 426.7 C -> 56.9 bars (11)= 454.5 C -> 44.1 bars (12)= 482.3 C -> 31.7 bars (13)= 510.0 C -> 19.0 bars (14)= 537.8 C -> 11.7 bars
1320	1340	Location= To Method= Peq Class/Grade= ASME-2009-600-1.1 G/C= 7.565 in. T/P table (1)= 37.8 C -> 102.0 bars (2)= 93.3 C -> 93.8 bars (3)= 148.9 C -> 90.3 bars (4)= 204.5 C -> 87.2 bars (5)= 260.0 C -> 83.1 bars (6)= 315.6 C -> 78.3 bars (7)= 343.4 C -> 75.8 bars (8)= 371.1 C -> 73.1 bars (9)= 398.9 C -> 70.0 bars (10)= 426.7 C -> 56.9 bars (11)= 454.5 C -> 44.1 bars (12)= 482.3 C -> 31.7 bars (13)= 510.0 C -> 19.0 bars (14)= 537.8 C -> 11.7 bars

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INPUT LISTING

2040	2060	Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in. T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars (3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars (5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars (7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars (9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars (11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars (13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars (15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars (17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars (19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars (21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars (23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars
2060	2080	Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in. T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars (3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars (5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars (7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars (9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars (11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars (13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars (15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars (17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars (19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars (21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars (23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars
2260	2280	Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in. T/P table (1)= 37.8 C

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```

-> 99.3 bars      ( 2)= 93.3 C      -> 82.7 bars
( 3)= 148.9 C      -> 74.1 bars
( 4)= 204.5 C      -> 68.6 bars
( 5)= 260.0 C      -> 64.1 bars
( 6)= 315.6 C      -> 61.0 bars
( 7)= 343.4 C      -> 59.6 bars
( 8)= 371.1 C      -> 58.3 bars
( 9)= 398.9 C      -> 56.9 bars
(10)= 426.7 C      -> 55.8 bars
(11)= 454.5 C      -> 54.5 bars
(12)= 482.3 C      -> 53.8 bars
(13)= 510.0 C      -> 52.7 bars
(14)= 537.8 C      -> 49.0 bars
(15)= 565.6 C      -> 44.8 bars
(16)= 593.4 C      -> 35.5 bars
(17)= 621.2 C      -> 28.3 bars
(18)= 648.9 C      -> 22.8 bars
(19)= 676.7 C      -> 18.3 bars
(20)= 704.5 C      -> 15.5 bars
(21)= 732.3 C      -> 12.8 bars
(22)= 760.1 C      -> 10.3 bars
(23)= 787.8 C      -> 7.9 bars
(24)= 815.6 C      -> 5.9 bars
2280          2300 Location= To      Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in.    T/P table ( 1)= 37.8 C
-> 99.3 bars      ( 2)= 93.3 C      -> 82.7 bars
( 3)= 148.9 C      -> 74.1 bars
( 4)= 204.5 C      -> 68.6 bars
( 5)= 260.0 C      -> 64.1 bars
( 6)= 315.6 C      -> 61.0 bars
( 7)= 343.4 C      -> 59.6 bars
( 8)= 371.1 C      -> 58.3 bars
( 9)= 398.9 C      -> 56.9 bars
(10)= 426.7 C      -> 55.8 bars
(11)= 454.5 C      -> 54.5 bars
(12)= 482.3 C      -> 53.8 bars
(13)= 510.0 C      -> 52.7 bars
(14)= 537.8 C      -> 49.0 bars
(15)= 565.6 C      -> 44.8 bars
(16)= 593.4 C      -> 35.5 bars
(17)= 621.2 C      -> 28.3 bars
(18)= 648.9 C      -> 22.8 bars
(19)= 676.7 C      -> 18.3 bars
(20)= 704.5 C      -> 15.5 bars
(21)= 732.3 C      -> 12.8 bars
(22)= 760.1 C      -> 10.3 bars
(23)= 787.8 C      -> 7.9 bars
(24)= 815.6 C      -> 5.9 bars
2360          2380 Location= To      Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in.    T/P table ( 1)= 37.8 C
-> 99.3 bars      ( 2)= 93.3 C      -> 82.7 bars
( 3)= 148.9 C      -> 74.1 bars
( 4)= 204.5 C      -> 68.6 bars

```

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Job:: CN-006

Licensed To:: SPLM: Edit company name in <system>\company.txt

INPUT LISTING

```

( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars
(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
(16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars
(18)= 648.9 C -> 22.8 bars
(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars

2380          2400
Location= To      Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in.    T/P table ( 1)= 37.8 C
-> 99.3 bars      ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars
(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
(16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars
(18)= 648.9 C -> 22.8 bars
(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars

2980          3000
Location= To      Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in.    T/P table ( 1)= 37.8 C
-> 99.3 bars      ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars

```

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INPUT LISTING

```

( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars
(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
(16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars
(18)= 648.9 C -> 22.8 bars
(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars

3000          3020
Location= To      Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in.    T/P table ( 1)= 37.8 C
-> 99.3 bars      ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars
(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
(16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars
(18)= 648.9 C -> 22.8 bars
(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars

3080          3100
Location= To      Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in.    T/P table ( 1)= 37.8 C
-> 99.3 bars      ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars

```

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INPUT LISTING

```

(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars
(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
(16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars
(18)= 648.9 C -> 22.8 bars
(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars
3100          3120 Location= To Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in. T/P table ( 1)= 37.8 C
-> 99.3 bars ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars
(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
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(17)= 621.2 C -> 28.3 bars
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(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars
3200          3220 Location= To Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in. T/P table ( 1)= 37.8 C
-> 99.3 bars ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars

```

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INPUT LISTING

```

(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
(16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars
(18)= 648.9 C -> 22.8 bars
(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars
3220          3240 Location= To Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in. T/P table ( 1)= 37.8 C
-> 99.3 bars ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
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(19)= 676.7 C -> 18.3 bars
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(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars

```

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EQUIPMENT LIMITS

20 40 Nozzle Node = 20

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,160.00 N. FB= 2,160.00 N.
 FC= 2,160.00 N. MA= 1,155.00 N.m. MB= 1,155.00 N.m. MC= 1,155.00 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= 8,400.00 N. FB= 8,400.00 N.
 FC= 6,300.00 N. MA= 3,780.00 N.m. MB= 2,520.00 N.m. MC= 3,280.00 N.m.
 Equipment Major Direction Vector= .0000 .0000 1.0000

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INPUT LISTING

Interact. Mtd= Absolute

1220 1240 Nozzle Node = 1240

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,160.00 N. FB= 2,160.00 N.
FC= 2,160.00 N. MA= 1,155.00 N.m. MB= 1,155.00 N.m. MC= 1,155.00 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= 15,090.00 N. FB= 15,090.00 N.
FC= 12,000.00 N. MA= 9,150.00 N.m. MB= 4,890.00 N.m. MC= 6,420.00 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= 15,090.00 N. FB= 15,090.00 N.
FC= 12,000.00 N. MA= 9,150.00 N.m. MB= 4,890.00 N.m. MC= 6,420.00 N.m.
Equipment Major Direction Vector= .0000 .0000 1.0000

Interact. Mtd= Absolute

3800 3820 Nozzle Node = 3820

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 9,600.00 N. FB= 9,600.00 N.
FC= 7,200.00 N. MA= 5,760.00 N.m. MB= 3,840.00 N.m. MC= 4,990.00 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000

Interact. Mtd= Absolute

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FORCES AND MOMENTS

2180 2240 Node 2240
5120 5140 Node 5140 FY1= 1,000.00 N.
FZ1= -2,000.00 N.
5420 5440 Node 5440 FY2= 1,000.00 N.
FZ2= -2,000.00 N.

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UNIFORM LOAD Changes

20 40 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

INPUT UNITS USED...

UNITS= 7728A 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	0.007	=	MPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	0.069	=	bars
ELASTIC MODULUS	lbs./sq.in.	x	0.007	=	MPa
PIPE DENSITY	lbs./cu.in.	x	27680.000	=	kg./m3
INSULATION DENS.	lbs./cu.in.	x	27680.000	=	kg./m3
FLUID DENSITY	lbs./cu.in.	x	27680.000	=	kg./m3
TRANSL. STIF	lbs./in.	x	0.175	=	N./mm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg.
UNIFORM LOAD	lb./in.	x	175.127	=	N./m.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6894.757	=	N./m2.
ELEVATION	inches	x	25.400	=	mm.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	1.000	=	in.
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 =                  0.175120E+12 N./mm.
DECOMP SNG TOL =                       0.100000E+11
BEND AXIAL SHAPE =                     YES
FRICT STIF =                           175120.      N./mm.
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=         0.175120E+12      N./mm.
DEFAULT ROT RESTRAINT STIFF=           0.112980E+12 N.m./deg.
IGNORE SPRING HANGER STIFFNESS =       NO
MISSING MASS ZPA =                      EXTRACTED

```

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INPUT LISTING

```

MIN WALL MILL TOLERANCE =          12.5000
WRC-107 VERSION =          MAR 79 1B1/2B1
WRC-107 INTERPOLATION =          LAST VALUE
DEFAULT AMBIENT TEMPERATURE=          21.1142          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) =          22064.0          MPa
FRP Ratio Gmod/Emod (axial) =          0.250000
FRP Ea/Eh*Vh/a =          0.152730
FRP Laminate Type =          THREE
FRP Alpha =          21.5983          C
FRP Density =          1660.80          kg./m3
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

```

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INPUT LISTING

```
Ambient Temperature ..... 21.000 C
Plastic (FRP) Alpha ..... 21.598
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
20      6553.000  -5329.350  7060.100
40      6452.000  -5329.350  7060.100
60      5374.720  -5329.350  7060.100
80      5374.720  -5958.483  7060.100
100     5874.720  -5958.483  7060.100
120     5874.720  -7216.753  7060.100
140     5874.720  -7445.753  7060.100
160     5874.720  -7645.753  7060.100
120     5874.720  -7216.753  7060.100
180     5874.720  -7445.753  7060.100
200     5645.720  -7445.753  7060.100
220     5544.120  -7445.753  7060.100
240     5442.520  -7445.753  7060.100
260     4742.520  -7445.753  7060.100
280     4447.020  -7445.753  7060.100
300     3947.020  -7445.753  7060.100
320     3744.020  -7445.753  7060.100
340     3642.419  -7445.753  7060.100
360     3153.419  -7445.753  7060.100
380     3051.819  -7445.753  7060.100
400     2201.819  -7445.753  7060.100
420       633.229  -7445.753  7060.100
440       526.229  -7445.753  7060.100
460       419.229  -7445.753  7060.100
480      -930.771  -7445.753  7060.100
500     -4893.771  -7445.753  7060.100
520     -4893.771  -7216.753  7060.100
540     -4893.771  -7445.753  7060.100
560     -4893.771  -7745.753  7060.100
520     -4893.771  -7216.753  7060.100
580     -4893.771  -3441.353  7060.100
600     -4893.771  -3441.353  4310.100
620     -5208.371  -3441.353  4310.100
640     -5208.371  -3525.353  4310.100
660     -5208.371  -3825.353  4310.100
620     -5208.371  -3441.353  4310.100
680     -6203.371  -3441.353  4310.100
700     -6203.371  -3670.353  4310.100
```

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INPUT LISTING

720	-6203.371	-3771.953	4310.100
740	-6203.371	-3799.953	4310.100
760	-6203.371	-3901.553	4310.100
780	-6203.371	-4082.953	4310.100
780	-6203.371	-4082.353	4310.100
660	-5208.371	-3825.353	4310.100
780	-6203.371	-4082.953	4310.100
840	-6203.371	-7147.953	4310.100
860	-6203.371	-8347.953	4310.100
280	4447.020	-7445.753	7060.100
880	4447.020	-7445.753	7182.240
900	4447.020	-7445.753	7641.640
920	4447.020	-7445.753	8217.840
940	4447.020	-6931.413	8217.840
960	4447.020	-6931.413	8138.640
980	4447.020	-6931.413	7678.899
1000	4447.020	-6931.413	6456.759
1020	4447.020	-7329.753	6456.759
1040	4747.020	-7329.753	6456.759
1060	4915.029	-7329.753	6456.759
1080	5041.029	-7329.753	6456.759
1100	5167.029	-7329.753	6456.759
1120	5497.029	-7329.753	6456.759
1140	5497.029	-7329.753	5456.759
1160	5962.763	-7329.753	5456.759
1180	6195.630	-7329.753	5456.759
1200	6195.630	-7329.753	7056.759
1220	6424.630	-7329.753	7056.759
1240	6551.630	-7329.753	7056.759
1020	4447.020	-7329.753	6456.759
1260	3047.020	-7329.753	6456.759
1280	2197.020	-7329.753	6456.759
1300	1547.020	-7329.753	6456.759
1320	1420.020	-7329.753	6456.759
1340	853.020	-7329.753	6456.759
1360	726.020	-7329.753	6456.759
1380	-923.980	-7329.753	6456.759
1400	-4892.980	-7329.753	6456.759
1420	-4892.980	-7100.753	6456.759
1440	-4892.980	-7329.753	6456.759
1460	-4892.980	-7629.753	6456.759
1420	-4892.980	-7100.753	6456.759
1480	-4892.980	-5545.353	6456.759
1500	-10202.580	-5545.353	6456.759
1520	-16202.580	-5545.353	6456.759
1540	-20183.881	-5545.353	6456.759
1560	-20183.881	-5545.353	7056.759
1580	-20183.881	-5545.353	9806.760
1600	-20183.881	-3025.433	9806.760
1620	-20841.080	-3025.433	9806.760
1640	-20841.080	-3254.433	9806.760
1660	-20841.080	-3381.433	9806.760
1680	-20841.080	-3416.433	9806.760
1700	-20841.080	-3616.433	9806.760
1740	-20841.080	-3856.433	9806.760

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INPUT LISTING

1780	-20841.080	-4096.433	9806.760
1800	-20841.080	-4296.433	9806.760
1820	-20841.080	-4331.433	9806.760
1740	-20841.080	-3856.433	9806.760
1840	-20841.080	-3856.433	11306.760
1860	-27876.080	-3856.433	11306.760
1880	-27876.080	-3856.433	8306.760
1900	-20841.080	-3856.433	8306.760
1740	-20841.080	-3856.433	9806.760
1820	-20841.080	-4331.433	9806.760
1920	-20841.080	-4458.433	9806.760
1940	-20841.080	-4687.433	9806.760
1960	-20841.080	-4687.433	9149.560
1980	-16400.080	-4687.433	9149.560
2000	-15800.080	-4687.433	9149.560
2020	-15800.080	-4696.183	10824.560
2040	-15800.080	-4696.893	10967.359
2060	-15800.080	-4697.524	11094.357
2080	-15800.080	-4700.303	11653.150
2100	-15800.080	-4700.934	11780.148
2120	-15800.080	-4703.440	12280.143
2140	-15800.080	-4705.734	12737.749
2160	-15357.311	-4705.734	12737.749
2180	-14657.730	-4705.734	12737.749
2200	-14428.730	-4705.734	12737.749
2220	-14128.730	-4705.734	12737.749
2180	-14657.730	-4705.734	12737.749
2240	-14428.730	-4705.734	12737.749
2260	-14428.730	-4705.734	12309.239
2280	-14428.730	-4705.734	12182.239
2300	-14428.730	-4705.734	11614.239
2320	-14428.730	-4705.734	11487.239
2340	-14428.730	-4705.734	11231.020
2360	-14428.730	-4705.734	11031.020
2380	-14428.730	-4705.734	10904.020
2400	-14428.730	-4705.734	10306.020
2420	-14428.730	-4705.734	10179.020
2440	-14428.730	-4705.734	9979.020
2460	-14428.730	-4705.734	9550.420
2480	-14428.730	-5988.304	9550.420
2500	-13228.131	-5988.304	9550.420
2520	-13228.131	-5988.304	10110.420
2540	-14428.730	-5988.304	10110.420
2560	-14428.730	-7727.704	10110.420
2340	-14428.730	-4705.734	11231.020
2580	-13980.271	-4705.734	11231.020
2600	-13980.271	-4705.734	11154.819
2620	-13980.271	-4705.734	10707.579
2640	-13980.271	-4705.734	10507.579
2660	-13980.271	-4705.734	9979.079
2660	-13980.271	-4705.734	9979.020
2440	-14428.730	-4705.734	9979.020
2680	-14428.730	-7727.704	9919.420
2700	-14428.730	-7727.704	8459.420
2680	-14428.730	-7727.704	9919.420

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INPUT LISTING

2720	-14428.730	-7727.704	10104.420
2560	-14428.730	-7727.704	10110.420
2740	-14428.730	-7727.704	16104.420
2760	-14428.730	-7727.704	22104.420
2780	-14428.730	-7727.704	28104.420
2800	-14428.730	-7727.704	34104.422
2820	-14428.730	-7727.704	40104.422
2840	-14428.730	-7727.704	46104.422
2020	-15800.080	-4696.183	10824.560
2860	-15800.080	-4324.683	10824.560
2880	-16257.280	-4324.683	10824.560
2900	-16257.280	-4324.683	8608.560
2920	-15700.080	-4324.683	8608.560
2940	-14828.610	-4324.683	8608.560
2960	-14428.610	-4324.683	8608.560
2980	-14428.610	-4324.683	8379.560
3000	-14428.610	-4324.683	8252.560
3020	-14428.610	-4324.683	7684.760
3040	-14428.610	-4324.683	7557.760
3060	-14428.610	-4324.683	7407.760
3080	-14428.610	-4351.683	7268.060
3100	-14428.610	-4351.683	7156.935
3120	-14428.610	-4351.683	6715.135
3140	-14428.610	-4351.683	6604.010
3160	-14428.610	-4324.683	6464.310
3180	-14428.610	-4324.683	6114.310
3200	-14428.610	-4324.683	5531.830
3220	-14428.610	-4324.683	5404.830
3240	-14428.610	-4324.683	4837.030
3260	-14428.610	-4324.683	4710.030
3280	-14428.610	-4324.683	4557.630
3300	-14428.610	-4324.683	4379.830
3320	-14428.610	-4324.683	4202.030
3340	-14428.610	-4324.683	3494.530
3360	-14428.610	-4324.683	3337.530
3380	-14428.610	-4324.683	2509.530
3400	-14428.610	-4324.683	2309.530
3420	-14428.610	-4324.683	1804.730
3440	-13359.710	-4324.683	1804.730
3460	-13359.710	-4324.683	2109.730
3480	-13359.710	-4324.683	2799.430
3500	-13359.710	-4324.683	3249.430
3520	-13359.710	-4324.683	3554.430
3540	-13359.710	-4324.683	3904.430
3500	-13359.710	-4324.683	3249.430
3560	-13359.710	-4324.683	3554.430
3580	-13359.710	-5501.683	3554.430
3600	-11900.110	-5501.683	3554.430
3620	-11900.110	-7674.683	3554.430
3300	-14428.610	-4324.683	4379.830
3640	-14428.610	-4674.683	4379.830
3660	-14428.610	-5511.683	4379.830
3680	-14428.610	-5511.683	1288.290
3700	-14428.610	-5511.683	288.290
3720	-10400.110	-5511.683	288.290

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INPUT LISTING

3740	-7246.710	-5511.683	288.290
3760	-7141.936	-5511.683	288.290
3780	-7116.936	-5511.683	288.290
3800	-7012.936	-5511.683	288.290
3820	-6856.936	-5511.683	288.290
3860	-6396.936	-5511.683	288.290
3880	-6396.936	-7071.683	288.290
3900	-6396.936	-8271.684	288.290
3620	-11900.110	-7674.683	3554.430
3920	-11900.110	-7674.683	4287.430
3620	-11900.110	-7674.683	3554.430
3940	-11900.110	-7674.683	-1711.570
2920	-15700.080	-4324.683	8608.560
3960	-15700.080	-4324.683	8208.560
3980	-15700.080	-4324.683	7978.560
4000	-15700.080	-4324.683	7324.510
4020	-15700.080	-4324.683	7174.510
4040	-15700.080	-4324.683	7024.510
4060	-15700.080	-4337.383	6922.910
4080	-15700.080	-4337.383	6830.834
4100	-15700.080	-4337.383	6465.834
4120	-15700.080	-4337.383	6373.759
4140	-15700.080	-4324.683	6272.159
4160	-15700.080	-4324.683	6022.159
4180	-15700.080	-4324.683	5755.219
4200	-15700.080	-4324.683	5302.219
4220	-15700.080	-4324.683	5149.219
4240	-15700.080	-6520.683	5149.219
4260	-15700.080	-6520.683	6449.219
4280	-15700.080	-7395.683	7324.219
4300	-15700.080	-7395.683	4104.219
4280	-15700.080	-7395.683	7324.219
4320	-15700.080	-7395.683	10104.219
4340	-15700.080	-7395.683	12310.889
4360	-15700.080	-7395.683	14687.099
4380	-15700.080	-7395.683	16104.219
2160	-15357.311	-4705.734	12737.749
4400	-15357.311	-4329.134	12737.749
4420	-16170.011	-4329.134	12737.749
4440	-16170.011	-4329.134	12963.949
4460	-16170.011	-4329.134	13190.149
4480	-14504.110	-4329.134	13190.149
4500	-14045.110	-4329.134	13190.149
4520	-13968.110	-4329.134	13190.149
4540	-13968.110	-4329.134	13416.350
4560	-13968.110	-4329.134	13642.550
4580	-14515.311	-4329.134	13642.550
4600	-14590.311	-4329.134	13642.550
4620	-14665.311	-4329.134	13642.550
4640	-14965.311	-4329.134	13642.550
4660	-15065.311	-4329.134	13642.550
4680	-15542.311	-4329.134	13642.550
4700	-15700.080	-4329.134	13642.550
4720	-15700.080	-6751.134	13642.550
4740	-15700.080	-6751.134	14042.550

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INPUT LISTING

4740	-15700.080	-6751.133	14042.549
4360	-15700.080	-7395.683	14687.099
4460	-16170.011	-4329.134	13190.149
4760	-16170.011	-4329.134	13566.350
4780	-16170.011	-4329.134	14043.550
4800	-16170.011	-4329.134	14120.550
4820	-16170.011	-2037.134	14120.550
4840	-16170.011	-1987.134	14170.550
1260	3047.020	-7329.753	6456.759
4860	3047.020	-5599.753	6456.759
4880	3047.020	-5599.753	6709.159
4900	47.020	-5599.753	6709.159
4920	-5452.980	-5599.753	6709.159
4940	-10196.980	-5599.753	6709.159
4960	-10556.980	-5599.753	6709.159
4980	-10556.980	-5599.753	9061.159
5000	-10696.681	-5599.753	9061.159
5020	-11168.121	-5599.753	9061.159
5000	-10696.681	-5599.753	9061.159
5040	-10696.681	-5141.753	9061.159
5060	-10696.681	-4699.753	9061.159
5080	-10696.681	-4240.753	9061.159
5100	-10696.681	-3840.753	9061.159
5120	-10696.681	-3675.753	9061.159
5140	-10696.681	-3509.753	9061.159
5160	-10696.681	-3509.753	9213.159
5180	-10696.681	-3509.753	9286.185
5200	-10696.681	-3549.453	9425.885
5220	-10696.681	-3549.453	10225.885
5240	-10696.681	-3549.453	11653.885
5260	-10696.681	-3778.453	11653.885
5280	-10696.681	-4229.303	11653.885
5300	-10696.681	-6015.303	11653.885
5320	-11616.381	-6015.303	11653.885
5020	-11168.121	-5599.753	9061.159
5340	-11168.121	-5141.753	9061.159
5360	-11168.121	-4699.753	9061.159
5380	-11168.121	-4240.753	9061.159
5400	-11168.121	-3840.753	9061.159
5420	-11168.121	-3675.753	9061.159
5440	-11168.121	-3509.753	9061.159
5460	-11168.121	-3509.753	9213.159
5480	-11168.121	-3509.753	9286.185
5500	-11168.121	-3549.453	9425.885
5520	-11168.121	-3549.453	10225.885
5540	-11168.121	-3549.453	10882.385
5560	-11168.121	-3778.453	10882.385
5580	-11168.121	-4229.303	10882.385
5600	-11168.121	-6015.303	10882.385
5620	-11168.121	-6015.303	11206.234
5320	-11616.381	-6015.303	11653.885
5640	-12276.921	-6015.303	11653.885
5660	-12586.921	-6015.303	11653.885
5680	-15700.081	-6015.303	11653.885
5700	-15700.081	-6738.683	11653.885

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INPUT LISTING

5700	-15700.080	-6738.683	11653.889
4340	-15700.080	-7395.683	12310.889
5020	-11168.121	-5599.753	9061.159
5720	-11668.121	-5599.753	9061.159
5740	-11668.121	-5599.753	9313.560
5760	-11668.121	-5141.753	9313.560
5780	-11668.121	-4749.753	9313.560
5800	-11668.121	-4290.753	9313.560
5820	-11668.121	-3914.053	9313.560
5840	-11668.121	-3914.053	9501.859
5860	-11668.121	-3914.053	9690.159
5880	-11668.121	-3914.053	10149.159
5900	-11668.121	-3914.053	10226.159
5920	-11668.121	-5141.753	10226.159
5940	-11668.121	-6015.303	10226.159
5960	-11668.121	-6015.303	11037.279
5960	-11660.321	-6015.303	11037.285
5640	-12276.921	-6015.303	11653.885
4380	-15700.080	-7395.683	16104.219
4701	-15700.080	-7395.683	18278.818
5021	-21700.080	-7395.683	18278.818
5181	-21700.080	-7395.683	19278.818
5341	-21700.080	-7395.683	20278.818
5661	-15700.080	-7395.683	20278.818
5980	-15700.080	-7395.683	22104.219
6000	-15700.080	-7395.683	28104.219
6020	-15700.080	-7395.683	34104.219
6040	-15700.080	-7395.683	40104.219
6060	-15700.080	-7395.683	46104.219
6180	-15700.080	-7395.683	47354.219
6185	-21700.080	-7395.683	47354.219
6187	-21700.080	-7395.683	48354.219
6190	-21700.080	-7395.683	49354.219
6195	-15700.080	-7395.683	49354.219
6200	-15700.080	-7395.683	52104.219
6220	-15700.080	-7395.683	58104.219
6240	-15700.080	-7395.683	64104.219
6260	-15700.080	-7395.683	70104.219
6280	-15700.080	-7395.683	76104.219
6300	-15700.080	-7395.683	82104.219
6310	-15700.080	-7395.683	87587.219
6320	-21700.080	-7395.683	87587.219
6323	-21700.080	-7395.683	88104.219
6327	-21700.080	-7395.683	88604.219
6326	-21700.080	-7395.683	89587.219
6332	-15700.080	-7395.683	89587.219
6340	-15700.080	-7395.683	94104.219
6360	-15700.080	-7395.683	100104.219
6380	-15700.080	-7395.683	104304.219
6400	-17500.080	-7395.683	106104.219
6420	-23700.080	-7395.683	106104.219
6440	-23700.080	-9095.684	106104.219
6460	-23700.080	-9273.684	106104.219
6480	-23700.080	-9378.459	106104.219
4300	-15700.080	-7395.683	4104.219

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INPUT LISTING

6500	-15700.080	-7395.683	-1895.781
6520	-15700.080	-7395.683	-7895.781
6540	-15700.080	-7395.683	-13895.781
6560	-15700.080	-7395.683	-19895.781
6580	-15700.080	-7395.683	-25895.781
6600	-15700.080	-7395.683	-31895.781
6620	-15700.080	-7395.683	-37895.781
2840	-14428.730	-7727.704	46104.422
6640	-14428.730	-7727.704	52104.422
6660	-14428.730	-7727.704	58104.422
6680	-14428.730	-7727.704	64104.422
6700	-14428.730	-7727.704	70104.422
3920	-11900.110	-7674.683	4287.430
6720	-11900.110	-7674.683	10287.430
6740	-11900.110	-7674.683	16287.430
6760	-11900.110	-7674.683	22287.430
6780	-11900.110	-7674.683	28287.430
6800	-11900.110	-7674.683	34287.430
6820	-11900.110	-7674.683	40287.430
6840	-11900.110	-7674.683	44487.430
6860	-5470.110	-7674.683	44487.430
6880	-5470.110	-7674.683	46287.430
6900	-5470.110	-7674.683	48087.430
6920	-11900.110	-7674.683	48087.430
6940	-11900.110	-7674.683	52287.430
6960	-11900.110	-7674.683	58287.430
6980	-11900.110	-7674.683	64287.430
7000	-11900.110	-7674.683	64987.430
7020	-11900.110	-7674.683	65092.203
3940	-11900.110	-7674.683	-1711.570
7040	-11900.110	-7674.683	-7711.570
7060	-11900.110	-7674.683	-13711.570
7080	-11900.110	-7674.683	-19711.570
7100	-11900.110	-7674.683	-25711.570

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 RESTRAINT SUMMARY REPORT: Loads On Restraints
 Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP+H
 CASE 4 (OPE) W+T1+P1+H
 CASE 6 (OPE) W+T2+P1+H
 CASE 7 (OPE) W+T3+P1+H
 CASE 9 (OPE) W+T1+P2+H
 CASE 10 (SUS) W+P1+H
 CASE 11 (SUS) WNC+H

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
20		TYPE=Rigid ANC;					
	3(HYD)	-165	-669	12	-5	12	253
	4(OPE)	361	1105	39	-26	95	-1083
	6(OPE)	893	2950	58	-37	134	-2507
	7(OPE)	-499	-1118	16	-8	23	451
	9(OPE)	361	1105	39	-26	95	-1083
	10(SUS)	-114	-530	12	-5	11	192
	11(SUS)	-115	-518	12	-5	11	181
	MAX	893/L6	2950/L6	58/L6	-37/L6	134/L6	-2507/L6
121		TYPE=Rigid +Y;					
	3(HYD)	-106	-1809	0	0	0	0
	4(OPE)	0	-1335	0	0	0	0
	6(OPE)	0	-1368	0	0	0	0
	7(OPE)	-131	-1309	0	0	0	0
	9(OPE)	0	-1335	0	0	0	0
	10(SUS)	-70	-1315	0	0	0	0
	11(SUS)	-69	-1315	0	0	0	0
	MAX	-131/L7	-1809/L3				
160		TYPE=Rigid Z; Rigid -X; Rigid X; Prog Design VSH;					
	3(HYD)	-106	-1809	7	0	0	0
	4(OPE)	2233	-2004	433	0	0	0
	6(OPE)	3051	-2284	562	0	0	0
	7(OPE)	-130	-1309	27	0	0	0
	9(OPE)	2233	-2004	433	0	0	0
	10(SUS)	-70	-1315	6	0	0	0
	11(SUS)	-69	-1315	6	0	0	0
	MAX	3051/L6	-2284/L6	562/L6			
300		TYPE=Rigid +Y;					
	3(HYD)	185	-1943	112	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)	-862	-2955	207	0	0	0
	6(OPE)	-1640	-5514	216	0	0	0
	7(OPE)	-272	-912	31	0	0	0
	9(OPE)	-862	-2955	207	0	0	0
	10(SUS)	125	-1710	103	0	0	0
	11(SUS)	125	-1700	102	0	0	0
	MAX	-1640/L6	-5514/L6	216/L6			
400		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	163	-1580	-13	0	0	0
	4(OPE)	-148	-493	402	0	0	0
	6(OPE)	-267	891	529	0	0	0
	7(OPE)	-164	-1562	132	0	0	0
	9(OPE)	-148	-493	402	0	0	0
	10(SUS)	110	-1268	-13	0	0	0
	11(SUS)	109	-1263	-13	0	0	0
	MAX	-267/L6	-1580/L3	529/L6			
480		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	216	-2042	-8	0	0	0
	4(OPE)	-534	-1780	33	0	0	0
	6(OPE)	-694	-2315	201	0	0	0
	7(OPE)	421	-1403	-82	0	0	0
	9(OPE)	-534	-1780	33	0	0	0
	10(SUS)	146	-1452	-5	0	0	0
	11(SUS)	144	-1438	-5	0	0	0
	MAX	-694/L6	-2315/L6	201/L6			
560		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	-325	-3243	34	0	0	0
	4(OPE)	-635	-2117	13	0	0	0
	6(OPE)	-580	-1932	-12	0	0	0
	7(OPE)	665	-2216	37	0	0	0
	9(OPE)	-635	-2117	13	0	0	0
	10(SUS)	-218	-2224	23	0	0	0
	11(SUS)	-216	-2201	23	0	0	0
	MAX	665/L7	-3243/L3	37/L7			
660		TYPE=Rigid +Y;					
	3(HYD)	-123	-1170	-113	0	0	0
	4(OPE)	-150	-859	210	0	0	0
	6(OPE)	-122	-970	264	0	0	0
	7(OPE)	15	-782	-234	0	0	0
	9(OPE)	-150	-859	210	0	0	0
	10(SUS)	-85	-808	-76	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)	-84	-800	-76	0	0	0
	MAX	-150/L4	-1170/L3	264/L6			
780		TYPE=Rigid ANC;					
	3(HYD)	32	-1884	-27	86	99	-1224
	4(OPE)	-250	-1321	-92	-73	-316	-879
	6(OPE)	-614	-1173	-204	-244	-777	-954
	7(OPE)	131	-1457	8	102	227	-857
	9(OPE)	-250	-1321	-92	-73	-316	-879
	10(SUS)	21	-1422	-18	59	67	-845
	11(SUS)	21	-1412	-18	58	66	-836
	MAX	-614/L6	-1884/L3	-204/L6	-244/L6	-777/L6	-1224/L3
860		TYPE=Rigid ANC;					
	3(HYD)	32	-1884	-27	-30	99	-1359
	4(OPE)	-250	-1321	-92	-463	-316	185
	6(OPE)	-614	-1173	-204	-1113	-777	1666
	7(OPE)	131	-1457	8	138	227	-1415
	9(OPE)	-250	-1321	-92	-463	-316	185
	10(SUS)	21	-1422	-18	-19	67	-936
	11(SUS)	21	-1412	-18	-19	66	-926
	MAX	-614/L6	-1884/L3	-204/L6	-1113/L6	-777/L6	1666/L6
920		TYPE=Rigid +Y;					
	3(HYD)	-0	-634	60	0	0	0
	4(OPE)	-72	-1203	353	0	0	0
	6(OPE)	-178	-1410	384	0	0	0
	7(OPE)	-120	-580	-126	0	0	0
	9(OPE)	-72	-1203	353	0	0	0
	10(SUS)	-1	-649	83	0	0	0
	11(SUS)	-1	-648	84	0	0	0
	MAX	-178/L6	-1410/L6	384/L6			
1040		TYPE=Rigid +Y;					
	3(HYD)	121	-2183	-171	0	0	0
	4(OPE)	-667	-2252	108	0	0	0
	6(OPE)	-739	-2464	-28	0	0	0
	7(OPE)	-525	-1763	62	0	0	0
	9(OPE)	-667	-2252	108	0	0	0
	10(SUS)	97	-1859	-185	0	0	0
	11(SUS)	96	-1840	-185	0	0	0
	MAX	-739/L6	-2464/L6	-185/L11			
1180		TYPE=Rigid +Y; Rigid -X;					

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RESTRAINT SUMMARY REPORT: 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)	3	-1194	3	0	0	0
	4(OPE)	7471	-927	-2519	0	0	0
	6(OPE)	8661	-877	-2861	0	0	0
	7(OPE)	-253	-943	126	0	0	0
	9(OPE)	7471	-927	-2519	0	0	0
	10(SUS)	2	-954	3	0	0	0
	11(SUS)	2	-940	3	0	0	0
	MAX	8661/L6	-1194/L3	-2861/L6			
1240		TYPE=Rigid ANC;					
	3(HYD)	4	-762	8	-3	2	249
	4(OPE)	1087	-629	-62	9	-984	191
	6(OPE)	1462	-628	-224	6	-1325	179
	7(OPE)	-1283	-699	-34	-11	1148	205
	9(OPE)	1087	-629	-62	9	-984	191
	10(SUS)	5	-678	10	-4	2	204
	11(SUS)	5	-673	10	-4	2	202
	MAX	1462/L6	-762/L3	-224/L6	-11/L7	-1325/L6	249/L3
1280		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	172	-3795	-22	0	0	0
	4(OPE)	-817	-2722	1076	0	0	0
	6(OPE)	-747	-2490	1251	0	0	0
	7(OPE)	-1106	-3688	-202	0	0	0
	9(OPE)	-817	-2722	1076	0	0	0
	10(SUS)	138	-3465	-24	0	0	0
	11(SUS)	136	-3445	-24	0	0	0
	MAX	-1106/L7	-3795/L3	1251/L6			
1380		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	281	-3311	2	0	0	0
	4(OPE)	-1329	-4430	6	0	0	0
	6(OPE)	-1455	-4852	52	0	0	0
	7(OPE)	672	-2240	2	0	0	0
	9(OPE)	-1329	-4430	6	0	0	0
	10(SUS)	227	-2830	3	0	0	0
	11(SUS)	223	-2801	3	0	0	0
	MAX	-1455/L6	-4852/L6	52/L6			
1460		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	-300	-3254	4	0	0	0
	4(OPE)	-695	-2316	91	0	0	0
	6(OPE)	-680	-2265	115	0	0	0
	7(OPE)	799	-2664	-0	0	0	0
	9(OPE)	-695	-2316	91	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)	-234	-2534	2	0	0	0
	11(SUS)	-230	-2494	2	0	0	0
	MAX	799/L7	-3254/L3	115/L6			
1500		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	0	-3561	-8	0	0	0
	4(OPE)	0	-1467	-783	0	0	0
	6(OPE)	0	-1099	-1033	0	0	0
	7(OPE)	0	-3204	25	0	0	0
	9(OPE)	0	-1467	-783	0	0	0
	10(SUS)	0	-2809	-5	0	0	0
	11(SUS)	0	-2765	-5	0	0	0
	MAX		-3561/L3	-1033/L6			
1520		TYPE=Rigid +Y;					
	3(HYD)	109	-3213	32	0	0	0
	4(OPE)	-1070	-3754	-350	0	0	0
	6(OPE)	-1171	-4112	-386	0	0	0
	7(OPE)	669	-2383	251	0	0	0
	9(OPE)	-1070	-3754	-350	0	0	0
	10(SUS)	96	-2533	21	0	0	0
	11(SUS)	93	-2494	21	0	0	0
	MAX	-1171/L6	-4112/L6	-386/L6			
1560		TYPE=Rigid +Y;					
	3(HYD)	-621	-2071	-7	0	0	0
	4(OPE)	-403	-1347	-36	0	0	0
	6(OPE)	-372	-1245	-34	0	0	0
	7(OPE)	482	-1616	50	0	0	0
	9(OPE)	-403	-1347	-36	0	0	0
	10(SUS)	-490	-1633	0	0	0	0
	11(SUS)	-482	-1608	1	0	0	0
	MAX	-621/L3	-2071/L3	50/L7			
1700		TYPE=Rigid ANC;					
	3(HYD)	156	-3040	-21	9	-99	-1138
	4(OPE)	-2909	-1924	968	88	3466	-3688
	6(OPE)	-3803	-1772	1227	137	4539	-4502
	7(OPE)	276	-2572	-158	27	-309	-802
	9(OPE)	-2909	-1924	968	88	3466	-3688
	10(SUS)	124	-2490	-18	6	-75	-903
	11(SUS)	122	-2458	-18	6	-74	-890
	MAX	-3803/L6	-3040/L3	1227/L6	137/L6	4539/L6	-4502/L6
1780		TYPE=Rigid					

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RESTRAINT SUMMARY REPORT: Loads On Restraints

Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
		ANC;					
	3(HYD)	-288	-1828	24	-412	104	-484
	4(OPE)	-2792	-1193	-210	-16	1802	-1421
	6(OPE)	-9393	-1191	-251	-38	5007	-4689
	7(OPE)	1349	-1343	16	-240	-716	426
	9(OPE)	-2792	-1193	-210	-16	1802	-1421
	10(SUS)	-388	-1303	29	-235	157	-413
	11(SUS)	-394	-1270	30	-224	160	-408
	MAX	-9393/L6	-1828/L3	-251/L6	-412/L3	5007/L6	-4689/L6
1840		TYPE=Rigid X; Rigid Z w/gap; Rigid Y;					
	3(HYD)	-64	-10743	1	0	0	0
	4(OPE)	-1079	-9883	1312	0	0	0
	6(OPE)	-3404	-10227	2044	0	0	0
	7(OPE)	-320	-9722	-1068	0	0	0
	9(OPE)	-1079	-9883	1312	0	0	0
	10(SUS)	-102	-9759	6	0	0	0
	11(SUS)	-104	-9694	6	0	0	0
	MAX	-3404/L6	-10743/L3	2044/L6			
1860		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	0	-8207	0	0	0	0
	4(OPE)	-689	-7479	291	0	0	0
	6(OPE)	-653	-7091	276	0	0	0
	7(OPE)	722	-7836	-304	0	0	0
	9(OPE)	-689	-7479	291	0	0	0
	10(SUS)	0	-7742	-1	0	0	0
	11(SUS)	0	-7707	-1	0	0	0
	MAX	722/L7	-8207/L3	-304/L7			
1880		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	-0	-8201	-0	0	0	0
	4(OPE)	-748	-7484	-3	0	0	0
	6(OPE)	-710	-7097	-3	0	0	0
	7(OPE)	783	-7832	4	0	0	0
	9(OPE)	-748	-7484	-3	0	0	0
	10(SUS)	-0	-7738	-1	0	0	0
	11(SUS)	-0	-7704	-1	0	0	0
	MAX	783/L7	-8201/L3	4/L7			
1900		TYPE=Rigid X; 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.
		w/gap; Rigid Y;					
	3(HYD)	-67	-11025	2	0	0	0
	4(OPE)	-3202	-9642	-962	0	0	0
	6(OPE)	-8495	-9918	-1183	0	0	0
	7(OPE)	364	-9895	932	0	0	0
	9(OPE)	-3202	-9642	-962	0	0	0
	10(SUS)	-163	-9923	6	0	0	0
	11(SUS)	-168	-9850	7	0	0	0
	MAX	-8495/L6	-11025/L3	-1183/L6			
1980		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	283	-3050	-57	0	0	0
	4(OPE)	597	-2548	-477	0	0	0
	6(OPE)	552	-1878	-113	0	0	0
	7(OPE)	-617	-2183	221	0	0	0
	9(OPE)	597	-2548	-477	0	0	0
	10(SUS)	382	-2163	-86	0	0	0
	11(SUS)	388	-2107	-88	0	0	0
	MAX	-617/L7	-3050/L3	-477/L4			
2120		TYPE=Rigid +Y;					
	3(HYD)	41	-4584	316	0	0	0
	4(OPE)	420	-5497	1595	0	0	0
	6(OPE)	2003	-8394	1526	0	0	0
	7(OPE)	21	-3382	-1014	0	0	0
	9(OPE)	420	-5497	1595	0	0	0
	10(SUS)	29	-3985	274	0	0	0
	11(SUS)	28	-3947	271	0	0	0
	MAX	2003/L6	-8394/L6	1595/L4			
2220		TYPE=Rigid +Y;					
	3(HYD)	-114	-4255	113	0	0	0
	4(OPE)	771	-4538	-1122	0	0	0
	6(OPE)	1215	-5588	-1155	0	0	0
	7(OPE)	-863	-3629	663	0	0	0
	9(OPE)	771	-4538	-1122	0	0	0
	10(SUS)	-107	-3964	90	0	0	0
	11(SUS)	-107	-3947	88	0	0	0
	MAX	1215/L6	-5588/L6	-1155/L6			
2440		TYPE=Rigid +Y;					
	3(HYD)	0	-5588	0	0	0	0
	4(OPE)	0	-720	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.
	6(OPE)	0	0	0	0	0	0
	7(OPE)	0	-6409	0	0	0	0
	9(OPE)	0	-720	0	0	0	0
	10(SUS)	0	-4763	0	0	0	0
	11(SUS)	0	-4710	0	0	0	0
	MAX		-6409/L7				
2640		TYPE=Rigid +Y;					
	3(HYD)	54	-1177	54	0	0	0
	4(OPE)	-145	-882	-221	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	230	-1038	210	0	0	0
	9(OPE)	-145	-882	-221	0	0	0
	10(SUS)	37	-1019	43	0	0	0
	11(SUS)	36	-1009	42	0	0	0
	MAX	230/L7	-1177/L3	-221/L4			
2700		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
	7(OPE)	-45	-964	286	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	MAX	-45/L7	-964/L7	286/L7			
2720		TYPE=Rigid +Y;					
	3(HYD)	0	-3144	0	0	0	0
	4(OPE)	0	-3725	0	0	0	0
	6(OPE)	0	-422	0	0	0	0
	7(OPE)	0	-169	0	0	0	0
	9(OPE)	0	-3725	0	0	0	0
	10(SUS)	0	-1964	0	0	0	0
	11(SUS)	0	-1889	0	0	0	0
	MAX		-3725/L4				
2740		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	-110	-2926	0	0	0	0
	4(OPE)	-366	-2905	0	0	0	0
	6(OPE)	-800	-6169	0	0	0	0
	7(OPE)	91	-1653	0	0	0	0
	9(OPE)	-366	-2905	0	0	0	0
	10(SUS)	-69	-1841	0	0	0	0
	11(SUS)	-66	-1772	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	-800/L6	-6169/L6				
2760		TYPE=Rigid +Y;					
	3(HYD)	0	-2762	0	0	0	0
	4(OPE)	0	-1462	0	0	0	0
	6(OPE)	0	-592	0	0	0	0
	7(OPE)	0	-1796	0	0	0	0
	9(OPE)	0	-1462	0	0	0	0
	10(SUS)	0	-1746	0	0	0	0
	11(SUS)	0	-1682	0	0	0	0
	MAX		-2762/L3				
2780		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	70	-2806	-132	0	0	0
	4(OPE)	76	-1847	-549	0	0	0
	6(OPE)	192	-2079	-667	0	0	0
	7(OPE)	-8	-1758	527	0	0	0
	9(OPE)	76	-1847	-549	0	0	0
	10(SUS)	45	-1771	-106	0	0	0
	11(SUS)	44	-1706	-104	0	0	0
	MAX	192/L6	-2806/L3	-667/L6			
2800		TYPE=Rigid +Y;					
	3(HYD)	-35	-2794	-41	0	0	0
	4(OPE)	3	-1744	-523	0	0	0
	6(OPE)	5	-1682	-505	0	0	0
	7(OPE)	1	-1768	530	0	0	0
	9(OPE)	3	-1744	-523	0	0	0
	10(SUS)	-23	-1764	-33	0	0	0
	11(SUS)	-22	-1699	-33	0	0	0
	MAX	-35/L3	-2794/L3	530/L7			
2820		TYPE=Rigid +Y;					
	3(HYD)	9	-2799	-13	0	0	0
	4(OPE)	-16	-1773	-532	0	0	0
	6(OPE)	37	-1789	-536	0	0	0
	7(OPE)	1	-1767	-348	0	0	0
	9(OPE)	-16	-1773	-532	0	0	0
	10(SUS)	6	-1768	-10	0	0	0
	11(SUS)	6	-1702	-10	0	0	0
	MAX	37/L6	-2799/L3	-536/L6			
2840		TYPE=Rigid X 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.
		Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-2	-2790	-4	0	0	0
	4(OPE)	-609	-1760	2552	0	0	0
	6(OPE)	2931	-1756	9099	0	0	0
	7(OPE)	-0	-1762	-529	0	0	0
	9(OPE)	-609	-1760	2552	0	0	0
	10(SUS)	-2	-1761	-3	0	0	0
	11(SUS)	-2	-1696	-3	0	0	0
	MAX	2931/L6	-2790/L3	9099/L6			
2940		TYPE=Rigid +Y;					
	3(HYD)	-213	-5113	-3	0	0	0
	4(OPE)	-753	-5581	1495	0	0	0
	6(OPE)	-351	-4697	1365	0	0	0
	7(OPE)	141	-4873	-1455	0	0	0
	9(OPE)	-753	-5581	1495	0	0	0
	10(SUS)	-161	-4799	-74	0	0	0
	11(SUS)	-160	-4782	-77	0	0	0
	MAX	-753/L4	-5581/L4	1495/L4			
3180		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	1519	-5639	-533	0	0	0
	4(OPE)	3075	-3696	2031	0	0	0
	6(OPE)	7515	-1639	2746	0	0	0
	7(OPE)	382	-5905	-1886	0	0	0
	9(OPE)	3075	-3696	2031	0	0	0
	10(SUS)	1240	-5300	-597	0	0	0
	11(SUS)	1238	-5280	-598	0	0	0
	MAX	7515/L6	-5905/L7	2746/L6			
3400		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	1038	-7853	-340	0	0	0
	4(OPE)	-176	-6672	-1994	0	0	0
	6(OPE)	-701	-5989	-1654	0	0	0
	7(OPE)	1019	-7298	1938	0	0	0
	9(OPE)	-176	-6672	-1994	0	0	0
	10(SUS)	835	-6639	-394	0	0	0
	11(SUS)	834	-6632	-395	0	0	0
	MAX	1038/L3	-7853/L3	-1994/L4			
3540		TYPE=Rigid +Y;					
	3(HYD)	163	-2129	-617	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.
	4(OPE)	35	-673	-199	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	424	-2099	466	0	0	0
	9(OPE)	35	-673	-199	0	0	0
	10(SUS)	94	-1420	-415	0	0	0
	11(SUS)	93	-1416	-414	0	0	0
	MAX	424/L7	-2129/L3	-617/L3			
3640		TYPE=Rigid X; Rigid Z; Rigid +Y;					
	3(HYD)	-2168	-7930	716	0	0	0
	4(OPE)	-1870	-7582	-6526	0	0	0
	6(OPE)	-4826	-9251	-15876	0	0	0
	7(OPE)	-1283	-6152	1445	0	0	0
	9(OPE)	-1870	-7582	-6526	0	0	0
	10(SUS)	-1807	-6930	957	0	0	0
	11(SUS)	-1805	-6919	959	0	0	0
	MAX	-4826/L6	-9251/L6	-15876/L6			
3680		TYPE=Rigid +Y;					
	3(HYD)	-940	-3227	231	0	0	0
	4(OPE)	-613	-2186	-233	0	0	0
	6(OPE)	-756	-2758	-336	0	0	0
	7(OPE)	395	-1493	212	0	0	0
	9(OPE)	-613	-2186	-233	0	0	0
	10(SUS)	-536	-1812	93	0	0	0
	11(SUS)	-533	-1804	92	0	0	0
	MAX	-940/L3	-3227/L3	-336/L6			
3720		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	206	-3390	-15	0	0	0
	4(OPE)	-350	-1244	-129	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	762	-2715	287	0	0	0
	9(OPE)	-350	-1244	-129	0	0	0
	10(SUS)	106	-1972	11	0	0	0
	11(SUS)	106	-1964	11	0	0	0
	MAX	762/L7	-3390/L3	287/L7			
3820		TYPE=Rigid ANC;					
	3(HYD)	424	-1420	4	-95	5	613
	4(OPE)	1094	-1503	-72	-29	-395	1648
	6(OPE)	1741	-2477	-685	34	-2504	4070
	7(OPE)	-1462	-407	7	-42	311	-887

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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.
	9(OPE)	1094	-1503	-72	-29	-395	1648
	10(SUS)	234	-953	-4	-45	-5	373
	11(SUS)	233	-950	-4	-45	-5	372
	MAX	1741/L6	-2477/L6	-685/L6	-95/L3	-2504/L6	4070/L6
3900		TYPE=Rigid ANC;					
	3(HYD)	424	-1420	4	-85	6	95
	4(OPE)	1094	-1503	-72	-229	-429	-679
	6(OPE)	1741	-2477	-685	-1857	-2819	403
	7(OPE)	-1462	-407	7	-24	314	3335
	9(OPE)	1094	-1503	-72	-229	-429	-679
	10(SUS)	234	-953	-4	-57	-7	165
	11(SUS)	233	-950	-4	-57	-7	166
	MAX	1741/L6	-2477/L6	-685/L6	-1857/L6	-2819/L6	3335/L7
3920		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-36	-9172	148	0	0	0
	4(OPE)	404	-6445	-1891	0	0	0
	6(OPE)	971	-7912	-2166	0	0	0
	7(OPE)	-352	-4191	1207	0	0	0
	9(OPE)	404	-6445	-1891	0	0	0
	10(SUS)	-6	-5243	104	0	0	0
	11(SUS)	-6	-5219	104	0	0	0
	MAX	971/L6	-9172/L3	-2166/L6			
3940		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-87	-6700	82	0	0	0
	4(OPE)	29	-3585	-1075	0	0	0
	6(OPE)	90	-3592	-1074	0	0	0
	7(OPE)	-98	-3755	1122	0	0	0
	9(OPE)	29	-3585	-1075	0	0	0
	10(SUS)	-63	-3668	58	0	0	0
	11(SUS)	-63	-3650	58	0	0	0
	MAX	-98/L7	-6700/L3	1122/L7			
3960		TYPE=Rigid +Y;					
	3(HYD)	0	-704	0	0	0	0
	4(OPE)	0	-175	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	0	-309	0	0	0	0
	9(OPE)	0	-175	0	0	0	0
	10(SUS)	0	-147	0	0	0	0
	11(SUS)	0	-109	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		-704/L3				
4020		TYPE=Rigid +Y;					
	3(HYD)	31	-655	-194	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	-37	-536	157	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	18	-893	-162	0	0	0
	11(SUS)	17	-897	-159	0	0	0
	MAX	-37/L7	-897/L11	-194/L3			
4160		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	-40	-3507	-312	0	0	0
	4(OPE)	534	0	0	0	0	0
	6(OPE)	1488	0	0	0	0	0
	7(OPE)	-202	-3457	1037	0	0	0
	9(OPE)	534	0	0	0	0	0
	10(SUS)	-23	-2999	-202	0	0	0
	11(SUS)	-23	-2992	-200	0	0	0
	MAX	1488/L6	-3507/L3	1037/L7			
4300		TYPE=Rigid +Y;					
	3(HYD)	-5	-6996	33	0	0	0
	4(OPE)	115	-4881	-1460	0	0	0
	6(OPE)	115	-5119	-1531	0	0	0
	7(OPE)	-27	-3760	1128	0	0	0
	9(OPE)	115	-4881	-1460	0	0	0
	10(SUS)	-6	-3865	29	0	0	0
	11(SUS)	-7	-3860	29	0	0	0
	MAX	115/L6	-6996/L3	-1531/L6			
4320		TYPE=Rigid X w/gap; Rigid Z; Rigid +Y;					
	3(HYD)	213	-6779	465	0	0	0
	4(OPE)	-3667	-8467	3763	0	0	0
	6(OPE)	-3503	-8308	3343	0	0	0
	7(OPE)	336	-3653	-5624	0	0	0
	9(OPE)	-3667	-8467	3763	0	0	0
	10(SUS)	143	-3982	384	0	0	0
	11(SUS)	143	-3977	384	0	0	0
	MAX	-3667/L4	-8467/L4	-5624/L7			
4380		TYPE=Rigid					

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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.
		+Y;					
	3(HYD)	117	-10281	56	0	0	0
	4(OPE)	-723	-5727	1559	0	0	0
	6(OPE)	-711	-5713	1559	0	0	0
	7(OPE)	-3	-5552	-1665	0	0	0
	9(OPE)	-723	-5727	1559	0	0	0
	10(SUS)	82	-5699	45	0	0	0
	11(SUS)	82	-5692	45	0	0	0
	MAX	-723/L4	-10281/L3	-1665/L7			
4440		TYPE=Rigid +Y;					
	3(HYD)	65	-253	39	0	0	0
	4(OPE)	-15	-204	-59	0	0	0
	6(OPE)	99	-351	-34	0	0	0
	7(OPE)	33	-217	57	0	0	0
	9(OPE)	-15	-204	-59	0	0	0
	10(SUS)	61	-217	24	0	0	0
	11(SUS)	60	-215	23	0	0	0
	MAX	99/L6	-351/L6	-59/L4			
4540		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	0	-297	0	0	0	0
	4(OPE)	0	-398	0	0	0	0
	6(OPE)	0	-516	231	0	0	0
	7(OPE)	0	-137	0	0	0	0
	9(OPE)	0	-398	0	0	0	0
	10(SUS)	0	-263	0	0	0	0
	11(SUS)	0	-261	0	0	0	0
	MAX		-516/L6	231/L6			
4640		TYPE=Rigid +Y;					
	3(HYD)	0	-673	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	0	-1056	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	0	-646	0	0	0	0
	11(SUS)	0	-644	0	0	0	0
	MAX		-1056/L7				
4800		TYPE=Rigid X; Rigid Z; Rigid +Y;					
	3(HYD)	9	-412	-104	0	0	0
	4(OPE)	-74	-254	332	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)	50	-113	1779	0	0	0
	7(OPE)	27	-367	-321	0	0	0
	9(OPE)	-74	-254	332	0	0	0
	10(SUS)	9	-351	-85	0	0	0
	11(SUS)	9	-347	-84	0	0	0
	MAX	-74/L4	-412/L3	1779/L6			
4900		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	0	-588	0	0	0	0
	4(OPE)	0	-352	16	0	0	0
	6(OPE)	0	-287	35	0	0	0
	7(OPE)	0	-552	0	0	0	0
	9(OPE)	0	-352	16	0	0	0
	10(SUS)	0	-523	0	0	0	0
	11(SUS)	0	-520	0	0	0	0
	MAX		-588/L3	35/L6			
4920		TYPE=Rigid +Y;					
	3(HYD)	-6	-691	8	0	0	0
	4(OPE)	-183	-628	-44	0	0	0
	6(OPE)	-185	-636	-46	0	0	0
	7(OPE)	-19	-611	3	0	0	0
	9(OPE)	-183	-628	-44	0	0	0
	10(SUS)	-6	-615	6	0	0	0
	11(SUS)	-6	-612	6	0	0	0
	MAX	-185/L6	-691/L3	-46/L6			
4940		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-8	-405	-88	0	0	0
	4(OPE)	-153	-518	-638	0	0	0
	6(OPE)	-165	-555	-1069	0	0	0
	7(OPE)	102	-339	7	0	0	0
	9(OPE)	-153	-518	-638	0	0	0
	10(SUS)	-10	-362	-46	0	0	0
	11(SUS)	-10	-360	-47	0	0	0
	MAX	-165/L6	-555/L6	-1069/L6			
5040		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
	7(OPE)	0	0	0	0	0	0
	9(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)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
5181		TYPE=Rigid +Y;					
	3(HYD)	-61	-8285	5	0	0	0
	4(OPE)	-1439	-4879	-265	0	0	0
	6(OPE)	-1429	-4849	-272	0	0	0
	7(OPE)	1309	-4472	297	0	0	0
	9(OPE)	-1439	-4879	-265	0	0	0
	10(SUS)	-43	-4495	4	0	0	0
	11(SUS)	-43	-4489	4	0	0	0
	MAX	-1439/L4	-8285/L3	297/L7			
5220		TYPE=Rigid X; Rigid +Y; Rigid Z;					
	3(HYD)	174	-3427	265	0	0	0
	4(OPE)	2449	0	-1117	0	0	0
	6(OPE)	2394	0	-1005	0	0	0
	7(OPE)	16	-2817	236	0	0	0
	9(OPE)	2449	0	-1117	0	0	0
	10(SUS)	128	-2889	201	0	0	0
	11(SUS)	129	-2884	201	0	0	0
	MAX	2449/L4	-3427/L3	-1117/L4			
5340		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	-649	0	0	0	0
	6(OPE)	0	-1243	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	-649	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	MAX		-1243/L6				
5520		TYPE=Rigid X; Rigid +Y; Rigid Z;					
	3(HYD)	73	-5135	394	0	0	0
	4(OPE)	2533	0	-1355	0	0	0
	6(OPE)	2446	0	-1172	0	0	0
	7(OPE)	-105	-4913	320	0	0	0
	9(OPE)	2533	0	-1355	0	0	0
	10(SUS)	53	-4095	288	0	0	0
	11(SUS)	53	-4093	289	0	0	0
	MAX	2533/L4	-5135/L3	-1355/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.
5660		TYPE=Rigid +Y;					
	3(HYD)	-432	-3446	-939	0	0	0
	4(OPE)	934	-6639	1759	0	0	0
	6(OPE)	951	-6409	1671	0	0	0
	7(OPE)	-271	-2149	-585	0	0	0
	9(OPE)	934	-6639	1759	0	0	0
	10(SUS)	-287	-2511	-696	0	0	0
	11(SUS)	-287	-2512	-697	0	0	0
	MAX	951/L6	-6639/L4	1759/L4			
5760		TYPE=Rigid +Y;					
	3(HYD)	0	-401	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	0	-182	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	0	-501	0	0	0	0
	11(SUS)	0	-499	0	0	0	0
	MAX		-501/L10				
5840		TYPE=Rigid X; Rigid Z;					
	3(HYD)	-37	0	95	0	0	0
	4(OPE)	-102	0	-72	0	0	0
	6(OPE)	-118	0	185	0	0	0
	7(OPE)	-30	0	57	0	0	0
	9(OPE)	-102	0	-72	0	0	0
	10(SUS)	-24	0	85	0	0	0
	11(SUS)	-24	0	85	0	0	0
	MAX	-118/L6		185/L6			
5920		TYPE=Rigid +Y;					
	3(HYD)	-39	-617	-181	0	0	0
	4(OPE)	173	-655	94	0	0	0
	6(OPE)	64	-235	29	0	0	0
	7(OPE)	-55	-622	-178	0	0	0
	9(OPE)	173	-655	94	0	0	0
	10(SUS)	-27	-576	-171	0	0	0
	11(SUS)	-27	-576	-171	0	0	0
	MAX	173/L4	-655/L4	-181/L3			
5980		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	17	-9013	-0	0	0	0
	4(OPE)	-3005	-4936	-1481	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)	-2952	-4932	-1480	0	0	0
	7(OPE)	-1013	-4889	1467	0	0	0
	9(OPE)	-3005	-4936	-1481	0	0	0
	10(SUS)	12	-4889	-0	0	0	0
	11(SUS)	12	-4882	-0	0	0	0
	MAX	-3005/L4	-9013/L3	-1481/L4			
6000		TYPE=Rigid +Y;					
	3(HYD)	-5	-5712	-0	0	0	0
	4(OPE)	178	-3005	-884	0	0	0
	6(OPE)	178	-3013	-886	0	0	0
	7(OPE)	24	-3106	932	0	0	0
	9(OPE)	178	-3005	-884	0	0	0
	10(SUS)	-3	-3100	-0	0	0	0
	11(SUS)	-3	-3096	-0	0	0	0
	MAX	178/L4	-5712/L3	932/L7			
6020		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	1	-6808	-0	0	0	0
	4(OPE)	3902	-3721	-1109	0	0	0
	6(OPE)	3886	-3719	-1109	0	0	0
	7(OPE)	62	-3693	1106	0	0	0
	9(OPE)	3902	-3721	-1109	0	0	0
	10(SUS)	1	-3695	-0	0	0	0
	11(SUS)	1	-3690	-0	0	0	0
	MAX	3902/L4	-6808/L3	-1109/L4			
6040		TYPE=Rigid X w/gap; Rigid Z; Rigid +Y;					
	3(HYD)	-0	-6240	-0	0	0	0
	4(OPE)	-557	-3377	3014	0	0	0
	6(OPE)	-550	-3378	3020	0	0	0
	7(OPE)	-139	-3387	-2504	0	0	0
	9(OPE)	-557	-3377	3014	0	0	0
	10(SUS)	-0	-3386	-0	0	0	0
	11(SUS)	-0	-3382	-0	0	0	0
	MAX	-557/L4	-6240/L3	3020/L6			
6060		TYPE=Rigid +Y;					
	3(HYD)	0	-7897	-0	0	0	0
	4(OPE)	-648	-4298	1115	0	0	0
	6(OPE)	-648	-4297	1114	0	0	0
	7(OPE)	-533	-4285	-1170	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)	-648	-4298	1115	0	0	0
	10(SUS)	0	-4286	-0	0	0	0
	11(SUS)	0	-4281	-0	0	0	0
	MAX	-648/L4	-7897/L3	-1170/L7			
6187		TYPE=Rigid +Y;					
	3(HYD)	-0	-8337	0	0	0	0
	4(OPE)	-1243	-4518	-541	0	0	0
	6(OPE)	-1243	-4518	-541	0	0	0
	7(OPE)	1354	-4525	104	0	0	0
	9(OPE)	-1243	-4518	-541	0	0	0
	10(SUS)	-0	-4525	0	0	0	0
	11(SUS)	-0	-4519	0	0	0	0
	MAX	1354/L7	-8337/L3	-541/L4			
6195		TYPE=Rigid +Y;					
	3(HYD)	0	-4174	0	0	0	0
	4(OPE)	-121	-2260	-667	0	0	0
	6(OPE)	-121	-2260	-667	0	0	0
	7(OPE)	-193	-2266	652	0	0	0
	9(OPE)	-121	-2260	-667	0	0	0
	10(SUS)	0	-2265	0	0	0	0
	11(SUS)	0	-2262	0	0	0	0
	MAX	-193/L7	-4174/L3	-667/L6			
6200		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-5016	0	0	0	0
	4(OPE)	-829	-2726	-817	0	0	0
	6(OPE)	-830	-2726	-817	0	0	0
	7(OPE)	-252	-2722	777	0	0	0
	9(OPE)	-829	-2726	-817	0	0	0
	10(SUS)	-0	-2722	0	0	0	0
	11(SUS)	-0	-2719	0	0	0	0
	MAX	-830/L6	-5016/L3	-817/L4			
6220		TYPE=Rigid +Y;					
	3(HYD)	0	-6778	0	0	0	0
	4(OPE)	156	-3678	-1093	0	0	0
	6(OPE)	156	-3678	-1093	0	0	0
	7(OPE)	-164	-3679	1091	0	0	0
	9(OPE)	156	-3678	-1093	0	0	0
	10(SUS)	0	-3679	0	0	0	0
	11(SUS)	0	-3674	0	0	0	0
	MAX	-164/L7	-6778/L3	-1093/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.
6240		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-6464	0	0	0	0
	4(OPE)	1593	-3507	-1046	0	0	0
	6(OPE)	1593	-3507	-1046	0	0	0
	7(OPE)	27	-3508	1052	0	0	0
	9(OPE)	1593	-3507	-1046	0	0	0
	10(SUS)	-0	-3508	0	0	0	0
	11(SUS)	-0	-3503	0	0	0	0
	MAX	1593/L6	-6464/L3	1052/L7			
6260		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	0	-6568	-0	0	0	0
	4(OPE)	0	-3566	1290	0	0	0
	6(OPE)	0	-3566	1289	0	0	0
	7(OPE)	0	-3564	-649	0	0	0
	9(OPE)	0	-3566	1290	0	0	0
	10(SUS)	0	-3564	-0	0	0	0
	11(SUS)	0	-3560	-0	0	0	0
	MAX		-6568/L3	1290/L4			
6280		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6462	-0	0	0	0
	4(OPE)	1840	-3500	1044	0	0	0
	6(OPE)	1840	-3500	1044	0	0	0
	7(OPE)	168	-3507	-1039	0	0	0
	9(OPE)	1840	-3500	1044	0	0	0
	10(SUS)	0	-3507	-0	0	0	0
	11(SUS)	0	-3502	-0	0	0	0
	MAX	1840/L4	-6462/L3	1044/L4			
6300		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	-0	-6915	-0	0	0	0
	4(OPE)	-1750	-3781	1134	0	0	0
	6(OPE)	-1750	-3781	1134	0	0	0
	7(OPE)	-592	-3751	-1125	0	0	0
	9(OPE)	-1750	-3781	1134	0	0	0
	10(SUS)	-0	-3753	-0	0	0	0
	11(SUS)	-0	-3748	-0	0	0	0
	MAX	-1750/L4	-6915/L3	1134/L6			
6310		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.
	3(HYD)	-4	-5889	0	0	0	0
	4(OPE)	-349	-3163	882	0	0	0
	6(OPE)	-349	-3163	882	0	0	0
	7(OPE)	-193	-3199	-940	0	0	0
	9(OPE)	-349	-3163	882	0	0	0
	10(SUS)	-2	-3196	0	0	0	0
	11(SUS)	-2	-3192	0	0	0	0
	MAX	-349/L6	-5889/L3	-940/L7			
6327		TYPE=Rigid +Y;					
	3(HYD)	8	-8063	-1	0	0	0
	4(OPE)	-1244	-4253	284	0	0	0
	6(OPE)	-1244	-4253	284	0	0	0
	7(OPE)	1312	-4386	-98	0	0	0
	9(OPE)	-1244	-4253	284	0	0	0
	10(SUS)	4	-4376	-1	0	0	0
	11(SUS)	4	-4370	-1	0	0	0
	MAX	1312/L7	-8063/L3	284/L4			
6332		TYPE=Rigid +Y;					
	3(HYD)	-19	-5102	-292	0	0	0
	4(OPE)	-465	-2926	-745	0	0	0
	6(OPE)	-465	-2926	-745	0	0	0
	7(OPE)	-275	-2756	780	0	0	0
	9(OPE)	-465	-2926	-745	0	0	0
	10(SUS)	-11	-2769	-159	0	0	0
	11(SUS)	-10	-2765	-158	0	0	0
	MAX	-465/L4	-5102/L3	780/L7			
6340		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	59	-6245	-428	0	0	0
	4(OPE)	2266	-3362	-1009	0	0	0
	6(OPE)	2266	-3362	-1009	0	0	0
	7(OPE)	-287	-3393	1018	0	0	0
	9(OPE)	2266	-3362	-1009	0	0	0
	10(SUS)	32	-3389	-232	0	0	0
	11(SUS)	32	-3385	-232	0	0	0
	MAX	2266/L6	-6245/L3	1018/L7			
6360		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-292	-4790	-913	0	0	0
	4(OPE)	732	-2455	3918	0	0	0
	6(OPE)	732	-2455	3918	0	0	0
	7(OPE)	-218	-2602	-750	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)	732	-2455	3918	0	0	0
	10(SUS)	-159	-2600	-496	0	0	0
	11(SUS)	-158	-2596	-495	0	0	0
	MAX	732/L4	-4790/L3	3918/L4			
6380		TYPE=Rigid +Y;					
	3(HYD)	1590	-7550	1475	0	0	0
	4(OPE)	999	-3848	579	0	0	0
	6(OPE)	999	-3848	579	0	0	0
	7(OPE)	-644	-4171	-1073	0	0	0
	9(OPE)	999	-3848	579	0	0	0
	10(SUS)	863	-4098	801	0	0	0
	11(SUS)	862	-4093	800	0	0	0
	MAX	1590/L3	-7550/L3	1475/L3			
6480		TYPE=Rigid ANC;					
	3(HYD)	-1341	-6822	159	1304	-47	-1264
	4(OPE)	-2132	-4165	3164	5511	-10685	-303
	6(OPE)	-2132	-4165	3164	5511	-10685	-303
	7(OPE)	851	-3690	-349	2	997	-3263
	9(OPE)	-2132	-4165	3164	5511	-10685	-303
	10(SUS)	-728	-3768	86	708	-25	-686
	11(SUS)	-727	-3763	86	707	-25	-685
	MAX	-2132/L6	-6822/L3	3164/L6	5511/L6	-10685/L6	-3263/L7
6500		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	3	-6428	15	0	0	0
	4(OPE)	220	-3282	-983	0	0	0
	6(OPE)	299	-3241	-971	0	0	0
	7(OPE)	-1	-3494	1048	0	0	0
	9(OPE)	220	-3282	-983	0	0	0
	10(SUS)	3	-3477	13	0	0	0
	11(SUS)	3	-3472	13	0	0	0
	MAX	299/L6	-6428/L3	1048/L7			
6520		TYPE=Rigid +Y;					
	3(HYD)	-1	-6565	7	0	0	0
	4(OPE)	41	-3617	-1084	0	0	0
	6(OPE)	42	-3628	-1088	0	0	0
	7(OPE)	1	-3561	1068	0	0	0
	9(OPE)	41	-3617	-1084	0	0	0
	10(SUS)	-1	-3566	6	0	0	0
	11(SUS)	-1	-3561	6	0	0	0
	MAX	42/L6	-6565/L3	-1088/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.
6540		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6509	3	0	0	0
	4(OPE)	35	-3518	-1055	0	0	0
	6(OPE)	39	-3515	-1054	0	0	0
	7(OPE)	0	-3533	1060	0	0	0
	9(OPE)	35	-3518	-1055	0	0	0
	10(SUS)	0	-3532	3	0	0	0
	11(SUS)	0	-3527	3	0	0	0
	MAX	39/L6	-6509/L3	1060/L7			
6560		TYPE=Rigid +Y;					
	3(HYD)	-0	-6596	1	0	0	0
	4(OPE)	24	-3583	-1075	0	0	0
	6(OPE)	23	-3584	-1075	0	0	0
	7(OPE)	0	-3579	1074	0	0	0
	9(OPE)	24	-3583	-1075	0	0	0
	10(SUS)	-0	-3580	1	0	0	0
	11(SUS)	-0	-3575	1	0	0	0
	MAX	24/L4	-6596/L3	-1075/L6			
6580		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6302	1	0	0	0
	4(OPE)	18	-3419	-1026	0	0	0
	6(OPE)	18	-3419	-1026	0	0	0
	7(OPE)	-0	-3420	1026	0	0	0
	9(OPE)	18	-3419	-1026	0	0	0
	10(SUS)	0	-3420	1	0	0	0
	11(SUS)	0	-3416	1	0	0	0
	MAX	18/L4	-6302/L3	1026/L7			
6600		TYPE=Rigid +Y;					
	3(HYD)	-0	-7403	0	0	0	0
	4(OPE)	18	-4018	-1205	0	0	0
	6(OPE)	17	-4018	-1205	0	0	0
	7(OPE)	-0	-4018	1205	0	0	0
	9(OPE)	18	-4018	-1205	0	0	0
	10(SUS)	-0	-4018	0	0	0	0
	11(SUS)	-0	-4013	0	0	0	0
	MAX	18/L4	-7403/L3	1205/L7			
6620		TYPE=Rigid X w/gap;					

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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.
		Rigid +Y;					
	3(HYD)	0	-2578	0	0	0	0
	4(OPE)	5	-1399	-420	0	0	0
	6(OPE)	5	-1399	-420	0	0	0
	7(OPE)	-0	-1399	420	0	0	0
	9(OPE)	5	-1399	-420	0	0	0
	10(SUS)	0	-1399	0	0	0	0
	11(SUS)	0	-1397	0	0	0	0
	MAX	5/L4	-2578/L3	420/L7			
6640		TYPE=Rigid +Y;					
	3(HYD)	1	-2823	-1	0	0	0
	4(OPE)	-1	-1783	535	0	0	0
	6(OPE)	44	-1784	533	0	0	0
	7(OPE)	0	-1783	-535	0	0	0
	9(OPE)	-1	-1783	535	0	0	0
	10(SUS)	0	-1783	-1	0	0	0
	11(SUS)	0	-1717	-1	0	0	0
	MAX	44/L6	-2823/L3	535/L4			
6660		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-2697	-0	0	0	0
	4(OPE)	-0	-1703	511	0	0	0
	6(OPE)	6	-1703	511	0	0	0
	7(OPE)	0	-1703	-511	0	0	0
	9(OPE)	-0	-1703	511	0	0	0
	10(SUS)	-0	-1703	-0	0	0	0
	11(SUS)	-0	-1640	-0	0	0	0
	MAX	6/L6	-2697/L3	-511/L7			
6680		TYPE=Rigid +Y;					
	3(HYD)	0	-3171	-0	0	0	0
	4(OPE)	0	-2002	601	0	0	0
	6(OPE)	-2	-2002	601	0	0	0
	7(OPE)	-0	-2002	-601	0	0	0
	9(OPE)	0	-2002	601	0	0	0
	10(SUS)	0	-2002	-0	0	0	0
	11(SUS)	0	-1928	-0	0	0	0
	MAX	-2/L6	-3171/L3	601/L6			
6700		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-1103	-0	0	0	0
	4(OPE)	0	-697	209	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)	-2	-697	209	0	0	0
	7(OPE)	-0	-697	-209	0	0	0
	9(OPE)	0	-697	209	0	0	0
	10(SUS)	-0	-697	-0	0	0	0
	11(SUS)	-0	-671	-0	0	0	0
	MAX	-2/L6	-1103/L3	-209/L7			
6720		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	41	-6384	66	0	0	0
	4(OPE)	96	-3473	1037	0	0	0
	6(OPE)	160	-3434	1018	0	0	0
	7(OPE)	-89	-3449	-517	0	0	0
	9(OPE)	96	-3473	1037	0	0	0
	10(SUS)	29	-3463	47	0	0	0
	11(SUS)	29	-3446	47	0	0	0
	MAX	160/L6	-6384/L3	1037/L4			
6740		TYPE=Rigid +Y;					
	3(HYD)	-11	-6569	30	0	0	0
	4(OPE)	13	-3580	1074	0	0	0
	6(OPE)	2	-3590	1077	0	0	0
	7(OPE)	23	-3587	-1076	0	0	0
	9(OPE)	13	-3580	1074	0	0	0
	10(SUS)	-8	-3583	21	0	0	0
	11(SUS)	-8	-3565	21	0	0	0
	MAX	23/L7	-6569/L3	1077/L6			
6760		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	3	-6534	13	0	0	0
	4(OPE)	-3	-3559	1068	0	0	0
	6(OPE)	-39	-3556	1066	0	0	0
	7(OPE)	-28	-3557	-1067	0	0	0
	9(OPE)	-3	-3559	1068	0	0	0
	10(SUS)	2	-3558	10	0	0	0
	11(SUS)	2	-3540	9	0	0	0
	MAX	-39/L6	-6534/L3	1068/L4			
6780		TYPE=Rigid +Y;					
	3(HYD)	-1	-6493	6	0	0	0
	4(OPE)	-55	-3537	1060	0	0	0
	6(OPE)	-90	-3537	1057	0	0	0
	7(OPE)	4	-3538	-1061	0	0	0
	9(OPE)	-55	-3537	1060	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)	-1	-3538	4	0	0	0
	11(SUS)	-1	-3520	4	0	0	0
	MAX	-90/L6	-6493/L3	-1061/L7			
6800		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6692	3	0	0	0
	4(OPE)	-148	-3647	1084	0	0	0
	6(OPE)	-142	-3648	1085	0	0	0
	7(OPE)	171	-3644	-1080	0	0	0
	9(OPE)	-148	-3647	1084	0	0	0
	10(SUS)	0	-3645	2	0	0	0
	11(SUS)	0	-3627	2	0	0	0
	MAX	171/L7	-6692/L3	1085/L6			
6820		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-6082	2	0	0	0
	4(OPE)	-889	-3313	975	0	0	0
	6(OPE)	-1055	-3312	987	0	0	0
	7(OPE)	348	-3315	-932	0	0	0
	9(OPE)	-889	-3313	975	0	0	0
	10(SUS)	-0	-3314	1	0	0	0
	11(SUS)	-0	-3297	1	0	0	0
	MAX	-1055/L6	-6082/L3	987/L6			
6840		TYPE=Rigid +Y;					
	3(HYD)	0	-5331	0	0	0	0
	4(OPE)	-89	-2896	864	0	0	0
	6(OPE)	19	-2884	865	0	0	0
	7(OPE)	281	-2914	-828	0	0	0
	9(OPE)	-89	-2896	864	0	0	0
	10(SUS)	0	-2906	0	0	0	0
	11(SUS)	0	-2892	0	0	0	0
	MAX	281/L7	-5331/L3	865/L6			
6880		TYPE=Rigid +Y;					
	3(HYD)	-0	-10217	-0	0	0	0
	4(OPE)	1421	-5575	882	0	0	0
	6(OPE)	1320	-5586	1033	0	0	0
	7(OPE)	-1655	-5556	-200	0	0	0
	9(OPE)	1421	-5575	882	0	0	0
	10(SUS)	-0	-5564	-0	0	0	0
	11(SUS)	-0	-5536	-0	0	0	0
	MAX	-1655/L7	-10217/L3	1033/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.
6920		TYPE=Rigid +Y;					
	3(HYD)	0	-5294	-0	0	0	0
	4(OPE)	189	-2885	-845	0	0	0
	6(OPE)	363	-2889	-787	0	0	0
	7(OPE)	410	-2879	760	0	0	0
	9(OPE)	189	-2885	-845	0	0	0
	10(SUS)	0	-2882	-0	0	0	0
	11(SUS)	0	-2867	-0	0	0	0
	MAX	410/L7	-5294/L3	-845/L4			
6940		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-5540	-0	0	0	0
	4(OPE)	-323	-3020	-313	0	0	0
	6(OPE)	-7	-3015	-904	0	0	0
	7(OPE)	359	-3027	632	0	0	0
	9(OPE)	-323	-3020	-313	0	0	0
	10(SUS)	-0	-3024	-0	0	0	0
	11(SUS)	-0	-3009	-0	0	0	0
	MAX	359/L7	-5540/L3	-904/L6			
6960		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	0	-7444	-0	0	0	0
	4(OPE)	-18	-4040	1212	0	0	0
	6(OPE)	-385	-4041	2395	0	0	0
	7(OPE)	-86	-4039	-1209	0	0	0
	9(OPE)	-18	-4040	1212	0	0	0
	10(SUS)	0	-4039	-0	0	0	0
	11(SUS)	0	-4019	-0	0	0	0
	MAX	-385/L6	-7444/L3	2395/L6			
6980		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-3702	-0	0	0	0
	4(OPE)	-1	-2108	633	0	0	0
	6(OPE)	28	-2108	632	0	0	0
	7(OPE)	4	-2109	-633	0	0	0
	9(OPE)	-1	-2108	633	0	0	0
	10(SUS)	-0	-2108	-0	0	0	0
	11(SUS)	-0	-2099	-0	0	0	0
	MAX	28/L6	-3702/L3	-633/L7			
7040		TYPE=Rigid					

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RESTRAINT SUMMARY REPORT: Loads On Restraints

Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
		+Y;					
	3(HYD)	22	-6545	37	0	0	0
	4(OPE)	-5	-3580	-1074	0	0	0
	6(OPE)	13	-3577	-1073	0	0	0
	7(OPE)	-3	-3539	1062	0	0	0
	9(OPE)	-5	-3580	-1074	0	0	0
	10(SUS)	16	-3560	26	0	0	0
	11(SUS)	16	-3542	26	0	0	0
	MAX	22/L3	-6545/L3	-1074/L4			
7060		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-6	-6316	17	0	0	0
	4(OPE)	-3	-3437	-1031	0	0	0
	6(OPE)	-3	-3437	-1031	0	0	0
	7(OPE)	6	-3447	1034	0	0	0
	9(OPE)	-3	-3437	-1031	0	0	0
	10(SUS)	-4	-3442	12	0	0	0
	11(SUS)	-4	-3424	12	0	0	0
	MAX	-6/L3	-6316/L3	1034/L7			
7080		TYPE=Rigid +Y;					
	3(HYD)	1	-7400	8	0	0	0
	4(OPE)	-1	-4032	-1210	0	0	0
	6(OPE)	-5	-4032	-1210	0	0	0
	7(OPE)	2	-4030	1209	0	0	0
	9(OPE)	-1	-4032	-1210	0	0	0
	10(SUS)	1	-4031	6	0	0	0
	11(SUS)	1	-4011	6	0	0	0
	MAX	-5/L6	-7400/L3	-1210/L4			
7100		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-2579	5	0	0	0
	4(OPE)	0	-1405	-421	0	0	0
	6(OPE)	-1	-1405	-421	0	0	0
	7(OPE)	-0	-1405	421	0	0	0
	9(OPE)	0	-1405	-421	0	0	0
	10(SUS)	-0	-1405	3	0	0	0
	11(SUS)	-0	-1398	3	0	0	0
	MAX	-1/L6	-2579/L3	421/L7			

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 STRESS SUMMARY REPORT: Highest Stresses Mini Statement
 Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP+H
 CASE 10 (SUS) W+P1+H
 CASE 11 (SUS) WNC+H
 CASE 32 (OCC) L32=L22+L10
 CASE 33 (OCC) L33=L23+L10
 CASE 34 (OCC) L34=L24+L10
 CASE 35 (OCC) L35=L25+L10
 CASE 36 (OCC) L36=L26+L10
 CASE 37 (OCC) L37=L27+L10
 CASE 38 (OCC) L38=L28+L10
 CASE 39 (OCC) L39=L29+L10
 CASE 40 (OCC) L40=L30+L10
 CASE 41 (OCC) L41=L31+L10
 CASE 42 (EXP) L42=L4-L10
 CASE 43 (EXP) L43=L6-L10
 CASE 44 (EXP) L44=L7-L10
 CASE 45 (EXP) L45=L6-L7

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

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

Highest Stresses: (MPa	)	LOADCASE 3 (HYD) WW+HP+H	
Ratio (%):	47.5	@Node 2200	
Code Stress:	81.9	Allowable Stress:	172.4
Axial Stress:	48.5	@Node 2460	
Bending Stress:	109.1	@Node 2200	
Torsion Stress:	3.3	@Node 2578	
Hoop Stress:	100.7	@Node 1939	
Max Stress Intensity:	115.0	@Node 2340	

CODE STRESS CHECK PASSED : LOADCASE 10 (SUS) W+P1+H

Highest Stresses: (MPa	)	LOADCASE 10 (SUS) W+P1+H	
Ratio (%):	66.4	@Node 2200	
Code Stress:	76.5	Allowable Stress:	115.1
Axial Stress:	34.5	@Node 3260	
Bending Stress:	101.9	@Node 2200	
Torsion Stress:	6.5	@Node 3320	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	102.0	@Node 2200	

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

Highest Stresses: (MPa	)	LOADCASE 11 (SUS) WNC+H	
Ratio (%):	66.1	@Node 2200	
Code Stress:	76.2	Allowable Stress:	115.1
Axial Stress:	4.2	@Node 3640	
Bending Stress:	101.5	@Node 2200	

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 Various Load Cases

Torsion Stress:	6.5	@Node	3320
Hoop Stress:	0.0	@Node	40
Max Stress Intensity:	101.5	@Node	2200

CODE STRESS CHECK PASSED : LOADCASE 32 (OCC) L32=L22+L10

Highest Stresses: (MPa	)	LOADCASE 32 (OCC) L32=L22+L10	
Ratio (%):	74.5	@Node	3260
Code Stress:	136.7	Allowable Stress:	183.4
Axial Stress:	34.1	@Node	3260
Bending Stress:	137.4	@Node	3520
Torsion Stress:	13.9	@Node	5180
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	138.3	@Node	3520

CODE STRESS CHECK PASSED : LOADCASE 33 (OCC) L33=L23+L10

Highest Stresses: (MPa	)	LOADCASE 33 (OCC) L33=L23+L10	
Ratio (%):	73.8	@Node	3260
Code Stress:	135.4	Allowable Stress:	183.4
Axial Stress:	37.4	@Node	3260
Bending Stress:	119.8	@Node	2200
Torsion Stress:	8.8	@Node	3320
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	135.7	@Node	3260

CODE STRESS CHECK PASSED : LOADCASE 34 (OCC) L34=L24+L10

Highest Stresses: (MPa	)	LOADCASE 34 (OCC) L34=L24+L10	
Ratio (%):	78.6	@Node	3260
Code Stress:	144.2	Allowable Stress:	183.4
Axial Stress:	38.4	@Node	3260
Bending Stress:	120.4	@Node	3520
Torsion Stress:	9.1	@Node	4398
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	144.4	@Node	3260

CODE STRESS CHECK PASSED : LOADCASE 35 (OCC) L35=L25+L10

Highest Stresses: (MPa	)	LOADCASE 35 (OCC) L35=L25+L10	
Ratio (%):	68.1	@Node	3260
Code Stress:	124.9	Allowable Stress:	183.4
Axial Stress:	32.8	@Node	2180
Bending Stress:	142.8	@Node	3520
Torsion Stress:	15.1	@Node	5180
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	143.6	@Node	3520

CODE STRESS CHECK PASSED : LOADCASE 36 (OCC) L36=L26+L10

Highest Stresses: (MPa	)	LOADCASE 36 (OCC) L36=L26+L10	
Ratio (%):	72.8	@Node	2200
Code Stress:	111.5	Allowable Stress:	153.1

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STRESS SUMMARY REPORT: Highest Stresses Mini Statement
 Various Load Cases

Axial Stress:	42.7	@Node	3260
Bending Stress:	148.4	@Node	2200
Torsion Stress:	8.6	@Node	4398
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	148.6	@Node	2200

CODE STRESS CHECK PASSED : LOADCASE 37 (OCC) L37=L27+L10

Highest Stresses: (MPa	)	LOADCASE 37 (OCC) L37=L27+L10	
Ratio (%):	65.5	@Node	3260
Code Stress:	120.0	Allowable Stress:	183.4
Axial Stress:	33.0	@Node	2840
Bending Stress:	113.3	@Node	4360
Torsion Stress:	6.2	@Node	3320
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	120.3	@Node	3260

CODE STRESS CHECK PASSED : LOADCASE 38 (OCC) L38=L28+L10

Highest Stresses: (MPa	)	LOADCASE 38 (OCC) L38=L28+L10	
Ratio (%):	75.0	@Node	2200
Code Stress:	114.9	Allowable Stress:	153.1
Axial Stress:	41.9	@Node	3260
Bending Stress:	152.9	@Node	2200
Torsion Stress:	9.3	@Node	3320
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	153.1	@Node	2200

CODE STRESS CHECK PASSED : LOADCASE 39 (OCC) L39=L29+L10

Highest Stresses: (MPa	)	LOADCASE 39 (OCC) L39=L29+L10	
Ratio (%):	64.6	@Node	3260
Code Stress:	118.4	Allowable Stress:	183.4
Axial Stress:	33.1	@Node	2840
Bending Stress:	121.9	@Node	3520
Torsion Stress:	8.0	@Node	6460
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	122.8	@Node	3520

CODE STRESS CHECK PASSED : LOADCASE 40 (OCC) L40=L30+L10

Highest Stresses: (MPa	)	LOADCASE 40 (OCC) L40=L30+L10	
Ratio (%):	50.0	@Node	2200
Code Stress:	76.5	Allowable Stress:	153.1
Axial Stress:	34.5	@Node	3260
Bending Stress:	101.9	@Node	2200
Torsion Stress:	8.1	@Node	5180
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	102.0	@Node	2200

CODE STRESS CHECK PASSED : LOADCASE 41 (OCC) L41=L31+L10

Highest Stresses: (MPa	)	LOADCASE 41 (OCC) L41=L31+L10	
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 Various Load Cases

Ratio (%) :	49.9	@Node	2200	
Code Stress:	76.5	Allowable Stress:		153.1
Axial Stress:	34.5	@Node	3260	
Bending Stress:	101.9	@Node	2200	
Torsion Stress:	6.5	@Node	3320	
Hoop Stress:	67.2	@Node	3260	
Max Stress Intensity:	102.0	@Node	2200	

CODE STRESS CHECK PASSED : LOADCASE 42 (EXP) L42=L4-L10

Highest Stresses: (MPa	)	LOADCASE 42 (EXP) L42=L4-L10	
Ratio (%) :	52.3	@Node	4120
Code Stress:	116.3	Allowable Stress:	222.4
Axial Stress:	3.2	@Node	3140
Bending Stress:	148.4	@Node	5320
Torsion Stress:	19.4	@Node	6460
Hoop Stress:	0.0	@Node	40
Max Stress Intensity:	358.9	@Node	5021

CODE STRESS CHECK PASSED : LOADCASE 43 (EXP) L43=L6-L10

Highest Stresses: (MPa	)	LOADCASE 43 (EXP) L43=L6-L10	
Ratio (%) :	91.0	@Node	2560
Code Stress:	222.5	Allowable Stress:	244.5
Axial Stress:	7.1	@Node	3140
Bending Stress:	217.0	@Node	2560
Torsion Stress:	74.4	@Node	4398
Hoop Stress:	0.0	@Node	40
Max Stress Intensity:	358.5	@Node	5021

CODE STRESS CHECK PASSED : LOADCASE 44 (EXP) L44=L7-L10

Highest Stresses: (MPa	)	LOADCASE 44 (EXP) L44=L7-L10	
Ratio (%) :	12.3	@Node	2560
Code Stress:	31.2	Allowable Stress:	253.9
Axial Stress:	1.0	@Node	4320
Bending Stress:	30.4	@Node	2560
Torsion Stress:	5.8	@Node	4398
Hoop Stress:	0.0	@Node	40
Max Stress Intensity:	66.0	@Node	4360

CODE STRESS CHECK PASSED : LOADCASE 45 (EXP) L45=L6-L7

Highest Stresses: (MPa	)	LOADCASE 45 (EXP) L45=L6-L7	
Ratio (%) :	99.2	@Node	2560
Code Stress:	247.8	Allowable Stress:	249.8
Axial Stress:	8.1	@Node	3140
Bending Stress:	245.5	@Node	2560
Torsion Stress:	80.2	@Node	4398
Hoop Stress:	0.0	@Node	40
Max Stress Intensity:	368.8	@Node	5021

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NOZZLE CHECK REPORT: Nozzle Loads Screening

Various Load Cases

LOAD CASE DEFINITION KEY

CASE 4 (OPE) W+T1+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	
20		Absolute Method								
	Limits	2160	2160	2160		1155	1155	1155		
	4(OPE)	-361	1105	-39	0.512	26	95	1083	0.938	
	10(SUS)	114	-530	-12	0.245	5	11	-192	0.166	
	11(SUS)	115	-518	-12	0.240	5	11	-181	0.157	
780		Absolute Method								
	Limits	8400	8400	6300		3780	2520	3280		
	4(OPE)	1321	-92	250	0.157	316	-879	73	0.349	
	10(SUS)	1422	-18	-21	0.169	-67	-845	-59	0.335	
	11(SUS)	1412	-18	-21	0.168	-66	-836	-58	0.332	
1240		Absolute Method								
	Limits	2160	2160	2160		1155	1155	1155		
	4(OPE)	1087	-629	-62	0.503	9	-984	191	0.852	
	10(SUS)	5	-678	10	0.314	-4	2	204	0.177	
	11(SUS)	5	-673	10	0.312	-4	2	202	0.175	
1700		Absolute Method								
	Limits	15090	15090	12000		9150	4890	6420		
	4(OPE)	1924	968	2909	0.242	-3466	-3688	-88	0.754	
	10(SUS)	2490	-18	-124	0.165	75	-903	-6	0.185	
	11(SUS)	2458	-18	-122	0.163	74	-890	-6	0.182	

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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	
1780		Absolute Method								
	Limits	15090	15090	12000		9150	4890	6420		
	4(OPE)	1193	-210	2792	0.233	-1802	-1421	16	0.291	
	10(SUS)	1303	29	388	0.086	-157	-413	235	0.084	
	11(SUS)	1270	30	394	0.084	-160	-408	224	0.083	
3820		Absolute Method								
	Limits	9600	9600	7200		5760	3840	4990		
	4(OPE)	1094	-1503	-72	0.157	-29	-395	1648	0.330	
	10(SUS)	234	-953	-4	0.099	-45	-5	373	0.075	
	11(SUS)	233	-950	-4	0.099	-45	-5	372	0.074	

CN-008

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Line no.

Stress sketch

Input echo

Restraint summary

Stress summary

Nozzle load Table

LINE NO.:

GAS-111-0044C-CN05-6"-ET

GAS-111-0051C-FN05-6"-IS

GAS-111-0047C-FN05-2"-PT

GAS-111-0048C-FN05-2"-PT

FL-112-0020C-AN07-6"-PT

FL-112-0022C-AN07-6"-PT

GAS-111-0054C-FS00-2"-NP

GAS-111-0082C-FS00-2"-NP

FL-112-0023C-AN07-2"-PT

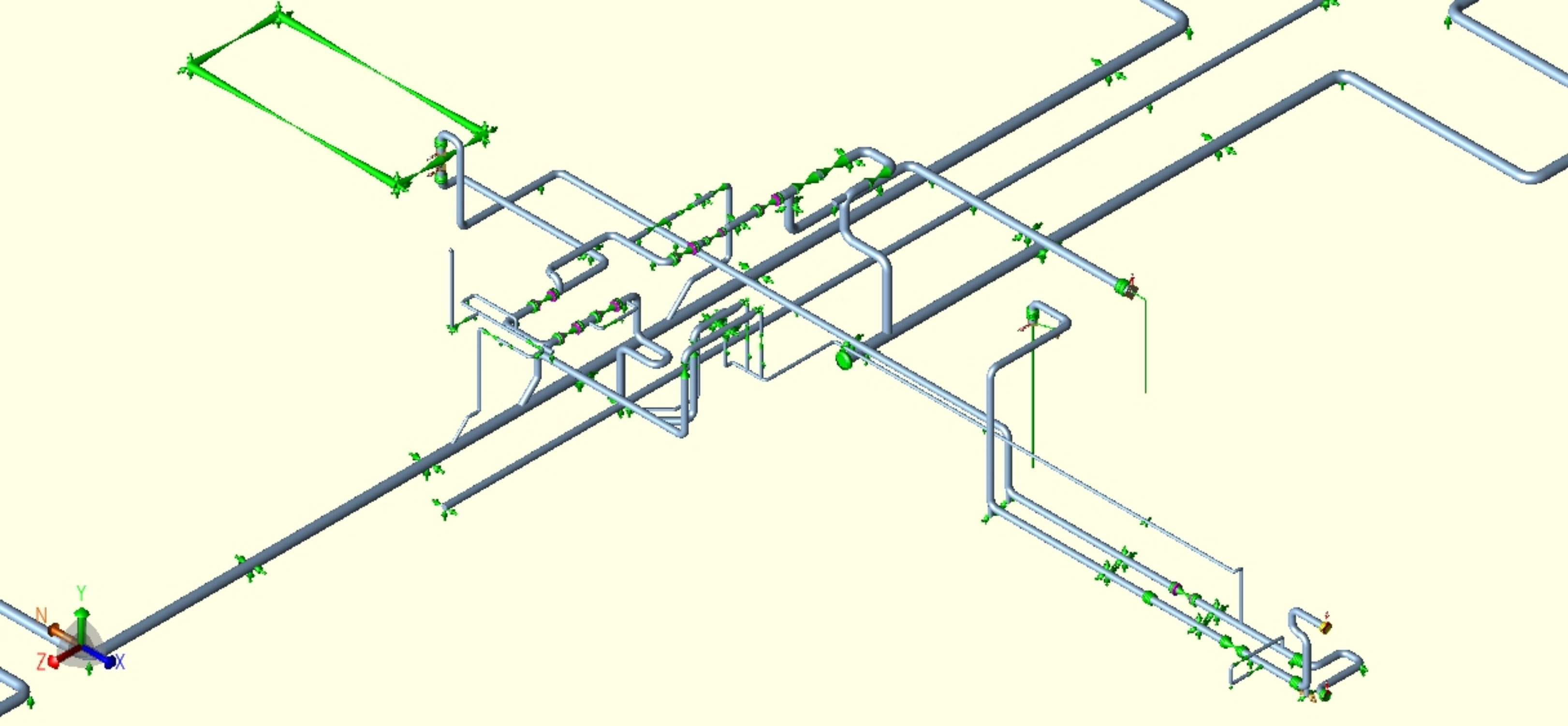
GAS-111-0058C-FS00-6"-NP

GAS-111-0055C-FS00-6"-NP

GAS-111-0057C-FS00-4"-NP

FL-112-0024C-AN07-4"-PT

FL-112-0001-AN07-10"-PT



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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+H
 4 (OPE) W+T1+P1+H
 5 (Alt-SUS) W+P1+H
 6 (OPE) W+T2+P1+H
 7 (OPE) W+T3+P1+H
 8 (Alt-SUS) W+P1+H
 9 (OPE) W+T1+P2+H
 10 (SUS) W+P1+H
 11 (SUS) WNC+H
 12 (OPE) W+T1+P1+H+U1+0.67U2
 13 (OPE) W+T1+P1+H-U1-0.67U2
 14 (OPE) W+T1+P1+H-U1+0.67U2
 15 (OPE) W+T1+P1+H+U1-0.67U2
 16 (OPE) W+T1+P1+H+0.67U2+U3
 17 (OPE) W+T1+P1+H-0.67U2-U3
 18 (OPE) W+T1+P1+H-0.67U2+U3
 19 (OPE) W+T1+P1+H+0.67U2-U3
 20 (OPE) W+T1+P1+H+F1
 21 (OPE) W+T1+P1+H+F2
 22 (OCC) L22=L12-L4
 23 (OCC) L23=L13-L4
 24 (OCC) L24=L14-L4
 25 (OCC) L25=L15-L4
 26 (OCC) L26=L16-L4
 27 (OCC) L27=L17-L4
 28 (OCC) L28=L18-L4
 29 (OCC) L29=L19-L4
 30 (OCC) L30=L20-L4
 31 (OCC) L31=L21-L4
 32 (OCC) L32=L22+L10
 33 (OCC) L33=L23+L10
 34 (OCC) L34=L24+L10
 35 (OCC) L35=L25+L10
 36 (OCC) L36=L26+L10
 37 (OCC) L37=L27+L10
 38 (OCC) L38=L28+L10
 39 (OCC) L39=L29+L10
 40 (OCC) L40=L30+L10
 41 (OCC) L41=L31+L10
 42 (EXP) L42=L4-L10
 43 (EXP) L43=L6-L10
 44 (EXP) L44=L7-L10
 45 (EXP) L45=L6-L7
 46 (OPE) L46=L4, L6, L7
 47 (OCC) L47=L22, L23, L24, L25

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INPUT LISTING

Job Description:

PROJECT:

CLIENT :

ANALYST:

NOTES :

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INPUT LISTING

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PIPE DATA

From 20 To 40 DX= -101.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm. Cor= 3.0000 mm.

Element Name= FLANGE_FLG_150

GENERAL

T1= 60 C T2= 115 C T3= 5 C P1= 22.0000 bars P2= 18.1000 bars

PHyd= 33.0000 bars Mat= (106)A106 Grade B E= 203,408 MPa

EH1= 200,651 MPa EH2= 197,207 MPa EH3= 204,236 MPa EH4= 203,408 MPa

EH5= 203,408 MPa EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa

EH9= 203,408 MPa v = .292 Pipe Den=7833.4399414 kg./m3

Fluid Den= 18.1000004 kg./m3 Insul Thk= 40.000 mm.

Insul Den= 136.1580048 kg./m3

RIGID Weight= 191.26 N.

RESTRAINTS

Node 20 ANC

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= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

EQUIPMENT LIMITS

Nozzle Node = 20 Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,160.00 N.

FB= 2,160.00 N. FC= 2,160.00 N. MA= 1,155.00 N.m. MB= 1,155.00 N.m.

MC= 1,155.00 N.m. Equipment Major Direction Vector= .0000 1.0000 .0000

Interact. Mtd= Absolute

From 40 To 60 DX= -1,077.280 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= -629.133 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

From 80 To 100 DX= 500.000 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 99

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INPUT LISTING

Angle/Node @2= .00 98

From 100 To 120 DY= -1,258.270 mm.

From 120 To 140 DY= -229.000 mm.

RIGID Weight= .00 N.

From 140 To 160 DY= -200.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm.

GENERAL

T1= 21 C T2= 21 C P1= .0000 bars P2= .0000 bars PHyd= .0000 bars

Fluid Den= .0000000 kg./m3 Insul Thk= 40.000 mm.

RESTRAINTS

Node 160 -X Mu = .30

Node 160 Z

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./mm.

Theoretical Cold Load = .00 N.

SIF's & TEE's

Node 140 Unreinforced Tee

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 120 To 180 DY= -229.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

GENERAL

T1= 60 C T2= 115 C P1= 22.0000 bars P2= 18.1000 bars

PHyd= 33.0000 bars Fluid Den= 18.1000004 kg./m3 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= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 180 To 200 DX= -229.000 mm.

From 200 To 220 DX= -101.600 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 220 To 240 DX= -101.600 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 240 To 260 DX= -700.000 mm.

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INPUT LISTING

From 260 To 280 DX= -295.500 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= -203.000 mm.

From 320 To 340 DX= -101.600 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 340 To 360 DX= -489.000 mm.

Element Name= GATE_NOFLG_300

RIGID Weight= 1,023.36 N.

From 360 To 380 DX= -101.600 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 380 To 400 DX= -850.000 mm.

RESTRAINTS

Node 400 Y Mu = .30

Node 400 Z

From 400 To 420 DX= -1,568.590 mm.

From 420 To 440 DX= -107.000 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 440 To 460 DX= -107.000 mm.

Element Name= FLANGE_FLG_300

RIGID Weight= 191.26 N.

From 460 To 480 DX= -1,350.000 mm.

RESTRAINTS

Node 480 Y Mu = .30

Node 480 Z

From 480 To 500 DX= -3,963.000 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 520 DY= 229.000 mm.

From 520 To 540 DY= -229.000 mm.

RIGID Weight= .00 N.

From 540 To 560 DY= -300.000 mm.

PIPE

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INPUT LISTING

Dia= 4.500 in. Wall= 6.020 mm.

GENERAL

T1= 21 C T2= 21 C P1= .0000 bars PHyd= .0000 bars

Fluid Den= .0000000 kg./m3 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= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 520 To 580 DY= 3,775.400 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

GENERAL

T1= 60 C T2= 115 C P1= 22.0000 bars PHyd= 33.0000 bars

Fluid Den= 18.1000004 kg./m3 Insul Thk= 40.000 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= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 580 To 600 DZ= -2,750.000 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 620 DX= -314.600 mm.

From 620 To 640 DY= -84.000 mm.

RIGID Weight= .00 N.

From 640 To 660 DY= -300.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm.

GENERAL

T1= 21 C T2= 21 C P1= .0000 bars P2= .0000 bars PHyd= .0000 bars

Fluid Den= .0000000 kg./m3 Insul Thk= 40.000 mm.

RESTRAINTS

Node 660 +Y Cnode 800 Mu = .30

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 620 To 680 DX= -995.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

GENERAL

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INPUT LISTING

```

T1= 60 C    T2= 115 C    P1= 22.0000 bars    P2= 18.1000 bars
Phyd= 33.0000 bars    Fluid Den= 18.1000004 kg./m3    Insul Thk= 40.000 mm.
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= 138 MPa    Sh1= 138 MPa
  Sh2= 138 MPa    Sh3= 138 MPa    Sh4= 138 MPa    Sh5= 138 MPa    Sh6= 138 MPa
  Sh7= 138 MPa    Sh8= 138 MPa    Sh9= 138 MPa    Sy= 241 MPa
-----
From 680 To 700 DY= -229.000 mm.
-----
From 700 To 720 DY= -101.600 mm.
  Element Name= FLANGE_FLG_300
RIGID Weight= 191.26 N.
-----
From 720 To 740 DY= -28.000 mm.
  Element Name= FLANGE_FLG_300
RIGID Weight= 60.00 N.
-----
From 740 To 760 DY= -101.600 mm.
  Element Name= FLANGE_FLG_300
RIGID Weight= 191.26 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= 8,400.00 N.
  FB= 8,400.00 N.    FC= 6,300.00 N.    MA= 3,780.00 N.m.    MB= 2,520.00 N.m.
  MC= 3,280.00 N.m.    Equipment Major Direction Vector= .0000 .0000 1.0000
  Interact. Mtd= Absolute
-----
From 780 To 800 DX= 995.000 mm.    DY= 257.000 mm.
RIGID Weight= .00 N.
-----
From 820 To 840 DY= -3,065.000 mm.
PIPE
  Dia= 36.000 in.    Wall= 15.000 mm.
GENERAL
  Mat= (383)A516 70    E= 203,408 MPa    EH1= 200,651 MPa    EH2= 197,207 MPa
  EH3= 204,236 MPa    EH4= 203,408 MPa    EH5= 203,408 MPa    EH6= 203,408 MPa
  EH7= 203,408 MPa    EH8= 203,408 MPa    EH9= 203,408 MPa    v = .292
  Pipe Den=7833.4399414 kg./m3    Insul Thk= 40.000 mm.
RIGID Weight= .00 N.
ALLOWABLE STRESSES
  B31.3 (2016)          Cycle Max Switch = ---    Sc= 161 MPa    Sh1= 160 MPa
  Sh2= 158 MPa    Sh3= 161 MPa    Sh4= 161 MPa    Sh5= 161 MPa    Sh6= 161 MPa
  Sh7= 161 MPa    Sh8= 161 MPa    Sh9= 161 MPa    Sy= 262 MPa
-----
From 840 To 860 DY= -1,200.000 mm.
PIPE
  Dia= 36.000 in.    Wall= 12.000 mm.
  Insul Thk= 40.000 mm.
RIGID Weight= .00 N.

```

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RESTRAINTS

Node 860 ANC

From 280 To 880 DZ= 122.140 mm.

PIPE

Dia= 2.375 in. Wall= 8.738 mm.

GENERAL

Mat= (106)A106 Grade B E= 203,408 MPa EH1= 200,651 MPa
EH2= 197,207 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa
EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa
v = .292 Pipe Den=7833.4399414 kg./m3 Insul Thk= 40.000 mm.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 880 To 900 DZ= 459.400 mm.

Element Name= BALL_FLG_600

GENERAL

T1= 142 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars
PHyd= 93.0000 bars Fluid Den= 43.0000000 kg./m3

RIGID Weight= 311.36 N.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 900 To 920 DZ= 576.200 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 919
Angle/Node @2= .00 918

RESTRAINTS

Node 920 +Y Mu = .30

From 920 To 940 DY= 514.340 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 939
Angle/Node @2= .00 938

From 940 To 960 DZ= -79.200 mm.

From 960 To 980 DZ= -459.740 mm.

Element Name= CHECK_FLG_600

RIGID Weight= 427.01 N.

From 980 To 1000 DZ= -1,222.140 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 999
Angle/Node @2= .00 998

From 1000 To 1020 DY= -398.340 mm.

SIF's & TEE's

Node 1020 Weldolet

From 1020 To 1040 DX= 300.000 mm.

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PIPE

Dia= 6.625 in. Wall= 10.973 mm.

Insul Thk= 40.000 mm.

RESTRAINTS

Node 1040 +Y Mu = .30

From 1040 To 1060 DX= 168.010 mm.

From 1060 To 1080 DX= 126.000 mm.

Element Name= FLG.PR_FLG_150

RIGID Weight= 364.74 N.

From 1080 To 1100 DX= 126.000 mm.

Element Name= FLG.PR_FLG_150

RIGID Weight= 364.74 N.

From 1100 To 1120 DX= 330.000 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 DZ= -1,000.000 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= 465.734 mm.

From 1160 To 1180 DX= 232.867 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

RESTRAINTS

Node 1180 -X Mu = .30

Node 1180 +Y Mu = .30

From 1180 To 1200 DZ= 1,600.000 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= 364.74 N.

RESTRAINTS

Node 1240 ANC

EQUIPMENT LIMITS

Nozzle Node = 1240

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,160.00 N. FB= 2,160.00 N.

FC= 2,160.00 N. MA= 1,155.00 N.m. MB= 1,155.00 N.m. MC= 1,155.00 N.m.

Equipment Major Direction Vector= .0000 1.0000 .0000

Interact. Mtd= Absolute

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From 1020 To 1260 DX= -1,400.000 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

From 1280 To 1300 DX= -650.000 mm.

From 1300 To 1320 DX= -127.000 mm.

Element Name= FLANGE_FLG_600

RIGID Weight= 364.74 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-1.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 102.0 bars (2)= 93.3 C -> 93.8 bars

(3)= 148.9 C -> 90.3 bars (4)= 204.5 C -> 87.2 bars

(5)= 260.0 C -> 83.1 bars (6)= 315.6 C -> 78.3 bars

(7)= 343.4 C -> 75.8 bars (8)= 371.1 C -> 73.1 bars

(9)= 398.9 C -> 70.0 bars (10)= 426.7 C -> 56.9 bars

(11)= 454.5 C -> 44.1 bars (12)= 482.3 C -> 31.7 bars

(13)= 510.0 C -> 19.0 bars (14)= 537.8 C -> 11.7 bars

From 1320 To 1340 DX= -567.000 mm.

Element Name= CHECK_NOFLG_600

RIGID Weight= 2,357.44 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-1.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 102.0 bars (2)= 93.3 C -> 93.8 bars

(3)= 148.9 C -> 90.3 bars (4)= 204.5 C -> 87.2 bars

(5)= 260.0 C -> 83.1 bars (6)= 315.6 C -> 78.3 bars

(7)= 343.4 C -> 75.8 bars (8)= 371.1 C -> 73.1 bars

(9)= 398.9 C -> 70.0 bars (10)= 426.7 C -> 56.9 bars

(11)= 454.5 C -> 44.1 bars (12)= 482.3 C -> 31.7 bars

(13)= 510.0 C -> 19.0 bars (14)= 537.8 C -> 11.7 bars

From 1340 To 1360 DX= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

From 1360 To 1380 DX= -1,650.000 mm.

RESTRAINTS

Node 1380 Y Mu = .30

Node 1380 Z

From 1380 To 1400 DX= -3,969.000 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.

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From 1440 To 1460 DY= -300.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm.

GENERAL

T1= 21 C T2= 21 C P1= .0000 bars P2= .0000 bars PHyd= .0000 bars

Fluid Den= .0000000 kg./m3 Insul Thk= .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= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 1420 To 1480 DY= 1,555.400 mm.

PIPE

Dia= 6.625 in. Wall= 10.973 mm.

GENERAL

T1= 142 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars

PHyd= 93.0000 bars Fluid Den= 43.0000000 kg./m3 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= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 1480 To 1500 DX= -5,309.600 mm.

RESTRAINTS

Node 1500 +Y

Node 1500 Z

From 1500 To 1520 DX= -6,000.000 mm.

RESTRAINTS

Node 1520 +Y Mu = .30

From 1520 To 1540 DX= -3,981.300 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= 600.000 mm.

RESTRAINTS

Node 1560 +Y Mu = .30

From 1560 To 1580 DZ= 2,750.000 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= 2,519.920 mm.

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INPUT LISTING

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BEND at "TO" end
  Radius= 228.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1599
  Angle/Node @2= .00 1598
-----
From 1600 To 1620 DX= -657.200 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= -229.000 mm.
-----
From 1640 To 1660 DY= -127.000 mm.
  Element Name= FLANGE_NOFLG_600
RIGID Weight= 364.74 N.
-----
From 1660 To 1680 DY= -35.000 mm.
  Element Name= FLANGE_NOFLG_600
RIGID Weight= 111.20 N.
-----
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= 15,090.00 N.   FB= 15,090.00 N.
  FC= 12,000.00 N.   MA= 9,150.00 N.m.   MB= 4,890.00 N.m.   MC= 6,420.00 N.m.
  Equipment Major Direction Vector= .0000 .0000 1.0000
  Interact. Mtd= Absolute
-----
From 1720 To 1740 DY= -240.000 mm.
RIGID Weight= .00 N.
-----
From 1740 To 1760 DY= -240.000 mm.
RIGID Weight= .00 N.
-----
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= 15,090.00 N.   FB= 15,090.00 N.
  FC= 12,000.00 N.   MA= 9,150.00 N.m.   MB= 4,890.00 N.m.   MC= 6,420.00 N.m.
  Equipment Major Direction Vector= .0000 .0000 1.0000
  Interact. Mtd= Absolute
-----
From 1800 To 1820 DY= -35.000 mm.
  Element Name= FLANGE_NOFLG_150
RIGID Weight= 111.20 N.
-----
From 1740 To 1840 DZ= 1,500.000 mm.
RIGID Weight= 2,250.00 N.
RESTRAINTS
  Node 1840 Y Mu = .10
  Node 1840 X Mu = .30
  Node 1840 Z Gap= 6.000 mm.

```

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INPUT LISTING

From 1840 To 1860 DX= -7,035.000 mm.

RIGID Weight=10,500.00 N.

RESTRAINTS

Node 1860 Y Mu = .10

Node 1860 Z Gap= 6.000 mm. Mu = .30

From 1860 To 1880 DZ= -3,000.000 mm.

RIGID Weight= 4,500.00 N.

RESTRAINTS

Node 1880 Y Mu = .10

Node 1880 Z Gap= 6.000 mm.

From 1880 To 1900 DX= 7,035.000 mm.

RIGID Weight=10,500.00 N.

RESTRAINTS

Node 1900 Y Mu = .10

Node 1900 X Mu = .30

Node 1900 Z Gap= 6.000 mm. Mu = .30

From 1900 To 1740 DZ= 1,500.000 mm.

RIGID Weight= 2,250.00 N.

From 1820 To 1920 DY= -127.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm. Cor= .0000 mm.

Element Name= FLANGE_NOFLG_150

GENERAL

T1= 60 C Mat= (165)A312 TP316L E= 195,134 MPa EH1= 192,371 MPa

EH2= 184,546 MPa EH3= 195,962 MPa EH4= 195,134 MPa EH5= 195,134 MPa

EH6= 195,134 MPa EH7= 195,134 MPa EH8= 195,134 MPa EH9= 195,134 MPa

v = .292 Pipe Den=8027.1997070 kg./m3 Fluid Den= 59.5999985 kg./m3

Insul Thk= .000 mm.

RIGID Weight= 364.74 N.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa

Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa

Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

From 1920 To 1940 DY= -229.000 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 1960 DZ= -657.200 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1959

Angle/Node @2= .00 1958

From 1960 To 1980 DX= 4,441.000 mm.

RESTRAINTS

Node 1980 +Y Mu = .30

Node 1980 Z Gap= 3.000 mm. Mu = .30

From 1980 To 2000 DX= 600.000 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 1999
Angle/Node @2= .00 1998

From 2000 To 2020 DY= -8.750 mm. DZ= 1,675.000 mm.

SIF's & TEE's

Node 2020 Welding Tee

From 2020 To 2040 DY= -.710 mm. DZ= 142.800 mm.

From 2040 To 2060 DY= -.631 mm. DZ= 126.998 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars

(5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars

(7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars

(9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars

(11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars

(13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars

(15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars

(17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars

(19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars

(21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars

(23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

From 2060 To 2080 DY= -2.778 mm. DZ= 558.793 mm.

Element Name= CHECK_NOFLG_600

RIGID Weight= 2,357.44 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars

(5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars

(7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars

(9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars

(11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars

(13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars

(15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars

(17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars

(19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars

(21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars

(23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

From 2080 To 2100 DY= -.631 mm. DZ= 126.998 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

From 2100 To 2120 DY= -2.506 mm. DZ= 499.994 mm.

RESTRAINTS

Node 2120 +Y Mu = .30

From 2120 To 2140 DY= -2.294 mm. DZ= 457.606 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 2139
Angle/Node @2= .00 2138

From 2140 To 2160 DX= 442.770 mm.

SIF's & TEE's

Node 2160 Weldolet

From 2160 To 2180 DX= 699.580 mm.

From 2180 To 2200 DX= 229.000 mm.

RIGID Weight= .00 N.

From 2200 To 2220 DX= 300.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm.

GENERAL

T1= 21 C T2= 21 C P1= .0000 bars P2= .0000 bars PHyd= .0000 bars

Fluid Den= .0000000 kg./m3 Insul Thk= .000 mm.

RESTRAINTS

Node 2220 +Y

SIF's & TEE's

Node 2200 Unreinforced Tee

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa
Sh2= 115 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa
Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

From 2180 To 2240 DX= 229.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

GENERAL

T1= 60 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars

PHyd= 93.0000 bars Fluid Den= 59.5999985 kg./m3 Insul Thk= .000 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2239

FORCES & MOMENTS

Node 2240

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa
Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa
Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

From 2240 To 2260 DZ= -428.510 mm.

From 2260 To 2280 DZ= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars

(5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars

(7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars

(9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars

(11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars

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INPUT LISTING

(13)= 510.0 C	-> 52.7 bars	(14)= 537.8 C	-> 49.0 bars
(15)= 565.6 C	-> 44.8 bars	(16)= 593.4 C	-> 35.5 bars
(17)= 621.2 C	-> 28.3 bars	(18)= 648.9 C	-> 22.8 bars
(19)= 676.7 C	-> 18.3 bars	(20)= 704.5 C	-> 15.5 bars
(21)= 732.3 C	-> 12.8 bars	(22)= 760.1 C	-> 10.3 bars
(23)= 787.8 C	-> 7.9 bars	(24)= 815.6 C	-> 5.9 bars

From 2280 To 2300 DZ= -568.000 mm.

Element Name= GATE_NOFLG_600

RIGID Weight= 4,846.72 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C	-> 74.1 bars	(4)= 204.5 C	-> 68.6 bars
(5)= 260.0 C	-> 64.1 bars	(6)= 315.6 C	-> 61.0 bars
(7)= 343.4 C	-> 59.6 bars	(8)= 371.1 C	-> 58.3 bars
(9)= 398.9 C	-> 56.9 bars	(10)= 426.7 C	-> 55.8 bars
(11)= 454.5 C	-> 54.5 bars	(12)= 482.3 C	-> 53.8 bars
(13)= 510.0 C	-> 52.7 bars	(14)= 537.8 C	-> 49.0 bars
(15)= 565.6 C	-> 44.8 bars	(16)= 593.4 C	-> 35.5 bars
(17)= 621.2 C	-> 28.3 bars	(18)= 648.9 C	-> 22.8 bars
(19)= 676.7 C	-> 18.3 bars	(20)= 704.5 C	-> 15.5 bars
(21)= 732.3 C	-> 12.8 bars	(22)= 760.1 C	-> 10.3 bars
(23)= 787.8 C	-> 7.9 bars	(24)= 815.6 C	-> 5.9 bars

From 2300 To 2320 DZ= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

From 2320 To 2340 DZ= -256.220 mm.

SIF's & TEE's

Node 2340 Weldolet

From 2340 To 2360 DZ= -200.000 mm.

From 2360 To 2380 DZ= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C	-> 74.1 bars	(4)= 204.5 C	-> 68.6 bars
(5)= 260.0 C	-> 64.1 bars	(6)= 315.6 C	-> 61.0 bars
(7)= 343.4 C	-> 59.6 bars	(8)= 371.1 C	-> 58.3 bars
(9)= 398.9 C	-> 56.9 bars	(10)= 426.7 C	-> 55.8 bars
(11)= 454.5 C	-> 54.5 bars	(12)= 482.3 C	-> 53.8 bars
(13)= 510.0 C	-> 52.7 bars	(14)= 537.8 C	-> 49.0 bars
(15)= 565.6 C	-> 44.8 bars	(16)= 593.4 C	-> 35.5 bars
(17)= 621.2 C	-> 28.3 bars	(18)= 648.9 C	-> 22.8 bars
(19)= 676.7 C	-> 18.3 bars	(20)= 704.5 C	-> 15.5 bars
(21)= 732.3 C	-> 12.8 bars	(22)= 760.1 C	-> 10.3 bars
(23)= 787.8 C	-> 7.9 bars	(24)= 815.6 C	-> 5.9 bars

From 2380 To 2400 DZ= -598.000 mm.

Element Name= GATE_NOFLG_600

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INPUT LISTING

RIGID Weight= 1,979.36 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars

(5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars

(7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars

(9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars

(11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars

(13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars

(15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars

(17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars

(19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars

(21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars

(23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

From 2400 To 2420 DZ= -127.000 mm.

Element Name= FLANGE_FLG_600

RIGID Weight= 364.74 N.

From 2420 To 2440 DZ= -200.000 mm.

RESTRAINTS

Node 2440 +Y

SIF's & TEE's

Node 2440 Weldolet

From 2440 To 2460 DZ= -428.600 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2459

Angle/Node @2= .00 2458

From 2460 To 2480 DY= -1,282.570 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2479

Angle/Node @2= .00 2478

From 2480 To 2500 DX= 1,200.600 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2499

Angle/Node @2= .00 2498

From 2500 To 2520 DZ= 560.000 mm.

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 DX= -1,200.600 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2539

Angle/Node @2= .00 2538

From 2540 To 6695 DY= -1,739.400 mm.

SIF's & TEE's

Node 6695 Welding Tee

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INPUT LISTING

From 2340 To 2580 DX= 448.460 mm.

PIPE

Dia= 2.375 in. Wall= 3.912 mm.

Insul Thk= .000 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2579

Angle/Node @2= .00 2578

From 2580 To 2600 DZ= -76.200 mm.

From 2600 To 2620 DZ= -447.240 mm.

Element Name= GLOBE_FLG_600

RIGID Weight= 515.97 N.

From 2620 To 2640 DZ= -200.000 mm.

RESTRAINTS

Node 2640 +Y

From 2640 To 2660 DZ= -528.500 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2659

Angle/Node @2= .00 2658

From 2660 To 2440 DX= -448.460 mm.

From 2680 To 2700 DZ= -1,460.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

Insul Thk= .000 mm.

RESTRAINTS

Node 2700 +Y Mu = .30

From 2680 To 2720 DZ= 185.000 mm.

RESTRAINTS

Node 2720 +Y Mu = .30

From 2720 To 2560 DZ= 6.000 mm.

From 2560 To 2740 DZ= 5,994.000 mm.

RESTRAINTS

Node 2740 +Y Mu = .30

Node 2740 X

From 2740 To 2760 DZ= 6,000.000 mm.

RESTRAINTS

Node 2760 +Y Mu = .30

From 2760 To 2780 DZ= 6,000.000 mm.

RESTRAINTS

Node 2780 +Y Mu = .30

Node 2780 X Gap= 3.000 mm. Mu = .30

From 2780 To 2800 DZ= 6,000.000 mm.

RESTRAINTS

Node 2800 +Y Mu = .30

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INPUT LISTING

From 2800 To 2820 DZ= 6,000.000 mm.

RESTRAINTS

Node 2820 +Y Mu = .30

From 2820 To 2830 DZ= 6.000 mm.

From 2830 To 2840 DZ= 5,994.000 mm.

RESTRAINTS

Node 2840 +Y

Node 2840 X Gap= 3.000 mm.

Node 2840 Z Gap= 3.000 mm.

From 2020 To 2860 DY= 371.500 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2859

Angle/Node @2= .00 2858

From 2860 To 2880 DX= -457.200 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2879

From 2880 To 2900 DZ= -2,216.000 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2899

Angle/Node @2= .00 2898

From 2900 To 2920 DX= 557.200 mm.

SIF's & TEE's

Node 2920 Welding Tee

From 2920 To 2940 DX= 871.470 mm.

RESTRAINTS

Node 2940 +Y Mu = .30

From 2940 To 2960 DX= 400.000 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2959

Angle/Node @2= .00 2958

From 2960 To 2980 DZ= -229.000 mm.

Element Name= GLOBE_FLG_600

From 2980 To 3000 DZ= -127.000 mm.

Element Name= FLANGE_FLG_600

RIGID Weight= 364.74 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars

(5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars

(7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars

(9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars

(11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars

(13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars

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INPUT LISTING

(15)= 565.6 C	-> 44.8 bars	(16)= 593.4 C	-> 35.5 bars
(17)= 621.2 C	-> 28.3 bars	(18)= 648.9 C	-> 22.8 bars
(19)= 676.7 C	-> 18.3 bars	(20)= 704.5 C	-> 15.5 bars
(21)= 732.3 C	-> 12.8 bars	(22)= 760.1 C	-> 10.3 bars
(23)= 787.8 C	-> 7.9 bars	(24)= 815.6 C	-> 5.9 bars

 From 3000 To 3020 DZ= -567.800 mm.

Element Name= GLOBE_NOFLG_600

RIGID Weight= 2,846.72 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C	-> 74.1 bars	(4)= 204.5 C	-> 68.6 bars
(5)= 260.0 C	-> 64.1 bars	(6)= 315.6 C	-> 61.0 bars
(7)= 343.4 C	-> 59.6 bars	(8)= 371.1 C	-> 58.3 bars
(9)= 398.9 C	-> 56.9 bars	(10)= 426.7 C	-> 55.8 bars
(11)= 454.5 C	-> 54.5 bars	(12)= 482.3 C	-> 53.8 bars
(13)= 510.0 C	-> 52.7 bars	(14)= 537.8 C	-> 49.0 bars
(15)= 565.6 C	-> 44.8 bars	(16)= 593.4 C	-> 35.5 bars
(17)= 621.2 C	-> 28.3 bars	(18)= 648.9 C	-> 22.8 bars
(19)= 676.7 C	-> 18.3 bars	(20)= 704.5 C	-> 15.5 bars
(21)= 732.3 C	-> 12.8 bars	(22)= 760.1 C	-> 10.3 bars
(23)= 787.8 C	-> 7.9 bars	(24)= 815.6 C	-> 5.9 bars

 From 3020 To 3040 DZ= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

 From 3040 To 3060 DZ= -150.000 mm.

 From 3060 To 3080 DY= -27.000 mm. DZ= -139.700 mm.

REDUCER

Diam2= 4.500 in. Wall2= 6.020 mm.

 From 3080 To 3100 DZ= -111.125 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm. Element Name= GLOBE_FLG_600

Insul Thk= .000 mm.

RIGID Weight= 191.26 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C	-> 74.1 bars	(4)= 204.5 C	-> 68.6 bars
(5)= 260.0 C	-> 64.1 bars	(6)= 315.6 C	-> 61.0 bars
(7)= 343.4 C	-> 59.6 bars	(8)= 371.1 C	-> 58.3 bars
(9)= 398.9 C	-> 56.9 bars	(10)= 426.7 C	-> 55.8 bars
(11)= 454.5 C	-> 54.5 bars	(12)= 482.3 C	-> 53.8 bars
(13)= 510.0 C	-> 52.7 bars	(14)= 537.8 C	-> 49.0 bars
(15)= 565.6 C	-> 44.8 bars	(16)= 593.4 C	-> 35.5 bars
(17)= 621.2 C	-> 28.3 bars	(18)= 648.9 C	-> 22.8 bars
(19)= 676.7 C	-> 18.3 bars	(20)= 704.5 C	-> 15.5 bars
(21)= 732.3 C	-> 12.8 bars	(22)= 760.1 C	-> 10.3 bars
(23)= 787.8 C	-> 7.9 bars	(24)= 815.6 C	-> 5.9 bars

 From 3100 To 3120 DZ= -441.800 mm.

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INPUT LISTING

```

Element Name= GLOBE_NOFLG_600
RIGID Weight= 2,423.36 N.
FLANGES
  Location= To      Method= Peq    Class/Grade= ASME-2009-600-2.1    G/C= 7.565 in.
  T/P table ( 1)=  37.8 C    -> 99.3 bars    ( 2)=  93.3 C    -> 82.7 bars
  ( 3)= 148.9 C    -> 74.1 bars    ( 4)= 204.5 C    -> 68.6 bars
  ( 5)= 260.0 C    -> 64.1 bars    ( 6)= 315.6 C    -> 61.0 bars
  ( 7)= 343.4 C    -> 59.6 bars    ( 8)= 371.1 C    -> 58.3 bars
  ( 9)= 398.9 C    -> 56.9 bars    (10)= 426.7 C    -> 55.8 bars
  (11)= 454.5 C    -> 54.5 bars    (12)= 482.3 C    -> 53.8 bars
  (13)= 510.0 C    -> 52.7 bars    (14)= 537.8 C    -> 49.0 bars
  (15)= 565.6 C    -> 44.8 bars    (16)= 593.4 C    -> 35.5 bars
  (17)= 621.2 C    -> 28.3 bars    (18)= 648.9 C    -> 22.8 bars
  (19)= 676.7 C    -> 18.3 bars    (20)= 704.5 C    -> 15.5 bars
  (21)= 732.3 C    -> 12.8 bars    (22)= 760.1 C    -> 10.3 bars
  (23)= 787.8 C    -> 7.9 bars     (24)= 815.6 C    -> 5.9 bars
-----
From 3120 To 3140 DZ= -111.125 mm.
  Element Name= FLANGE_NOFLG_600
RIGID Weight= 191.26 N.
-----
From 3140 To 3160 DY= 27.000 mm.  DZ= -139.700 mm.
REDUCER
  Diam2= 6.625 in.  Wall2= 7.112 mm.
-----
From 3160 To 3180 DZ= -350.000 mm.
PIPE
  Dia= 6.625 in.  Wall= 7.112 mm.
  Insul Thk= .000 mm.
RESTRAINTS
  Node 3180 +Y Mu = .30
  Node 3180 X Mu = .30
-----
From 3180 To 3200 DZ= -582.480 mm.
-----
From 3200 To 3220 DZ= -127.000 mm.
  Element Name= FLANGE_NOFLG_600
RIGID Weight= 364.74 N.
FLANGES
  Location= To      Method= Peq    Class/Grade= ASME-2009-600-2.1    G/C= 7.565 in.
  T/P table ( 1)=  37.8 C    -> 99.3 bars    ( 2)=  93.3 C    -> 82.7 bars
  ( 3)= 148.9 C    -> 74.1 bars    ( 4)= 204.5 C    -> 68.6 bars
  ( 5)= 260.0 C    -> 64.1 bars    ( 6)= 315.6 C    -> 61.0 bars
  ( 7)= 343.4 C    -> 59.6 bars    ( 8)= 371.1 C    -> 58.3 bars
  ( 9)= 398.9 C    -> 56.9 bars    (10)= 426.7 C    -> 55.8 bars
  (11)= 454.5 C    -> 54.5 bars    (12)= 482.3 C    -> 53.8 bars
  (13)= 510.0 C    -> 52.7 bars    (14)= 537.8 C    -> 49.0 bars
  (15)= 565.6 C    -> 44.8 bars    (16)= 593.4 C    -> 35.5 bars
  (17)= 621.2 C    -> 28.3 bars    (18)= 648.9 C    -> 22.8 bars
  (19)= 676.7 C    -> 18.3 bars    (20)= 704.5 C    -> 15.5 bars
  (21)= 732.3 C    -> 12.8 bars    (22)= 760.1 C    -> 10.3 bars
  (23)= 787.8 C    -> 7.9 bars     (24)= 815.6 C    -> 5.9 bars
-----
From 3220 To 3240 DZ= -567.800 mm.
  Element Name= BALL_NOFLG_600

```

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INPUT LISTING

RIGID Weight= 1,979.36 N.

FLANGES

Location= To Method= Peq Class/Grade= ASME-2009-600-2.1 G/C= 7.565 in.

T/P table (1)= 37.8 C -> 99.3 bars (2)= 93.3 C -> 82.7 bars

(3)= 148.9 C -> 74.1 bars (4)= 204.5 C -> 68.6 bars

(5)= 260.0 C -> 64.1 bars (6)= 315.6 C -> 61.0 bars

(7)= 343.4 C -> 59.6 bars (8)= 371.1 C -> 58.3 bars

(9)= 398.9 C -> 56.9 bars (10)= 426.7 C -> 55.8 bars

(11)= 454.5 C -> 54.5 bars (12)= 482.3 C -> 53.8 bars

(13)= 510.0 C -> 52.7 bars (14)= 537.8 C -> 49.0 bars

(15)= 565.6 C -> 44.8 bars (16)= 593.4 C -> 35.5 bars

(17)= 621.2 C -> 28.3 bars (18)= 648.9 C -> 22.8 bars

(19)= 676.7 C -> 18.3 bars (20)= 704.5 C -> 15.5 bars

(21)= 732.3 C -> 12.8 bars (22)= 760.1 C -> 10.3 bars

(23)= 787.8 C -> 7.9 bars (24)= 815.6 C -> 5.9 bars

From 3240 To 3260 DZ= -127.000 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 364.74 N.

From 3260 To 3280 DZ= -152.400 mm.

PIPE

Cor= 6.0000 mm.

GENERAL

T1= 37 C T2= 85 C P1= 9.0000 bars P2= 5.1000 bars PHyd= 13.5000 bars

Mat= (106)A106 Grade B E= 203,408 MPa EH1= 202,088 MPa

EH2= 199,094 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa

EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa

v = .292 Pipe Den=7833.4399414 kg./m3 Fluid Den= 6.0000000 kg./m3

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

REDUCER

Diam2= 8.625 in. Wall2= 8.179 mm.

From 3280 To 3300 DZ= -177.800 mm.

PIPE

Dia= 8.625 in. Wall= 8.179 mm.

Insul Thk= .000 mm.

SIF's & TEE's

Node 3300 Welding Tee

From 3300 To 3320 DZ= -177.800 mm.

From 3320 To 3340 DZ= -707.500 mm.

Element Name= CHECK_FLG_600

RIGID Weight= 5,052.93 N.

From 3340 To 3360 DZ= -157.000 mm.

From 3360 To 3380 DZ= -828.000 mm.

Element Name= GLOBE_FLG_600

RIGID Weight= 4,224.00 N.

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INPUT LISTING

From 3380 To 3400 DZ= -200.000 mm.

RESTRAINTS

Node 3400 +Y Mu = .30

Node 3400 X Gap= 3.000 mm. Mu = .30

From 3400 To 3420 DZ= -504.800 mm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3419

Angle/Node @2= .00 3418

From 3420 To 3440 DX= 1,068.900 mm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3439

Angle/Node @2= .00 3438

From 3440 To 3460 DZ= 305.000 mm.

From 3460 To 3480 DZ= 689.700 mm.

Element Name= BALL_FLG_150

RIGID Weight= 2,259.58 N.

From 3480 To 3500 DZ= 450.000 mm.

From 3500 To 3520 DZ= 305.000 mm.

RIGID Weight= .00 N.

From 3520 To 3540 DZ= 350.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm.

GENERAL

T1= 21 C T2= 21 C P1= .0000 bars P2= .0000 bars PHyd= .0000 bars

Fluid Den= .0000000 kg./m3 Insul Thk= .000 mm.

RESTRAINTS

Node 3540 +Y

SIF's & TEE's

Node 3520 Unreinforced Tee

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 3500 To 3560 DZ= 305.000 mm.

PIPE

Dia= 8.625 in. Wall= 8.179 mm.

GENERAL

T1= 37 C T2= 85 C P1= 9.0000 bars P2= 5.1000 bars PHyd= 13.5000 bars

Fluid Den= 6.0000000 kg./m3 Insul Thk= .000 mm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3559

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 3560 To 3580 DY= -1,177.000 mm.

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INPUT LISTING

```

BEND at "TO" end
  Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3579
  Angle/Node @2= .00 3578
-----
From 3580 To 3600 DX= 1,459.600 mm.
BEND at "TO" end
  Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3599
  Angle/Node @2= .00 3598
-----
From 3600 To 6970 DY= -2,173.000 mm.
SIF's & TEE's
  Node 6970 Welding Tee
-----
From 3300 To 3640 DY= -350.000 mm.
RESTRAINTS
  Node 3640 +Y Mu = .30
  Node 3640 X
  Node 3640 Z
-----
From 3640 To 3660 DY= -837.000 mm.
BEND at "TO" end
  Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3659
  Angle/Node @2= .00 3658
-----
From 3660 To 3680 DZ= -3,091.540 mm.
RESTRAINTS
  Node 3680 +Y Mu = .30
-----
From 3680 To 3700 DZ= -1,000.000 mm.
BEND at "TO" end
  Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3699
  Angle/Node @2= .00 3698
-----
From 3700 To 3720 DX= 4,028.500 mm.
RESTRAINTS
  Node 3720 +Y Mu = .30
  Node 3720 Z Gap= 3.000 mm. Mu = .30
-----
From 3720 To 3740 DX= 3,153.400 mm.
-----
From 3740 To 3760 DX= 104.775 mm.
  Element Name= FLANGE_FLG_150
RIGID Weight= 177.92 N.
-----
From 3760 To 3780 DX= 25.000 mm.
  Element Name= FLANGE_FLG_150
RIGID Weight= 100.00 N.
-----
From 3780 To 3800 DX= 104.000 mm.
  Element Name= FLANGE_FLG_150
RIGID Weight= 177.92 N.
-----
From 3800 To 3820 DX= 156.000 mm.
RESTRAINTS
  Node 3820 ANC Cnode 3840

```

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INPUT LISTING

EQUIPMENT LIMITS

Nozzle Node = 3820

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 9,600.00 N. FB= 9,600.00 N.
FC= 7,200.00 N. MA= 5,760.00 N.m. MB= 3,840.00 N.m. MC= 4,990.00 N.m.
Equipment Major Direction Vector= .0000 1.0000 .0000
Interact. Mtd= Absolute

From 3840 To 3860 DX= 460.000 mm.

PIPE

Dia= 36.220 in. Wall= 12.000 mm.

GENERAL

Mat= (381)A516 60 E= 203,408 MPa EH1= 202,088 MPa EH2= 199,094 MPa
EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa EH6= 203,408 MPa
EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa v = .292
Pipe Den=7833.4399414 kg./m3 Insul Thk= .000 mm.

RIGID Weight= .00 N.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
Sh2= 135 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 221 MPa

From 3860 To 3880 DY= -1,560.000 mm.

RIGID Weight= .00 N.

From 3880 To 3900 DY= -1,200.000 mm.

RIGID Weight= .00 N.

RESTRAINTS

Node 3900 ANC

From 3620 To 3920 DZ= 733.000 mm.

PIPE

Dia= 10.750 in. Wall= 9.271 mm.

GENERAL

Mat= (106)A106 Grade B E= 203,408 MPa EH1= 202,088 MPa
EH2= 199,094 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa
EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa
v = .292 Pipe Den=7833.4399414 kg./m3 Insul Thk= .000 mm.

RESTRAINTS

Node 3920 +Y Mu = .30

Node 3920 Z Gap= 3.000 mm. Mu = .30

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 3620 To 3940 DZ= -5,266.000 mm.

RESTRAINTS

Node 3940 +Y Mu = .30

Node 3940 X Gap= 3.000 mm. Mu = .30

From 2920 To 3960 DZ= -400.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm. Cor= .0000 mm.

GENERAL

T1= 60 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars

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INPUT LISTING

PHyd= 93.0000 bars Mat= (165)A312 TP316L E= 195,134 MPa
 EH1= 192,371 MPa EH2= 184,546 MPa EH3= 195,962 MPa EH4= 195,134 MPa
 EH5= 195,134 MPa EH6= 195,134 MPa EH7= 195,134 MPa EH8= 195,134 MPa
 EH9= 195,134 MPa v = .292 Pipe Den=8027.1997070 kg./m3
 Fluid Den= 59.5999985 kg./m3 Insul Thk= .000 mm.

RESTRAINTS

Node 3960 +Y Mu = .30

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa
 Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa
 Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

 From 3960 To 3980 DZ= -230.000 mm.

From 3980 To 4000 DZ= -654.050 mm.

Element Name= BALL_FLG_600

RIGID Weight= 1,116.45 N.

From 4000 To 4020 DZ= -150.000 mm.

RESTRAINTS

Node 4020 +Y Mu = .30

From 4020 To 4040 DZ= -150.000 mm.

From 4040 To 4060 DY= -12.700 mm. DZ= -101.600 mm.

REDUCER

Diam2= 3.500 in. Wall2= 5.486 mm.

From 4060 To 4080 DZ= -92.075 mm.

PIPE

Dia= 3.500 in. Wall= 5.486 mm. Element Name= FLANGE_FLG_600

Insul Thk= .000 mm.

RIGID Weight= 106.75 N.

From 4080 To 4100 DZ= -365.000 mm.

Element Name= GLOBE_NOFLG_600

RIGID Weight= 1,211.68 N.

From 4100 To 4120 DZ= -92.075 mm.

Element Name= FLANGE_NOFLG_600

RIGID Weight= 106.75 N.

From 4120 To 4140 DY= 12.700 mm. DZ= -101.600 mm.

REDUCER

Diam2= 4.500 in. Wall2= 6.020 mm.

From 4140 To 4160 DZ= -250.000 mm.

PIPE

Dia= 4.500 in. Wall= 6.020 mm.

Insul Thk= .000 mm.

RESTRAINTS

Node 4160 +Y Mu = .30

Node 4160 X

From 4160 To 4180 DZ= -266.940 mm.

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INPUT LISTING

From 4180 To 4200 DZ= -453.000 mm.

Element Name= BALL_FLG_600

RIGID Weight= 1,116.45 N.

From 4200 To 4220 DZ= -153.000 mm.

PIPE

Dia= 4.500 in. Wall= 8.560 mm. Cor= 6.0000 mm.

GENERAL

T1= 350 C T2= 350 C P1= 7.5000 bars P2= .5000 bars PHyd= 8.2500 bars

Mat= (106)A106 Grade B E= 203,408 MPa EH1= 178,971 MPa

EH2= 178,971 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa

EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa

v = .292 Pipe Den=7833.4399414 kg./m3 Fluid Den= 1.5000000 kg./m3

Insul Thk= .000 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4219

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 118 MPa

Sh2= 118 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 4220 To 4240 DY= -2,196.000 mm.

BEND at "TO" end

Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4239

Angle/Node @2= .00 4238

From 4240 To 4260 DZ= 1,300.000 mm.

BEND at "TO" end

Radius= 152.400 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 4259

Angle/Node @2= .00 4258

From 4260 To 6250 DY= -875.000 mm. DZ= 875.000 mm.

SIF's & TEE's

Node 6250 <No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460

From 4280 To 4300 DZ= -2,720.000 mm.

PIPE

Dia= 10.750 in. Wall= 9.271 mm.

Insul Thk= .000 mm.

RESTRAINTS

Node 4300 +Y Mu = .30

SIF's & TEE's

Node 4280 <No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460

From 4280 To 4320 DZ= 3,280.000 mm.

RESTRAINTS

Node 4320 +Y Mu = .30

Node 4320 X Gap= 3.000 mm. Mu = .30

Node 4320 Z

SIF's & TEE's

Node 4280 <No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460

From 4320 To 4340 DZ= 2,206.670 mm.

SIF's & TEE's

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INPUT LISTING

```

Node 4340 <No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160
-----
From 4340 To 4360 DZ= 2,776.210 mm.
SIF's & TEE's
Node 4340 <No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160
Pad= 9.270 mm.
Node 4360 <No Type Specified> SIF(in)= 2.130 SIF(out)= 2.520
-----
From 4360 To 4380 DZ= 1,017.120 mm.
RESTRAINTS
Node 4380 +Y Mu = .30
SIF's & TEE's
Node 4360 <No Type Specified> SIF(in)= 2.130 SIF(out)= 2.520
-----
From 2160 To 4400 DY= 376.600 mm.
PIPE
Dia= 2.375 in. Wall= 3.912 mm. Cor= .0000 mm.
GENERAL
T1= 60 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars
PHyd= 93.0000 bars Mat= (165)A312 TP316L E= 195,134 MPa
EH1= 192,371 MPa EH2= 184,546 MPa EH3= 195,962 MPa EH4= 195,134 MPa
EH5= 195,134 MPa EH6= 195,134 MPa EH7= 195,134 MPa EH8= 195,134 MPa
EH9= 195,134 MPa v = .292 Pipe Den=8027.1997070 kg./m3
Fluid Den= 59.5999985 kg./m3 Insul Thk= .000 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4399
Angle/Node @2= .00 4398
ALLOWABLE STRESSES
B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa
Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa
Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa
-----
From 4400 To 4420 DX= -1,412.700 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4419
Angle/Node @2= .00 4418
-----
From 4420 To 4430 DZ= 226.100 mm.
RESTRAINTS
Node 4430 +Y
-----
From 4430 To 4440 DZ= 226.100 mm.
BEND at "TO" end
Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4439
Angle/Node @2= .00 4438
-----
From 4440 To 4460 DX= 600.000 mm.
SIF's & TEE's
Node 4460 Welding Tee
-----
From 4460 To 4480 DX= 1,665.900 mm.
-----
From 4480 To 4500 DX= 459.000 mm.
Element Name= BALL_FLG_600
RIGID Weight= 311.36 N.

```

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INPUT LISTING

```
-----
From 4500 To 4520 DX= 77.000 mm.
SINGLE FLANGED BEND at "TO" end
  Radius= 76.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 4519
  Angle/Node @2= .00 4518
-----
```

```
From 4520 To 4540 DZ= 226.200 mm.
```

RESTRAINTS

Node 4540 +Y

Node 4540 Z Gap= 3.000 mm.

```
-----
From 4540 To 4560 DZ= 226.200 mm.
```

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4559

Angle/Node @2= .00 4558

```
-----
From 4560 To 4580 DX= -547.200 mm.
```

```
-----
From 4580 To 4600 DX= -75.000 mm.
```

Element Name= FLG.PR_FLG_600

RIGID Weight= 55.60 N.

```
-----
From 4600 To 4620 DX= -75.000 mm.
```

Element Name= FLANGE_FLG_600

RIGID Weight= 57.82 N.

```
-----
From 4620 To 4640 DX= -300.000 mm.
```

RESTRAINTS

Node 4640 +Y Mu = .30

```
-----
From 4640 To 4660 DX= -100.000 mm.
```

```
-----
From 4660 To 4680 DX= -477.000 mm.
```

Element Name= BALL_FLG_600

RIGID Weight= 311.36 N.

```
-----
From 4680 To 4700 DX= -157.770 mm.
```

PIPE

Dia= 2.375 in. Wall= 8.738 mm. Cor= 6.0000 mm.

GENERAL

T1= 350 C T2= 350 C T3= -28 C P1= 7.5000 bars P2= .5000 bars

PHyd= 8.2500 bars Mat= (106)A106 Grade B E= 203,408 MPa

EH1= 178,971 MPa EH2= 178,971 MPa EH3= 205,942 MPa EH4= 203,408 MPa

EH5= 203,408 MPa EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa

EH9= 203,408 MPa v = .292 Pipe Den=7833.4399414 kg./m3

Fluid Den= 1.5000000 kg./m3 Insul Thk= .000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4699

Angle/Node @2= .00 4698

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 118 MPa

Sh2= 118 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

```
-----
From 4700 To 4720 DY= -2,422.000 mm.
```

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INPUT LISTING

BEND at "TO" end
 Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4719
 Angle/Node @2= .00 4718

 From 4720 To 4740 DZ= 400.000 mm.

BEND at "TO" end
 Radius= 76.200 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 4739
 Angle/Node @2= .00 4738

 From 4740 To 6270 DY= -644.550 mm. DZ= 644.550 mm.

SIF's & TEE's

Node 6270 <No Type Specified> SIF(in)= 2.130 SIF(out)= 2.520

 From 4460 To 4610 DZ= 130.000 mm.

PIPE

Dia= 2.375 in. Wall= 3.912 mm. Cor= .0000 mm.

GENERAL

T1= 60 C T2= 175 C T3= 5 C P1= 62.0000 bars P2= 54.1000 bars
 PHyd= 93.0000 bars Mat= (165)A312 TP316L E= 195,134 MPa
 EH1= 192,371 MPa EH2= 184,546 MPa EH3= 195,962 MPa EH4= 195,134 MPa
 EH5= 195,134 MPa EH6= 195,134 MPa EH7= 195,134 MPa EH8= 195,134 MPa
 EH9= 195,134 MPa v = .292 Pipe Den=8027.1997070 kg./m3
 Fluid Den= 59.5999985 kg./m3 Insul Thk= .000 mm.

RESTRAINTS

Node 4610 +Y Mu = .30

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa
 Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa
 Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

 From 4610 To 4760 DZ= 246.200 mm.

 From 4760 To 4780 DZ= 477.200 mm.

Element Name= BALL_FLG_600

RIGID Weight= 311.36 N.

 From 4780 To 4800 DZ= 77.000 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4799
 Angle/Node @2= .00 4798

RESTRAINTS

Node 4800 +Y Mu = .30
 Node 4800 X Gap= 3.000 mm.
 Node 4800 Z Gap= 3.000 mm.

 From 4800 To 4820 DY= 2,292.000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 4819
 Angle/Node @2= .00 4818

 From 4820 To 4840 DY= 50.000 mm. DZ= 50.000 mm.

 From 1260 To 4860 DY= 1,730.000 mm.

PIPE

Dia= 2.375 in. Wall= 8.738 mm. Cor= 3.0000 mm.

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GENERAL

T1= 142 C Mat= (106)A106 Grade B E= 203,408 MPa EH1= 195,538 MPa
 EH2= 193,185 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa
 EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa
 v = .292 Pipe Den=7833.4399414 kg./m3 Fluid Den= 43.0000000 kg./m3
 Insul Thk= .000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4859
 Angle/Node @2= .00 4858

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
 Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
 Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 4860 To 4880 DZ= 252.400 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4879
 Angle/Node @2= .00 4878

From 4880 To 4900 DX= -3,000.000 mm.

RESTRAINTS

Node 4900 +Y
 Node 4900 Z Gap= 3.000 mm.

From 4900 To 4920 DX= -5,500.000 mm.

RESTRAINTS

Node 4920 +Y Mu = .30

From 4920 To 4940 DX= -4,744.000 mm.

RESTRAINTS

Node 4940 +Y Mu = .30
 Node 4940 Z Gap= 3.000 mm.

From 4940 To 4960 DX= -360.000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4959
 Angle/Node @2= .00 4958

From 4960 To 4980 DZ= 2,352.000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 4979
 Angle/Node @2= .00 4978

From 4980 To 5000 DX= -139.700 mm.

SIF's & TEE's

Node 5000 Welding Tee

From 5000 To 5020 DX= -471.440 mm.

SIF's & TEE's

Node 5020 Welding Tee

From 5000 To 5040 DY= 458.000 mm.

RESTRAINTS

Node 5040 +Y

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From 5040 To 5060 DY= 442.000 mm.

From 5060 To 5080 DY= 459.000 mm.

Element Name= GATE_FLG_600

RIGID Weight= 311.36 N.

From 5080 To 5100 DY= 400.000 mm.

From 5100 To 5120 DY= 165.000 mm.

SIF's & TEE's

Node 5120 <No Type Specified> SIF(in)= 1.300 SIF(out)= 1.300

REDUCER

Diam2= 1.900 in. Wall2= 7.137 mm.

From 5120 To 5140 DY= 166.000 mm.

PIPE

Dia= 1.900 in. Wall= 7.137 mm.

Insul Thk= .000 mm.

RIGID Weight= 100.00 N.

FORCES & MOMENTS

Node 5140 FY1= 1,000.00 N. FZ1= -2,000.00 N.

From 5140 To 5160 DZ= 152.000 mm.

PIPE

Dia= 3.500 in. Wall= 7.620 mm.

Insul Thk= .000 mm.

RIGID Weight= 100.00 N.

From 5160 To 5180 DZ= 73.025 mm.

PIPE

Cor= 6.0000 mm. Element Name= FLANGE_FLG_150

GENERAL

T1= 350 C T2= 350 C P1= 7.5000 bars P2= .5000 bars PHyd= 8.2500 bars

Fluid Den= 1.5000000 kg./m3

RIGID Weight= 54.49 N.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 118 MPa

Sh2= 118 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 5180 To 5200 DY= -39.700 mm. DZ= 139.700 mm.

REDUCER

Diam2= 6.625 in. Wall2= 10.973 mm.

From 5200 To 5220 DZ= 800.000 mm.

PIPE

Dia= 6.625 in. Wall= 10.973 mm.

Insul Thk= .000 mm.

RESTRAINTS

Node 5220 +Y Mu = .30

Node 5220 Z

Node 5220 X

From 5220 To 5240 DZ= 1,428.000 mm.

SINGLE FLANGED BEND at "TO" end

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INPUT LISTING

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      Radius= 228.600 mm. (LONG)    Bend Angle= 90.000    Angle/Node @1= 45.00 5239
      Angle/Node @2= .00 5238
-----
From  5240  To  5260 DY= -229.000 mm.
-----
From  5260  To  5280 DY= -450.850 mm.
      Element Name= BALL_FLG_150
RIGID  Weight= 1,005.25 N.
-----
From  5280  To  5300 DY= -1,786.000 mm.
BEND at "TO" end
      Radius= 228.600 mm. (LONG)    Bend Angle= 90.000    Angle/Node @1= 45.00 5299
      Angle/Node @2= .00 5298
-----
From  5300  To  5320 DX= -919.700 mm.
SIF's & TEE's
      Node  5320  Unreinforced Tee
-----
From  5020  To  5340 DY= 458.000 mm.
PIPE
      Dia= 2.375 in.    Wall= 8.738 mm.    Cor= 3.0000 mm.
GENERAL
      T1= 142 C    T2= 175 C    P1= 62.0000 bars    PHyd= 93.0000 bars
      Fluid Den= 43.0000000 kg./m3    Insul Thk= .000 mm.
RESTRAINTS
      Node  5340  +Y
-----
From  5340  To  5360 DY= 442.000 mm.
-----
From  5360  To  5380 DY= 459.000 mm.
      Element Name= GATE_FLG_600
RIGID  Weight= 311.36 N.
-----
From  5380  To  5400 DY= 400.000 mm.
-----
From  5400  To  5420 DY= 165.000 mm.
SIF's & TEE's
      Node  5420  <No Type Specified>    SIF(in)= 1.300    SIF(out)= 1.300
REDUCER
      Diam2= 1.900 in.    Wall2= 7.137 mm.
-----
From  5420  To  5440 DY= 166.000 mm.
PIPE
      Dia= 1.900 in.    Wall= 7.137 mm.
      Insul Thk= .000 mm.
RIGID  Weight= 100.00 N.
FORCES & MOMENTS
      Node  5440  FY2= 1,000.00 N.    FZ2= -2,000.00 N.
-----
From  5440  To  5460 DZ= 152.000 mm.
PIPE
      Dia= 3.500 in.    Wall= 7.620 mm.
      Insul Thk= .000 mm.
RIGID  Weight= 100.00 N.
-----

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INPUT LISTING

From 5460 To 5480 DZ= 73.025 mm.

PIPE

Cor= 6.0000 mm. Element Name= FLANGE_FLG_150

GENERAL

T1= 350 C T2= 350 C P1= 7.5000 bars PHyd= 8.2500 bars

Fluid Den= 1.5000000 kg./m3

RIGID Weight= 54.49 N.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 118 MPa
Sh2= 118 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 5480 To 5500 DY= -39.700 mm. DZ= 139.700 mm.

REDUCER

Diam2= 6.625 in. Wall2= 10.973 mm.

From 5500 To 5520 DZ= 800.000 mm.

PIPE

Dia= 6.625 in. Wall= 10.973 mm.

Insul Thk= .000 mm.

RESTRAINTS

Node 5520 +Y

Node 5520 Z

Node 5520 X

From 5520 To 5540 DZ= 656.500 mm.

SINGLE FLANGED BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5539

Angle/Node @2= .00 5538

From 5540 To 5560 DY= -229.000 mm.

From 5560 To 5580 DY= -450.850 mm.

Element Name= BALL_FLG_150

RIGID Weight= 1,005.25 N.

From 5580 To 5600 DY= -1,786.000 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5599

Angle/Node @2= .00 5598

From 5600 To 5620 DZ= 323.850 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 45.039 Angle/Node @1= 22.52 5619

From 5620 To 5320 DX= -448.260 mm. DZ= 447.650 mm.

SIF'S & TEE'S

Node 5320 Unreinforced Tee

From 5320 To 5640 DX= -660.540 mm.

SIF'S & TEE'S

Node 5640 Unreinforced Tee

From 5640 To 5660 DX= -310.000 mm.

RESTRAINTS

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INPUT LISTING

Node 5660 +Y Mu = .30

From 5660 To 5680 DX= -3,113.160 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5679

Angle/Node @2= .00 5678

From 5680 To 5700 DY= -723.380 mm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 5699

Angle/Node @2= .00 5698

From 5700 To 6265 DY= -657.000 mm. DZ= 657.000 mm.

SIF's & TEE's

Node 6265 <No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160

From 5020 To 5720 DX= -500.000 mm.

PIPE

Dia= 2.375 in. Wall= 8.738 mm. Cor= 3.0000 mm.

GENERAL

T1= 142 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars

PHyd= 93.0000 bars Fluid Den= 43.0000000 kg./m3 Insul Thk= .000 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5719

Angle/Node @2= .00 5718

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa

Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 5720 To 5740 DZ= 252.400 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5739

Angle/Node @2= .00 5738

From 5740 To 5760 DY= 458.000 mm.

RESTRAINTS

Node 5760 +Y

From 5760 To 5780 DY= 392.000 mm.

From 5780 To 5800 DY= 459.000 mm.

Element Name= BALL_FLG_600

RIGID Weight= 311.36 N.

From 5800 To 5820 DY= 376.700 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5819

Angle/Node @2= .00 5818

From 5820 To 5840 DZ= 188.300 mm.

RESTRAINTS

Node 5840 X

Node 5840 Z

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INPUT LISTING

From 5840 To 5860 DZ= 188.300 mm.

From 5860 To 5880 DZ= 459.000 mm.

Element Name= GLOBE_FLG_600

RIGID Weight= 515.97 N.

From 5880 To 5900 DZ= 77.000 mm.

PIPE

Cor= 6.0000 mm.

GENERAL

T1= 350 C T2= 350 C P1= 7.5000 bars P2= .5000 bars PHyd= 8.2500 bars

Fluid Den= 1.5000000 kg./m3

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5899

Angle/Node @2= .00 5898

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 118 MPa

Sh2= 118 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa

Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 5900 To 5920 DY= -1,227.700 mm.

RESTRAINTS

Node 5920 +Y Mu = .30

From 5920 To 5940 DY= -873.550 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5939

Angle/Node @2= .00 5938

From 5940 To 5960 DZ= 811.120 mm.

BEND at "TO" end

Radius= 76.200 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 5959

Angle/Node @2= .00 5958

From 5960 To 5640 DX= -616.600 mm. DZ= 616.600 mm.

From 4380 To 4701 DZ= 2,174.600 mm.

PIPE

Dia= 10.750 in. 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 4702

Angle/Node @2= .00 4703

From 4701 To 5021 DX= -6,000.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5022

Angle/Node @2= .00 5019

From 5021 To 5181 DZ= 1,000.000 mm.

RESTRAINTS

Node 5181 +Y Mu = .30

From 5181 To 5341 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 5342
Angle/Node @2= .00 5339

From 5341 To 5661 DX= 6,000.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5662
Angle/Node @2= .00 5659

From 5661 To 5980 DZ= 1,825.400 mm.

RESTRAINTS

Node 5980 +Y Mu = .30

Node 5980 X

From 5980 To 6000 DZ= 6,000.000 mm.

RESTRAINTS

Node 6000 +Y Mu = .30

From 6000 To 6020 DZ= 6,000.000 mm.

RESTRAINTS

Node 6020 +Y Mu = .30

Node 6020 X Gap= 3.000 mm.

From 6020 To 6030 DZ= 2,590.120 mm.

SIF's & TEE's

Node 6030 <No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460

From 6030 To 6040 DZ= 3,409.880 mm.

RESTRAINTS

Node 6040 +Y Mu = .30

Node 6040 X Gap= 3.000 mm.

Node 6040 Z

SIF's & TEE's

Node 6030 <No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460

From 6040 To 6045 DZ= 2,076.790 mm.

SIF's & TEE's

Node 6045 <No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160

From 6045 To 6050 DZ= 2,776.210 mm.

SIF's & TEE's

Node 6050 <No Type Specified> SIF(in)= 2.130 SIF(out)= 2.520

Node 6045 <No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160

From 6050 To 6060 DZ= 1,147.000 mm.

RESTRAINTS

Node 6060 +Y Mu = .30

SIF's & TEE's

Node 6050 <No Type Specified> SIF(in)= 2.130 SIF(out)= 2.520

From 6060 To 6180 DZ= 1,250.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6179
Angle/Node @2= .00 6178

From 6180 To 6185 DX= -6,000.000 mm.

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INPUT LISTING

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BEND at "TO" end
  Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 6184
  Angle/Node @2= .00 6183
-----
From 6185 To 6187 DZ= 1,000.000 mm.
RESTRAINTS
  Node 6187 +Y Mu = .30
-----
From 6187 To 6190 DZ= 1,000.000 mm.
BEND at "TO" end
  Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 6189
  Angle/Node @2= .00 6188
-----
From 6190 To 6195 DX= 6,000.000 mm.
BEND at "TO" end
  Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 6194
  Angle/Node @2= .00 6193
RESTRAINTS
  Node 6195 +Y Mu = .30
-----
From 6195 To 6200 DZ= 2,750.000 mm.
RESTRAINTS
  Node 6200 +Y Mu = .30
  Node 6200 X Gap= 3.000 mm.
-----
From 6200 To 6220 DZ= 6,000.000 mm.
RESTRAINTS
  Node 6220 +Y Mu = .30
-----
From 6220 To 6240 DZ= 6,000.000 mm.
RESTRAINTS
  Node 6240 +Y Mu = .30
  Node 6240 X Gap= 3.000 mm.
-----
From 6240 To 6250 DZ= 3,090.130 mm.
SIF's & TEE's
  Node 6250 <No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460
-----
From 6250 To 6260 DZ= 2,909.870 mm.
RESTRAINTS
  Node 6260 +Y Mu = .30
  Node 6260 Z
SIF's & TEE's
  Node 6250 <No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460
-----
From 6260 To 6265 DZ= 2,076.790 mm.
SIF's & TEE's
  Node 6265 <No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160
-----
From 6265 To 6270 DZ= 2,376.210 mm.
SIF's & TEE's
  Node 6270 <No Type Specified> SIF(in)= 2.130 SIF(out)= 2.570
  Node 6265 <No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160
-----
From 6270 To 6280 DZ= 747.000 mm.

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INPUT LISTING

RESTRAINTS

Node 6280 +Y Mu = .30
Node 6280 X Gap= 3.000 mm.

SIF's & TEE's

Node 6270 <No Type Specified> SIF(in)= 2.130 SIF(out)= 2.570

From 6280 To 6300 DZ= 6,000.000 mm.

RESTRAINTS

Node 6300 +Y Mu = .30
Node 6300 X

From 6300 To 6310 DZ= 5,483.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6309
Angle/Node @2= .00 6308

RESTRAINTS

Node 6310 +Y Mu = .30

From 6310 To 6320 DX= -6,000.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6319
Angle/Node @2= .00 6318

From 6320 To 6323 DZ= 517.000 mm.

From 6323 To 6327 DZ= 500.000 mm.

RESTRAINTS

Node 6327 +Y Mu = .30

From 6327 To 6326 DZ= 983.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6325
Angle/Node @2= .00 6324

From 6326 To 6332 DX= 6,000.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6331
Angle/Node @2= .00 6330

RESTRAINTS

Node 6332 +Y Mu = .30

From 6332 To 6340 DZ= 4,517.000 mm.

RESTRAINTS

Node 6340 +Y Mu = .30
Node 6340 X

From 6340 To 6360 DZ= 6,000.000 mm.

RESTRAINTS

Node 6360 +Y Mu = .30
Node 6360 Z Gap= 3.000 mm.

From 6360 To 6380 DZ= 4,200.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 6379
Angle/Node @2= .00 6378

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INPUT LISTING

RESTRAINTS

Node 6380 +Y Mu = .30

From 6380 To 6400 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 6399
Angle/Node @2= .00 6398

From 6400 To 6420 DX= -6,200.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6419
Angle/Node @2= .00 6418

From 6420 To 6440 DY= -1,700.000 mm.

From 6440 To 6460 DY= -178.000 mm.

REDUCER

Diam2= 8.625 in. Wall2= 8.179 mm.

From 6460 To 6480 DY= -104.775 mm.

PIPE

Dia= 8.625 in. Wall= 8.179 mm. Element Name= FLANGE_FLG_150
Insul Thk= .000 mm.

RIGID Weight= 177.92 N.

RESTRAINTS

Node 6480 ANC

From 4300 To 6500 DZ= -6,000.000 mm.

PIPE

Dia= 10.750 in. Wall= 9.271 mm.
Insul Thk= .000 mm.

RESTRAINTS

Node 6500 +Y Mu = .30

Node 6500 X Gap= 3.000 mm.

From 6500 To 6520 DZ= -6,000.000 mm.

RESTRAINTS

Node 6520 +Y Mu = .30

From 6520 To 6540 DZ= -6,000.000 mm.

RESTRAINTS

Node 6540 +Y Mu = .30

Node 6540 X Gap= 3.000 mm.

From 6540 To 6560 DZ= -6,000.000 mm.

RESTRAINTS

Node 6560 +Y Mu = .30

From 6560 To 6580 DZ= -6,000.000 mm.

RESTRAINTS

Node 6580 +Y Mu = .30

Node 6580 X Gap= 3.000 mm.

From 6580 To 6600 DZ= -6,000.000 mm.

RESTRAINTS

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INPUT LISTING

Node 6600 +Y Mu = .30

From 6600 To 6620 DZ= -6,000.000 mm.

RESTRAINTS

Node 6620 +Y Mu = .30

Node 6620 X Gap= 3.000 mm.

From 2840 To 6640 DZ= 6,000.000 mm.

PIPE

Dia= 6.625 in. Wall= 7.112 mm. Cor= .0000 mm.

GENERAL

T1= 60 C T2= 175 C P1= 62.0000 bars P2= 54.1000 bars

PHyd= 93.0000 bars Mat= (165)A312 TP316L E= 195,134 MPa

EH1= 192,371 MPa EH2= 184,546 MPa EH3= 195,962 MPa EH4= 195,134 MPa

EH5= 195,134 MPa EH6= 195,134 MPa EH7= 195,134 MPa EH8= 195,134 MPa

EH9= 195,134 MPa v = .292 Pipe Den=8027.1997070 kg./m3

Fluid Den= 59.5999985 kg./m3 Insul Thk= .000 mm.

RESTRAINTS

Node 6640 +Y Mu = .30

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 115 MPa Sh1= 115 MPa

Sh2= 112 MPa Sh3= 115 MPa Sh4= 115 MPa Sh5= 115 MPa Sh6= 115 MPa

Sh7= 115 MPa Sh8= 115 MPa Sh9= 115 MPa Sy= 172 MPa

From 6640 To 6660 DZ= 6,000.000 mm.

RESTRAINTS

Node 6660 +Y Mu = .30

Node 6660 X Gap= 3.000 mm.

From 6660 To 6680 DZ= 6,000.000 mm.

RESTRAINTS

Node 6680 +Y Mu = .30

From 6680 To 6690 DZ= 6,000.000 mm.

RESTRAINTS

Node 6690 +Y Mu = .30

Node 6690 X Gap= 3.000 mm.

From 6690 To 6695 DZ= 6.000 mm.

From 6695 To 6700 DZ= 5,994.000 mm.

RESTRAINTS

Node 6700 +Y Mu = .30

Node 6700 X Gap= 3.000 mm.

From 3920 To 6720 DZ= 6,000.000 mm.

PIPE

Dia= 10.750 in. Wall= 9.271 mm. Cor= 6.0000 mm.

GENERAL

T1= 60 C T2= 85 C P1= 9.0000 bars P2= 5.1000 bars PHyd= 13.5000 bars

Mat= (106)A106 Grade B E= 203,408 MPa EH1= 200,645 MPa

EH2= 199,094 MPa EH3= 204,236 MPa EH4= 203,408 MPa EH5= 203,408 MPa

EH6= 203,408 MPa EH7= 203,408 MPa EH8= 203,408 MPa EH9= 203,408 MPa

v = .292 Pipe Den=7833.4399414 kg./m3 Fluid Den= 6.0000000 kg./m3

Insul Thk= .000 mm.

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INPUT LISTING

RESTRAINTS

Node 6720 +Y Mu = .30
Node 6720 X Gap= 3.000 mm.

ALLOWABLE STRESSES

B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa
Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa
Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

From 6720 To 6740 DZ= 6,000.000 mm.

RESTRAINTS

Node 6740 +Y Mu = .30

From 6740 To 6760 DZ= 6,000.000 mm.

RESTRAINTS

Node 6760 +Y Mu = .30
Node 6760 X Gap= 3.000 mm.

From 6760 To 6780 DZ= 6,000.000 mm.

RESTRAINTS

Node 6780 +Y Mu = .30

From 6780 To 6790 DZ= 5,267.000 mm.

From 6790 To 6800 DZ= 733.000 mm.

RESTRAINTS

Node 6800 +Y Mu = .30
Node 6800 X Gap= 3.000 mm.

From 6800 To 6820 DZ= 6,000.000 mm.

RESTRAINTS

Node 6820 +Y Mu = .30
Node 6820 X Gap= 3.000 mm.

From 6820 To 6840 DZ= 4,200.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6839
Angle/Node @2= .00 6838

RESTRAINTS

Node 6840 +Y Mu = .30

From 6840 To 6860 DX= 6,430.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6859
Angle/Node @2= .00 6858

From 6860 To 6880 DZ= 1,800.000 mm.

RESTRAINTS

Node 6880 +Y Mu = .30

From 6880 To 6900 DZ= 1,800.000 mm.

BEND at "TO" end

Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 6899
Angle/Node @2= .00 6898

From 6900 To 6920 DX= -6,430.000 mm.

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BEND at "TO" end
  Radius= 381.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 6919
  Angle/Node @2= .00 6918
RESTRAINTS
  Node 6920 +Y Mu = .30
-----
From 6920 To 6940 DZ= 4,200.000 mm.
RESTRAINTS
  Node 6940 +Y Mu = .30
  Node 6940 X Gap= 3.000 mm.
-----
From 6940 To 6960 DZ= 6,000.000 mm.
RESTRAINTS
  Node 6960 +Y Mu = .30
  Node 6960 Z Gap= 3.000 mm. Mu = .30
-----
From 6960 To 6970 DZ= 5,267.000 mm.
-----
From 6970 To 6980 DZ= 733.000 mm.
RESTRAINTS
  Node 6980 +Y Mu = .30
  Node 6980 X Gap= 3.000 mm.
-----
From 6980 To 7000 DZ= 700.000 mm.
-----
From 7000 To 7020 DZ= 104.775 mm.
  Element Name= FLANGE_FLG_150
RIGID Weight= 235.74 N.
-----
From 3940 To 7040 DZ= -6,000.000 mm.
RESTRAINTS
  Node 7040 +Y Mu = .30
-----
From 7040 To 7060 DZ= -6,000.000 mm.
RESTRAINTS
  Node 7060 +Y Mu = .30
  Node 7060 X Gap= 3.000 mm.
-----
From 7060 To 7080 DZ= -6,000.000 mm.
RESTRAINTS
  Node 7080 +Y Mu = .30
-----
From 7080 To 7100 DZ= -6,000.000 mm.
RESTRAINTS
  Node 7100 +Y Mu = .30
  Node 7100 X Gap= 3.000 mm.
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MATERIAL Changes:

20	40	Mat= (106)A106 Grade B E= 203,408 MPa
		v = .292 Density= 7,833.4399 kg./m3
820	840	Mat= (383)A516 70 E= 203,408 MPa
		v = .292 Density= 7,833.4399 kg./m3

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INPUT LISTING

280	880	Mat= (106)A106 Grade B E= 203,408 MPa v = .292 Density= 7,833.4399 kg./m3
1820	1920	Mat= (165)A312 TP316L E= 195,134 MPa v = .292 Density= 8,027.1997 kg./m3
3260	3280	Mat= (106)A106 Grade B E= 203,408 MPa v = .292 Density= 7,833.4399 kg./m3
3840	3860	Mat= (381)A516 60 E= 203,408 MPa v = .292 Density= 7,833.4399 kg./m3
3620	3920	Mat= (106)A106 Grade B E= 203,408 MPa v = .292 Density= 7,833.4399 kg./m3
2920	3960	Mat= (165)A312 TP316L E= 195,134 MPa v = .292 Density= 8,027.1997 kg./m3
4200	4220	Mat= (106)A106 Grade B E= 203,408 MPa v = .292 Density= 7,833.4399 kg./m3
2160	4400	Mat= (165)A312 TP316L E= 195,134 MPa v = .292 Density= 8,027.1997 kg./m3
4680	4700	Mat= (106)A106 Grade B E= 203,408 MPa v = .292 Density= 7,833.4399 kg./m3
4460	4610	Mat= (165)A312 TP316L E= 195,134 MPa v = .292 Density= 8,027.1997 kg./m3
1260	4860	Mat= (106)A106 Grade B E= 203,408 MPa v = .292 Density= 7,833.4399 kg./m3
2840	6640	Mat= (165)A312 TP316L E= 195,134 MPa v = .292 Density= 8,027.1997 kg./m3
3920	6720	Mat= (106)A106 Grade B E= 203,408 MPa v = .292 Density= 7,833.4399 kg./m3

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ALLOWABLE STRESS Changes

20	40	B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
140	160	B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
120	180	B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
540	560	B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa
520	580	B31.3 (2016) Cycle Max Switch = --- Sc= 138 MPa Sh1= 138 MPa Sh2= 138 MPa Sh3= 138 MPa Sh4= 138 MPa Sh5= 138 MPa Sh6= 138 MPa Sh7= 138 MPa Sh8= 138 MPa Sh9= 138 MPa Sy= 241 MPa

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INPUT LISTING

640	660	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
620	680	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
820	840	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 161 MPa	Sh1= 160 MPa Sh2= 158 MPa
		Sh3= 161 MPa	Sh4= 161 MPa Sh5= 161 MPa
		Sh6= 161 MPa	Sh7= 161 MPa Sh8= 161 MPa
		Sh9= 161 MPa	Sy= 262 MPa
280	880	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
880	900	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
1440	1460	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
1420	1480	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
1820	1920	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 115 MPa	Sh1= 115 MPa Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa
2200	2220	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 115 MPa	Sh1= 115 MPa Sh2= 115 MPa
		Sh3= 115 MPa	Sh4= 115 MPa Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa
2180	2240	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 115 MPa	Sh1= 115 MPa Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa
3260	3280	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa

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INPUT LISTING

3520	3540	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
3500	3560	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
3840	3860	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 135 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 221 MPa
3620	3920	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
2920	3960	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 115 MPa	Sh1= 115 MPa Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa
4200	4220	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 118 MPa Sh2= 118 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
2160	4400	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 115 MPa	Sh1= 115 MPa Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa
4680	4700	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 118 MPa Sh2= 118 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
4460	4610	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 115 MPa	Sh1= 115 MPa Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa
1260	4860	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
5160	5180	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 118 MPa Sh2= 118 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa

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5460	5480	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 118 MPa Sh2= 118 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
5020	5720	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
5880	5900	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 118 MPa Sh2= 118 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa
2840	6640	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 115 MPa	Sh1= 115 MPa Sh2= 112 MPa
		Sh3= 115 MPa	Sh4= 115 MPa Sh5= 115 MPa
		Sh6= 115 MPa	Sh7= 115 MPa Sh8= 115 MPa
		Sh9= 115 MPa	Sy= 172 MPa
3920	6720	B31.3 (2016)	Cycle Max Switch = ---
		Sc= 138 MPa	Sh1= 138 MPa Sh2= 138 MPa
		Sh3= 138 MPa	Sh4= 138 MPa Sh5= 138 MPa
		Sh6= 138 MPa	Sh7= 138 MPa Sh8= 138 MPa
		Sh9= 138 MPa	Sy= 241 MPa

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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
80	100	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00 99
		Angle/Node @2= .00 98
120	180	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		179
480	500	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		499 Angle/Node @2= .00 498
520	580	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		579 Angle/Node @2= .00 578
580	600	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		599 Angle/Node @2= .00 598
620	680	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		679 Angle/Node @2= .00 678
900	920	Radius= 76.200 mm. (LONG)

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		Bend Angle= 90.000	Angle/Node @1= 45.00
		919	Angle/Node @2= .00 918
920	940	Radius= 76.200 mm.	(LONG)
		Bend Angle= 90.000	Angle/Node @1= 45.00
		939	Angle/Node @2= .00 938
980	1000	Radius= 76.200 mm.	(LONG)
		Bend Angle= 90.000	Angle/Node @1= 45.00
		999	Angle/Node @2= .00 998
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
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
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
1580	1600	Radius= 228.600 mm.	(LONG)
		Bend Angle= 90.000	Angle/Node @1= 45.00
		1599	Angle/Node @2= .00 1598
1600	1620	Radius= 228.600 mm.	(LONG)
		Bend Angle= 90.000	Angle/Node @1= 45.00
		1619	Angle/Node @2= .00 1618
1920	1940	Radius= 228.600 mm.	(LONG)
		Bend Angle= 90.000	Angle/Node @1= 45.00
		1939	
1940	1960	Radius= 228.600 mm.	(LONG)
		Bend Angle= 90.000	Angle/Node @1= 45.00
		1959	Angle/Node @2= .00 1958
1980	2000	Radius= 228.600 mm.	(LONG)
		Bend Angle= 90.000	Angle/Node @1= 45.00
		1999	Angle/Node @2= .00 1998
2120	2140	Radius= 228.600 mm.	(LONG)
		Bend Angle= 90.000	Angle/Node @1= 45.00
		2139	Angle/Node @2= .00 2138
2180	2240	Radius= 228.600 mm.	(LONG)
		Bend Angle= 90.000	Angle/Node @1= 45.00
		2239	
2440	2460	Radius= 228.600 mm.	(LONG)
		Bend Angle= 90.000	Angle/Node @1= 45.00

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INPUT LISTING

2460	2480	2459 Angle/Node @2= .00 2458 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2480	2500	2479 Angle/Node @2= .00 2478 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2500	2520	2499 Angle/Node @2= .00 2498 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2520	2540	2519 Angle/Node @2= .00 2518 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2340	2580	2539 Angle/Node @2= .00 2538 Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2640	2660	2579 Angle/Node @2= .00 2578 Radius= 76.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2020	2860	2659 Angle/Node @2= .00 2658 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2860	2880	2859 Angle/Node @2= .00 2858 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2880	2900	2879 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
2940	2960	2899 Angle/Node @2= .00 2898 Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
3400	3420	2959 Angle/Node @2= .00 2958 Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
3420	3440	3419 Angle/Node @2= .00 3418 Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
3500	3560	3439 Angle/Node @2= .00 3438 Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
3560	3580	3559 Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
3580	3600	3579 Angle/Node @2= .00 3578 Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
3640	3660	3599 Angle/Node @2= .00 3598 Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
3680	3700	3659 Angle/Node @2= .00 3658 Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
4200	4220	3699 Angle/Node @2= .00 3698 Radius= 152.400 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
		4219

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INPUT LISTING

4220	4240	Radius= 152.400 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4239 Angle/Node @2= .00 4238
4240	4260	Radius= 152.400 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		4259 Angle/Node @2= .00 4258
2160	4400	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4399 Angle/Node @2= .00 4398
4400	4420	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4419 Angle/Node @2= .00 4418
4430	4440	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4439 Angle/Node @2= .00 4438
4500	4520	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4519 Angle/Node @2= .00 4518
4540	4560	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4559 Angle/Node @2= .00 4558
4680	4700	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4699 Angle/Node @2= .00 4698
4700	4720	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4719 Angle/Node @2= .00 4718
4720	4740	Radius= 76.200 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		4739 Angle/Node @2= .00 4738
4780	4800	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4799 Angle/Node @2= .00 4798
4800	4820	Radius= 76.200 mm. (LONG)
		Bend Angle= 45.000 Angle/Node @1= 22.50
		4819 Angle/Node @2= .00 4818
1260	4860	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4859 Angle/Node @2= .00 4858
4860	4880	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4879 Angle/Node @2= .00 4878
4940	4960	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4959 Angle/Node @2= .00 4958
4960	4980	Radius= 76.200 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		4979 Angle/Node @2= .00 4978
5220	5240	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5239 Angle/Node @2= .00 5238
5280	5300	Radius= 228.600 mm. (LONG)
		Bend Angle= 90.000 Angle/Node @1= 45.00
		5299 Angle/Node @2= .00 5298
5520	5540	Radius= 228.600 mm. (LONG)

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		Bend Angle= 90.000	Angle/Node @1= 45.00
5580	5600	5539 Angle/Node @2= .00 5538	
		Radius= 228.600 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
5600	5620	5599 Angle/Node @2= .00 5598	
		Radius= 228.600 mm. (LONG)	
		Bend Angle= 45.039	Angle/Node @1= 22.52
5660	5680	5619	
		Radius= 228.600 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
5680	5700	5679 Angle/Node @2= .00 5678	
		Radius= 228.600 mm. (LONG)	
		Bend Angle= 45.000	Angle/Node @1= 22.50
5020	5720	5699 Angle/Node @2= .00 5698	
		Radius= 76.200 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
5720	5740	5719 Angle/Node @2= .00 5718	
		Radius= 76.200 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
5800	5820	5739 Angle/Node @2= .00 5738	
		Radius= 76.200 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
5880	5900	5819 Angle/Node @2= .00 5818	
		Radius= 76.200 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
5920	5940	5899 Angle/Node @2= .00 5898	
		Radius= 76.200 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
5940	5960	5939 Angle/Node @2= .00 5938	
		Radius= 76.200 mm. (LONG)	
		Bend Angle= 45.000	Angle/Node @1= 22.50
4380	4701	5959 Angle/Node @2= .00 5958	
		Radius= 381.000 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
4701	5021	4702 Angle/Node @2= .00 4703	
		Radius= 381.000 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
5181	5341	5022 Angle/Node @2= .00 5019	
		Radius= 381.000 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
5341	5661	5342 Angle/Node @2= .00 5339	
		Radius= 381.000 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
6060	6180	5662 Angle/Node @2= .00 5659	
		Radius= 381.000 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
6180	6185	6179 Angle/Node @2= .00 6178	
		Radius= 381.000 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
6187	6190	6184 Angle/Node @2= .00 6183	
		Radius= 381.000 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00
6190	6195	6189 Angle/Node @2= .00 6188	
		Radius= 381.000 mm. (LONG)	
		Bend Angle= 90.000	Angle/Node @1= 45.00

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6300	6310	6194 Angle/Node @2= .00 6193 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6310	6320	6309 Angle/Node @2= .00 6308 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6327	6326	6319 Angle/Node @2= .00 6318 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6326	6332	6325 Angle/Node @2= .00 6324 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6360	6380	6331 Angle/Node @2= .00 6330 Radius= 381.000 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50
6380	6400	6379 Angle/Node @2= .00 6378 Radius= 381.000 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50
6400	6420	6399 Angle/Node @2= .00 6398 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6820	6840	6419 Angle/Node @2= .00 6418 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6840	6860	6839 Angle/Node @2= .00 6838 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6880	6900	6859 Angle/Node @2= .00 6858 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
6900	6920	6899 Angle/Node @2= .00 6898 Radius= 381.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00
		6919 Angle/Node @2= .00 6918

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RIGIDS

20	40	RIGID Weight= 191.26 N.
120	140	RIGID Weight= .00 N.
200	220	RIGID Weight= 191.26 N.
220	240	RIGID Weight= 191.26 N.
320	340	RIGID Weight= 191.26 N.
340	360	RIGID Weight= 1,023.36 N.
360	380	RIGID Weight= 191.26 N.
420	440	RIGID Weight= 191.26 N.
440	460	RIGID Weight= 191.26 N.
520	540	RIGID Weight= .00 N.
620	640	RIGID Weight= .00 N.
700	720	RIGID Weight= 191.26 N.
720	740	RIGID Weight= 60.00 N.
740	760	RIGID Weight= 191.26 N.
780	800	RIGID Weight= .00 N.
820	840	RIGID Weight= .00 N.

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INPUT LISTING

840	860	RIGID	Weight= .00 N.
880	900	RIGID	Weight= 311.36 N.
960	980	RIGID	Weight= 427.01 N.
1060	1080	RIGID	Weight= 364.74 N.
1080	1100	RIGID	Weight= 364.74 N.
1220	1240	RIGID	Weight= 364.74 N.
1300	1320	RIGID	Weight= 364.74 N.
1320	1340	RIGID	Weight= 2,357.44 N.
1340	1360	RIGID	Weight= 364.74 N.
1420	1440	RIGID	Weight= .00 N.
1640	1660	RIGID	Weight= 364.74 N.
1660	1680	RIGID	Weight= 111.20 N.
1720	1740	RIGID	Weight= .00 N.
1740	1760	RIGID	Weight= .00 N.
1800	1820	RIGID	Weight= 111.20 N.
1740	1840	RIGID	Weight= 2,250.00 N.
1840	1860	RIGID	Weight=10,500.00 N.
1860	1880	RIGID	Weight= 4,500.00 N.
1880	1900	RIGID	Weight=10,500.00 N.
1900	1740	RIGID	Weight= 2,250.00 N.
1820	1920	RIGID	Weight= 364.74 N.
2040	2060	RIGID	Weight= 364.74 N.
2060	2080	RIGID	Weight= 2,357.44 N.
2080	2100	RIGID	Weight= 364.74 N.
2180	2200	RIGID	Weight= .00 N.
2260	2280	RIGID	Weight= 364.74 N.
2280	2300	RIGID	Weight= 4,846.72 N.
2300	2320	RIGID	Weight= 364.74 N.
2360	2380	RIGID	Weight= 364.74 N.
2380	2400	RIGID	Weight= 1,979.36 N.
2400	2420	RIGID	Weight= 364.74 N.
2600	2620	RIGID	Weight= 515.97 N.
2980	3000	RIGID	Weight= 364.74 N.
3000	3020	RIGID	Weight= 2,846.72 N.
3020	3040	RIGID	Weight= 364.74 N.
3080	3100	RIGID	Weight= 191.26 N.
3100	3120	RIGID	Weight= 2,423.36 N.
3120	3140	RIGID	Weight= 191.26 N.
3200	3220	RIGID	Weight= 364.74 N.
3220	3240	RIGID	Weight= 1,979.36 N.
3240	3260	RIGID	Weight= 364.74 N.
3320	3340	RIGID	Weight= 5,052.93 N.
3360	3380	RIGID	Weight= 4,224.00 N.
3460	3480	RIGID	Weight= 2,259.58 N.
3500	3520	RIGID	Weight= .00 N.
3740	3760	RIGID	Weight= 177.92 N.
3760	3780	RIGID	Weight= 100.00 N.
3780	3800	RIGID	Weight= 177.92 N.
3840	3860	RIGID	Weight= .00 N.
3860	3880	RIGID	Weight= .00 N.
3880	3900	RIGID	Weight= .00 N.
3980	4000	RIGID	Weight= 1,116.45 N.
4060	4080	RIGID	Weight= 106.75 N.
4080	4100	RIGID	Weight= 1,211.68 N.
4100	4120	RIGID	Weight= 106.75 N.

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4180	4200	RIGID	Weight= 1,116.45 N.
4480	4500	RIGID	Weight= 311.36 N.
4580	4600	RIGID	Weight= 55.60 N.
4600	4620	RIGID	Weight= 57.82 N.
4660	4680	RIGID	Weight= 311.36 N.
4760	4780	RIGID	Weight= 311.36 N.
5060	5080	RIGID	Weight= 311.36 N.
5120	5140	RIGID	Weight= 100.00 N.
5140	5160	RIGID	Weight= 100.00 N.
5160	5180	RIGID	Weight= 54.49 N.
5260	5280	RIGID	Weight= 1,005.25 N.
5360	5380	RIGID	Weight= 311.36 N.
5420	5440	RIGID	Weight= 100.00 N.
5440	5460	RIGID	Weight= 100.00 N.
5460	5480	RIGID	Weight= 54.49 N.
5560	5580	RIGID	Weight= 1,005.25 N.
5780	5800	RIGID	Weight= 311.36 N.
5860	5880	RIGID	Weight= 515.97 N.
6460	6480	RIGID	Weight= 177.92 N.
7000	7020	RIGID	Weight= 235.74 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	Weldolet
1440	1460	Node 1440	Unreinforced Tee
2000	2020	Node 2020	Welding Tee
2140	2160	Node 2160	Weldolet
2200	2220	Node 2200	Unreinforced Tee
2320	2340	Node 2340	Weldolet
2420	2440	Node 2440	Weldolet
2540	6695	Node 6695	Welding Tee
2900	2920	Node 2920	Welding Tee
3280	3300	Node 3300	Welding Tee
3520	3540	Node 3520	Unreinforced Tee
3600	6970	Node 6970	Welding Tee
4260	6250	Node 6250	<No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460
4280	4300	Node 4280	<No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460
4280	4320	Node 4280	<No Type Specified> SIF(in)= 2.080 SIF(out)= 2.460
4320	4340	Node 4340	<No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160
4340	4360	Node 4340	<No Type Specified> SIF(in)= 2.660 SIF(out)= 3.160 Pad= 9.270 mm.
		Node 4360	<No Type Specified> SIF(in)= 2.130 SIF(out)= 2.520
4360	4380	Node 4360	<No Type Specified>

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		SIF(in)= 2.130	SIF(out)= 2.520
4440	4460	Node 4460	Welding Tee
4740	6270	Node 6270	<No Type Specified>
		SIF(in)= 2.130	SIF(out)= 2.520
4980	5000	Node 5000	Welding Tee
5000	5020	Node 5020	Welding Tee
5100	5120	Node 5120	<No Type Specified>
		SIF(in)= 1.300	SIF(out)= 1.300
5300	5320	Node 5320	Unreinforced Tee
5400	5420	Node 5420	<No Type Specified>
		SIF(in)= 1.300	SIF(out)= 1.300
5620	5320	Node 5320	Unreinforced Tee
5320	5640	Node 5640	Unreinforced Tee
5700	6265	Node 6265	<No Type Specified>
		SIF(in)= 2.660	SIF(out)= 3.160
6020	6030	Node 6030	<No Type Specified>
		SIF(in)= 2.080	SIF(out)= 2.460
6030	6040	Node 6030	<No Type Specified>
		SIF(in)= 2.080	SIF(out)= 2.460
6040	6045	Node 6045	<No Type Specified>
		SIF(in)= 2.660	SIF(out)= 3.160
6045	6050	Node 6050	<No Type Specified>
		SIF(in)= 2.130	SIF(out)= 2.520
		Node 6045	<No Type Specified>
		SIF(in)= 2.660	SIF(out)= 3.160
6050	6060	Node 6050	<No Type Specified>
		SIF(in)= 2.130	SIF(out)= 2.520
6240	6250	Node 6250	<No Type Specified>
		SIF(in)= 2.080	SIF(out)= 2.460
6250	6260	Node 6250	<No Type Specified>
		SIF(in)= 2.080	SIF(out)= 2.460
6260	6265	Node 6265	<No Type Specified>
		SIF(in)= 2.660	SIF(out)= 3.160
6265	6270	Node 6270	<No Type Specified>
		SIF(in)= 2.130	SIF(out)= 2.570
		Node 6265	<No Type Specified>
		SIF(in)= 2.660	SIF(out)= 3.160
6270	6280	Node 6270	<No Type Specified>
		SIF(in)= 2.130	SIF(out)= 2.570

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REDUCERS

3060	3080	Diam2= 4.500 in.	Wall2= 6.020 mm.
3140	3160	Diam2= 6.625 in.	Wall2= 7.112 mm.
3260	3280	Diam2= 8.625 in.	Wall2= 8.179 mm.
4040	4060	Diam2= 3.500 in.	Wall2= 5.486 mm.
4120	4140	Diam2= 4.500 in.	Wall2= 6.020 mm.
5100	5120	Diam2= 1.900 in.	Wall2= 7.137 mm.
5180	5200	Diam2= 6.625 in.	Wall2= 10.973 mm.
5400	5420	Diam2= 1.900 in.	Wall2= 7.137 mm.
5480	5500	Diam2= 6.625 in.	Wall2= 10.973 mm.
6440	6460	Diam2= 8.625 in.	Wall2= 8.179 mm.

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INPUT LISTING

RESTRAINTS			Len	MU	Dir		
NODE	TYPE	CNODE	GAP STIF1	YIELD STIF2	FORCE	Vectors	
20	ANC				.000	.000	.000
160	-X			.30	1.000	.000	.000
160	Z				.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
660	+Y	800		.30	.000	1.000	.000
780	ANC	820			.000	.000	.000
860	ANC				.000	.000	.000
920	+Y			.30	.000	1.000	.000
1040	+Y			.30	.000	1.000	.000
1180	-X			.30	1.000	.000	.000
1180	+Y			.30	.000	1.000	.000
1240	ANC				.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
1560	+Y			.30	.000	1.000	.000
1700	ANC	1720			.000	.000	.000
1780	ANC	1760			.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	.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			.30	1.000	.000	.000
1900	Z		6.00	.30	.000	.000	1.000
1980	+Y			.30	.000	1.000	.000
1980	Z		3.00	.30	.000	.000	1.000
2120	+Y			.30	.000	1.000	.000
2220	+Y				.000	1.000	.000
2440	+Y				.000	1.000	.000
2640	+Y				.000	1.000	.000
2700	+Y			.30	.000	1.000	.000
2720	+Y			.30	.000	1.000	.000

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INPUT LISTING

2740	+Y		.30	.000	1.000	.000
2740	X			1.000	.000	.000
2760	+Y		.30	.000	1.000	.000
2780	+Y		.30	.000	1.000	.000
2780	X	3.00	.30	1.000	.000	.000
2800	+Y		.30	.000	1.000	.000
2820	+Y		.30	.000	1.000	.000
2840	+Y			.000	1.000	.000
2840	X	3.00		1.000	.000	.000
2840	Z	3.00		.000	.000	1.000
2940	+Y		.30	.000	1.000	.000
3180	+Y		.30	.000	1.000	.000
3180	X		.30	1.000	.000	.000
3400	+Y		.30	.000	1.000	.000
3400	X	3.00	.30	1.000	.000	.000
3540	+Y			.000	1.000	.000
3640	+Y		.30	.000	1.000	.000
3640	X			1.000	.000	.000
3640	Z			.000	.000	1.000
3680	+Y		.30	.000	1.000	.000
3720	+Y		.30	.000	1.000	.000
3720	Z	3.00	.30	.000	.000	1.000
3820	ANC	3840		.000	.000	.000
3900	ANC			.000	.000	.000
3920	+Y		.30	.000	1.000	.000
3920	Z	3.00	.30	.000	.000	1.000
3940	+Y		.30	.000	1.000	.000
3940	X	3.00	.30	1.000	.000	.000
3960	+Y		.30	.000	1.000	.000
4020	+Y		.30	.000	1.000	.000
4160	+Y		.30	.000	1.000	.000
4160	X			1.000	.000	.000
4300	+Y		.30	.000	1.000	.000
4320	+Y		.30	.000	1.000	.000
4320	X	3.00	.30	1.000	.000	.000
4320	Z			.000	.000	1.000
4380	+Y		.30	.000	1.000	.000
4430	+Y			.000	1.000	.000
4540	+Y			.000	1.000	.000
4540	Z	3.00		.000	.000	1.000
4640	+Y		.30	.000	1.000	.000
4610	+Y		.30	.000	1.000	.000
4800	+Y		.30	.000	1.000	.000
4800	X	3.00		1.000	.000	.000
4800	Z	3.00		.000	.000	1.000
4900	+Y			.000	1.000	.000
4900	Z	3.00		.000	.000	1.000
4920	+Y		.30	.000	1.000	.000
4940	+Y		.30	.000	1.000	.000
4940	Z	3.00		.000	.000	1.000
5040	+Y			.000	1.000	.000
5220	+Y		.30	.000	1.000	.000
5220	Z			.000	.000	1.000
5220	X			1.000	.000	.000
5340	+Y			.000	1.000	.000

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INPUT LISTING

5520	+Y			.000	1.000	.000
5520	Z			.000	.000	1.000
5520	X			1.000	.000	.000
5660	+Y		.30	.000	1.000	.000
5760	+Y			.000	1.000	.000
5840	X			1.000	.000	.000
5840	Z			.000	.000	1.000
5920	+Y		.30	.000	1.000	.000
5181	+Y		.30	.000	1.000	.000
5980	+Y		.30	.000	1.000	.000
5980	X			1.000	.000	.000
6000	+Y		.30	.000	1.000	.000
6020	+Y		.30	.000	1.000	.000
6020	X	3.00		1.000	.000	.000
6040	+Y		.30	.000	1.000	.000
6040	X	3.00		1.000	.000	.000
6040	Z			.000	.000	1.000
6060	+Y		.30	.000	1.000	.000
6187	+Y		.30	.000	1.000	.000
6195	+Y		.30	.000	1.000	.000
6200	+Y		.30	.000	1.000	.000
6200	X	3.00		1.000	.000	.000
6220	+Y		.30	.000	1.000	.000
6240	+Y		.30	.000	1.000	.000
6240	X	3.00		1.000	.000	.000
6260	+Y		.30	.000	1.000	.000
6260	Z			.000	.000	1.000
6280	+Y		.30	.000	1.000	.000
6280	X	3.00		1.000	.000	.000
6300	+Y		.30	.000	1.000	.000
6300	X			1.000	.000	.000
6310	+Y		.30	.000	1.000	.000
6327	+Y		.30	.000	1.000	.000
6332	+Y		.30	.000	1.000	.000
6340	+Y		.30	.000	1.000	.000
6340	X			1.000	.000	.000
6360	+Y		.30	.000	1.000	.000
6360	Z	3.00		.000	.000	1.000
6380	+Y		.30	.000	1.000	.000
6480	ANC			.000	.000	.000
6500	+Y		.30	.000	1.000	.000
6500	X	3.00		1.000	.000	.000
6520	+Y		.30	.000	1.000	.000
6540	+Y		.30	.000	1.000	.000
6540	X	3.00		1.000	.000	.000
6560	+Y		.30	.000	1.000	.000
6580	+Y		.30	.000	1.000	.000
6580	X	3.00		1.000	.000	.000
6600	+Y		.30	.000	1.000	.000
6620	+Y		.30	.000	1.000	.000
6620	X	3.00		1.000	.000	.000
6640	+Y		.30	.000	1.000	.000
6660	+Y		.30	.000	1.000	.000
6660	X	3.00		1.000	.000	.000
6680	+Y		.30	.000	1.000	.000

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INPUT LISTING

6690	+Y		.30	.000	1.000	.000
6690	X	3.00		1.000	.000	.000
6700	+Y		.30	.000	1.000	.000
6700	X	3.00		1.000	.000	.000
6720	+Y		.30	.000	1.000	.000
6720	X	3.00		1.000	.000	.000
6740	+Y		.30	.000	1.000	.000
6760	+Y		.30	.000	1.000	.000
6760	X	3.00		1.000	.000	.000
6780	+Y		.30	.000	1.000	.000
6800	+Y		.30	.000	1.000	.000
6800	X	3.00		1.000	.000	.000
6820	+Y		.30	.000	1.000	.000
6820	X	3.00		1.000	.000	.000
6840	+Y		.30	.000	1.000	.000
6880	+Y		.30	.000	1.000	.000
6920	+Y		.30	.000	1.000	.000
6940	+Y		.30	.000	1.000	.000
6940	X	3.00		1.000	.000	.000
6960	+Y		.30	.000	1.000	.000
6960	Z	3.00	.30	.000	.000	1.000
6980	+Y		.30	.000	1.000	.000
6980	X	3.00		1.000	.000	.000
7040	+Y		.30	.000	1.000	.000
7060	+Y		.30	.000	1.000	.000
7060	X	3.00		1.000	.000	.000
7080	+Y		.30	.000	1.000	.000
7100	+Y		.30	.000	1.000	.000
7100	X	3.00		1.000	.000	.000

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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./mm.
		Theoretical Cold Load = .00 N.

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FLANGES

1300	1320	Location= To	Method= Peq
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INPUT LISTING

		Class/Grade= ASME-2009-600-1.1
		G/C= 7.565 in. T/P table (1)= 37.8 C
		-> 102.0 bars (2)= 93.3 C -> 93.8 bars
		(3)= 148.9 C -> 90.3 bars
		(4)= 204.5 C -> 87.2 bars
		(5)= 260.0 C -> 83.1 bars
		(6)= 315.6 C -> 78.3 bars
		(7)= 343.4 C -> 75.8 bars
		(8)= 371.1 C -> 73.1 bars
		(9)= 398.9 C -> 70.0 bars
		(10)= 426.7 C -> 56.9 bars
		(11)= 454.5 C -> 44.1 bars
		(12)= 482.3 C -> 31.7 bars
		(13)= 510.0 C -> 19.0 bars
		(14)= 537.8 C -> 11.7 bars
1320	1340	Location= To Method= Peq
		Class/Grade= ASME-2009-600-1.1
		G/C= 7.565 in. T/P table (1)= 37.8 C
		-> 102.0 bars (2)= 93.3 C -> 93.8 bars
		(3)= 148.9 C -> 90.3 bars
		(4)= 204.5 C -> 87.2 bars
		(5)= 260.0 C -> 83.1 bars
		(6)= 315.6 C -> 78.3 bars
		(7)= 343.4 C -> 75.8 bars
		(8)= 371.1 C -> 73.1 bars
		(9)= 398.9 C -> 70.0 bars
		(10)= 426.7 C -> 56.9 bars
		(11)= 454.5 C -> 44.1 bars
		(12)= 482.3 C -> 31.7 bars
		(13)= 510.0 C -> 19.0 bars
		(14)= 537.8 C -> 11.7 bars
2040	2060	Location= To Method= Peq
		Class/Grade= ASME-2009-600-2.1
		G/C= 7.565 in. T/P table (1)= 37.8 C
		-> 99.3 bars (2)= 93.3 C -> 82.7 bars
		(3)= 148.9 C -> 74.1 bars
		(4)= 204.5 C -> 68.6 bars
		(5)= 260.0 C -> 64.1 bars
		(6)= 315.6 C -> 61.0 bars
		(7)= 343.4 C -> 59.6 bars
		(8)= 371.1 C -> 58.3 bars
		(9)= 398.9 C -> 56.9 bars
		(10)= 426.7 C -> 55.8 bars
		(11)= 454.5 C -> 54.5 bars
		(12)= 482.3 C -> 53.8 bars
		(13)= 510.0 C -> 52.7 bars
		(14)= 537.8 C -> 49.0 bars
		(15)= 565.6 C -> 44.8 bars
		(16)= 593.4 C -> 35.5 bars
		(17)= 621.2 C -> 28.3 bars
		(18)= 648.9 C -> 22.8 bars
		(19)= 676.7 C -> 18.3 bars
		(20)= 704.5 C -> 15.5 bars
		(21)= 732.3 C -> 12.8 bars
		(22)= 760.1 C -> 10.3 bars

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		(23)= 787.8 C -> 7.9 bars
		(24)= 815.6 C -> 5.9 bars
2060	2080	Location= To Method= Peq
		Class/Grade= ASME-2009-600-2.1
		G/C= 7.565 in. T/P table (1)= 37.8 C
		-> 99.3 bars (2)= 93.3 C -> 82.7 bars
		(3)= 148.9 C -> 74.1 bars
		(4)= 204.5 C -> 68.6 bars
		(5)= 260.0 C -> 64.1 bars
		(6)= 315.6 C -> 61.0 bars
		(7)= 343.4 C -> 59.6 bars
		(8)= 371.1 C -> 58.3 bars
		(9)= 398.9 C -> 56.9 bars
		(10)= 426.7 C -> 55.8 bars
		(11)= 454.5 C -> 54.5 bars
		(12)= 482.3 C -> 53.8 bars
		(13)= 510.0 C -> 52.7 bars
		(14)= 537.8 C -> 49.0 bars
		(15)= 565.6 C -> 44.8 bars
		(16)= 593.4 C -> 35.5 bars
		(17)= 621.2 C -> 28.3 bars
		(18)= 648.9 C -> 22.8 bars
		(19)= 676.7 C -> 18.3 bars
		(20)= 704.5 C -> 15.5 bars
		(21)= 732.3 C -> 12.8 bars
		(22)= 760.1 C -> 10.3 bars
		(23)= 787.8 C -> 7.9 bars
		(24)= 815.6 C -> 5.9 bars
2260	2280	Location= To Method= Peq
		Class/Grade= ASME-2009-600-2.1
		G/C= 7.565 in. T/P table (1)= 37.8 C
		-> 99.3 bars (2)= 93.3 C -> 82.7 bars
		(3)= 148.9 C -> 74.1 bars
		(4)= 204.5 C -> 68.6 bars
		(5)= 260.0 C -> 64.1 bars
		(6)= 315.6 C -> 61.0 bars
		(7)= 343.4 C -> 59.6 bars
		(8)= 371.1 C -> 58.3 bars
		(9)= 398.9 C -> 56.9 bars
		(10)= 426.7 C -> 55.8 bars
		(11)= 454.5 C -> 54.5 bars
		(12)= 482.3 C -> 53.8 bars
		(13)= 510.0 C -> 52.7 bars
		(14)= 537.8 C -> 49.0 bars
		(15)= 565.6 C -> 44.8 bars
		(16)= 593.4 C -> 35.5 bars
		(17)= 621.2 C -> 28.3 bars
		(18)= 648.9 C -> 22.8 bars
		(19)= 676.7 C -> 18.3 bars
		(20)= 704.5 C -> 15.5 bars
		(21)= 732.3 C -> 12.8 bars
		(22)= 760.1 C -> 10.3 bars
		(23)= 787.8 C -> 7.9 bars
		(24)= 815.6 C -> 5.9 bars
2280	2300	Location= To Method= Peq

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INPUT LISTING

```
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in.    T/P table ( 1)= 37.8 C
-> 99.3 bars    ( 2)= 93.3 C    -> 82.7 bars
( 3)= 148.9 C    -> 74.1 bars
( 4)= 204.5 C    -> 68.6 bars
( 5)= 260.0 C    -> 64.1 bars
( 6)= 315.6 C    -> 61.0 bars
( 7)= 343.4 C    -> 59.6 bars
( 8)= 371.1 C    -> 58.3 bars
( 9)= 398.9 C    -> 56.9 bars
(10)= 426.7 C    -> 55.8 bars
(11)= 454.5 C    -> 54.5 bars
(12)= 482.3 C    -> 53.8 bars
(13)= 510.0 C    -> 52.7 bars
(14)= 537.8 C    -> 49.0 bars
(15)= 565.6 C    -> 44.8 bars
(16)= 593.4 C    -> 35.5 bars
(17)= 621.2 C    -> 28.3 bars
(18)= 648.9 C    -> 22.8 bars
(19)= 676.7 C    -> 18.3 bars
(20)= 704.5 C    -> 15.5 bars
(21)= 732.3 C    -> 12.8 bars
(22)= 760.1 C    -> 10.3 bars
(23)= 787.8 C    -> 7.9 bars
(24)= 815.6 C    -> 5.9 bars
```

2360

2380

```
Location= To    Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in.    T/P table ( 1)= 37.8 C
-> 99.3 bars    ( 2)= 93.3 C    -> 82.7 bars
( 3)= 148.9 C    -> 74.1 bars
( 4)= 204.5 C    -> 68.6 bars
( 5)= 260.0 C    -> 64.1 bars
( 6)= 315.6 C    -> 61.0 bars
( 7)= 343.4 C    -> 59.6 bars
( 8)= 371.1 C    -> 58.3 bars
( 9)= 398.9 C    -> 56.9 bars
(10)= 426.7 C    -> 55.8 bars
(11)= 454.5 C    -> 54.5 bars
(12)= 482.3 C    -> 53.8 bars
(13)= 510.0 C    -> 52.7 bars
(14)= 537.8 C    -> 49.0 bars
(15)= 565.6 C    -> 44.8 bars
(16)= 593.4 C    -> 35.5 bars
(17)= 621.2 C    -> 28.3 bars
(18)= 648.9 C    -> 22.8 bars
(19)= 676.7 C    -> 18.3 bars
(20)= 704.5 C    -> 15.5 bars
(21)= 732.3 C    -> 12.8 bars
(22)= 760.1 C    -> 10.3 bars
(23)= 787.8 C    -> 7.9 bars
(24)= 815.6 C    -> 5.9 bars
```

2380

2400

```
Location= To    Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in.    T/P table ( 1)= 37.8 C
-> 99.3 bars    ( 2)= 93.3 C    -> 82.7 bars
```

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```

( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars
(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
(16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars
(18)= 648.9 C -> 22.8 bars
(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars
2980          3000 Location= To Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in. T/P table ( 1)= 37.8 C
-> 99.3 bars ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars
(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
(16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars
(18)= 648.9 C -> 22.8 bars
(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars
3000          3020 Location= To Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in. T/P table ( 1)= 37.8 C
-> 99.3 bars ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars

```

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INPUT LISTING

```

( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars
(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
(16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars
(18)= 648.9 C -> 22.8 bars
(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars
3080          3100 Location= To Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in. T/P table ( 1)= 37.8 C
-> 99.3 bars ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars
(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
(16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars
(18)= 648.9 C -> 22.8 bars
(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars
3100          3120 Location= To Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in. T/P table ( 1)= 37.8 C
-> 99.3 bars ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars

```

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```

( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
(13)= 510.0 C -> 52.7 bars
(14)= 537.8 C -> 49.0 bars
(15)= 565.6 C -> 44.8 bars
(16)= 593.4 C -> 35.5 bars
(17)= 621.2 C -> 28.3 bars
(18)= 648.9 C -> 22.8 bars
(19)= 676.7 C -> 18.3 bars
(20)= 704.5 C -> 15.5 bars
(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars
3200          3220 Location= To Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in. T/P table ( 1)= 37.8 C
-> 99.3 bars ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars
(12)= 482.3 C -> 53.8 bars
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(21)= 732.3 C -> 12.8 bars
(22)= 760.1 C -> 10.3 bars
(23)= 787.8 C -> 7.9 bars
(24)= 815.6 C -> 5.9 bars
3220          3240 Location= To Method= Peq
Class/Grade= ASME-2009-600-2.1
G/C= 7.565 in. T/P table ( 1)= 37.8 C
-> 99.3 bars ( 2)= 93.3 C -> 82.7 bars
( 3)= 148.9 C -> 74.1 bars
( 4)= 204.5 C -> 68.6 bars
( 5)= 260.0 C -> 64.1 bars
( 6)= 315.6 C -> 61.0 bars
( 7)= 343.4 C -> 59.6 bars
( 8)= 371.1 C -> 58.3 bars
( 9)= 398.9 C -> 56.9 bars
(10)= 426.7 C -> 55.8 bars
(11)= 454.5 C -> 54.5 bars

```

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(12)= 482.3 C -> 53.8 bars
 (13)= 510.0 C -> 52.7 bars
 (14)= 537.8 C -> 49.0 bars
 (15)= 565.6 C -> 44.8 bars
 (16)= 593.4 C -> 35.5 bars
 (17)= 621.2 C -> 28.3 bars
 (18)= 648.9 C -> 22.8 bars
 (19)= 676.7 C -> 18.3 bars
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 (24)= 815.6 C -> 5.9 bars

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EQUIPMENT LIMITS

20 40 Nozzle Node = 20

Limiting Loads: A=pipe; B=ref; C=AxB; FA= 2,160.00 N. FB= 2,160.00 N.
 FC= 2,160.00 N. MA= 1,155.00 N.m. MB= 1,155.00 N.m. MC= 1,155.00 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= 8,400.00 N. FB= 8,400.00 N.
 FC= 6,300.00 N. MA= 3,780.00 N.m. MB= 2,520.00 N.m. MC= 3,280.00 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= 2,160.00 N. FB= 2,160.00 N.
 FC= 2,160.00 N. MA= 1,155.00 N.m. MB= 1,155.00 N.m. MC= 1,155.00 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= 15,090.00 N. FB= 15,090.00 N.
 FC= 12,000.00 N. MA= 9,150.00 N.m. MB= 4,890.00 N.m. MC= 6,420.00 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= 15,090.00 N. FB= 15,090.00 N.
 FC= 12,000.00 N. MA= 9,150.00 N.m. MB= 4,890.00 N.m. MC= 6,420.00 N.m.
 Equipment Major Direction Vector= .0000 .0000 1.0000
 Interact. Mtd= Absolute

3800 3820 Nozzle Node = 3820

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Limiting Loads: A=pipe; B=ref; C=AxB; FA= 9,600.00 N. FB= 9,600.00 N.
 FC= 7,200.00 N. MA= 5,760.00 N.m. MB= 3,840.00 N.m. MC= 4,990.00 N.m.
 Equipment Major Direction Vector= .0000 1.0000 .0000
 Interact. Mtd= Absolute

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FORCES AND MOMENTS

2180	2240	Node 2240
5120	5140	Node 5140 FY1= 1,000.00 N.
		FZ1= -2,000.00 N.
5420	5440	Node 5440 FY2= 1,000.00 N.
		FZ2= -2,000.00 N.

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UNIFORM LOAD Changes

20	40	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= 7728A 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	0.007	=	MPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	0.069	=	bars
ELASTIC MODULUS	lbs./sq.in.	x	0.007	=	MPa
PIPE DENSITY	lbs./cu.in.	x	27680.000	=	kg./m3
INSULATION DENS.	lbs./cu.in.	x	27680.000	=	kg./m3
FLUID DENSITY	lbs./cu.in.	x	27680.000	=	kg./m3
TRANSL. STIF	lbs./in.	x	0.175	=	N./mm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg.
UNIFORM LOAD	lb./in.	x	175.127	=	N./m.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6894.757	=	N./m2.
ELEVATION	inches	x	25.400	=	mm.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	1.000	=	in.
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 =                 0.175120E+12 N./mm.
DECOMP SNG TOL =                     0.100000E+11
BEND AXIAL SHAPE =                    YES
FRICT STIF =                          175120.      N./mm.
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=        0.175120E+12 N./mm.
DEFAULT ROT RESTRAINT STIFF=          0.112980E+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=          21.1142      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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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) =                 22064.0      MPa
FRP Ratio Gmod/Emod (axial) =      0.250000
FRP Ea/Eh*Vh/a =                   0.152730
FRP Laminate Type =                THREE
FRP Alpha =                        21.5983      C
FRP Density =                       1660.80     kg./m3
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 ..... 21.000 C
Plastic (FRP) Alpha ..... 21.598
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
20      6553.000  -5329.350  7060.100
40      6452.000  -5329.350  7060.100
60      5374.720  -5329.350  7060.100
80      5374.720  -5958.483  7060.100
100     5874.720  -5958.483  7060.100
120     5874.720  -7216.753  7060.100
140     5874.720  -7445.753  7060.100

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160	5874.720	-7645.753	7060.100
120	5874.720	-7216.753	7060.100
180	5874.720	-7445.753	7060.100
200	5645.720	-7445.753	7060.100
220	5544.120	-7445.753	7060.100
240	5442.520	-7445.753	7060.100
260	4742.520	-7445.753	7060.100
280	4447.020	-7445.753	7060.100
300	3947.020	-7445.753	7060.100
320	3744.020	-7445.753	7060.100
340	3642.419	-7445.753	7060.100
360	3153.419	-7445.753	7060.100
380	3051.819	-7445.753	7060.100
400	2201.819	-7445.753	7060.100
420	633.229	-7445.753	7060.100
440	526.229	-7445.753	7060.100
460	419.229	-7445.753	7060.100
480	-930.771	-7445.753	7060.100
500	-4893.771	-7445.753	7060.100
520	-4893.771	-7216.753	7060.100
540	-4893.771	-7445.753	7060.100
560	-4893.771	-7745.753	7060.100
520	-4893.771	-7216.753	7060.100
580	-4893.771	-3441.353	7060.100
600	-4893.771	-3441.353	4310.100
620	-5208.371	-3441.353	4310.100
640	-5208.371	-3525.353	4310.100
660	-5208.371	-3825.353	4310.100
620	-5208.371	-3441.353	4310.100
680	-6203.371	-3441.353	4310.100
700	-6203.371	-3670.353	4310.100
720	-6203.371	-3771.953	4310.100
740	-6203.371	-3799.953	4310.100
760	-6203.371	-3901.553	4310.100
780	-6203.371	-4082.953	4310.100
780	-6203.371	-4082.353	4310.100
660	-5208.371	-3825.353	4310.100
780	-6203.371	-4082.953	4310.100
840	-6203.371	-7147.953	4310.100
860	-6203.371	-8347.953	4310.100
280	4447.020	-7445.753	7060.100
880	4447.020	-7445.753	7182.240
900	4447.020	-7445.753	7641.640
920	4447.020	-7445.753	8217.840
940	4447.020	-6931.413	8217.840
960	4447.020	-6931.413	8138.640
980	4447.020	-6931.413	7678.899
1000	4447.020	-6931.413	6456.759
1020	4447.020	-7329.753	6456.759
1040	4747.020	-7329.753	6456.759
1060	4915.029	-7329.753	6456.759
1080	5041.029	-7329.753	6456.759
1100	5167.029	-7329.753	6456.759
1120	5497.029	-7329.753	6456.759
1140	5497.029	-7329.753	5456.759

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1160	5962.763	-7329.753	5456.759
1180	6195.630	-7329.753	5456.759
1200	6195.630	-7329.753	7056.759
1220	6424.630	-7329.753	7056.759
1240	6551.630	-7329.753	7056.759
1020	4447.020	-7329.753	6456.759
1260	3047.020	-7329.753	6456.759
1280	2197.020	-7329.753	6456.759
1300	1547.020	-7329.753	6456.759
1320	1420.020	-7329.753	6456.759
1340	853.020	-7329.753	6456.759
1360	726.020	-7329.753	6456.759
1380	-923.980	-7329.753	6456.759
1400	-4892.980	-7329.753	6456.759
1420	-4892.980	-7100.753	6456.759
1440	-4892.980	-7329.753	6456.759
1460	-4892.980	-7629.753	6456.759
1420	-4892.980	-7100.753	6456.759
1480	-4892.980	-5545.353	6456.759
1500	-10202.580	-5545.353	6456.759
1520	-16202.580	-5545.353	6456.759
1540	-20183.881	-5545.353	6456.759
1560	-20183.881	-5545.353	7056.759
1580	-20183.881	-5545.353	9806.760
1600	-20183.881	-3025.433	9806.760
1620	-20841.080	-3025.433	9806.760
1640	-20841.080	-3254.433	9806.760
1660	-20841.080	-3381.433	9806.760
1680	-20841.080	-3416.433	9806.760
1700	-20841.080	-3616.433	9806.760
1740	-20841.080	-3856.433	9806.760
1780	-20841.080	-4096.433	9806.760
1800	-20841.080	-4296.433	9806.760
1820	-20841.080	-4331.433	9806.760
1740	-20841.080	-3856.433	9806.760
1840	-20841.080	-3856.433	11306.760
1860	-27876.080	-3856.433	11306.760
1880	-27876.080	-3856.433	8306.760
1900	-20841.080	-3856.433	8306.760
1740	-20841.080	-3856.433	9806.760
1820	-20841.080	-4331.433	9806.760
1920	-20841.080	-4458.433	9806.760
1940	-20841.080	-4687.433	9806.760
1960	-20841.080	-4687.433	9149.560
1980	-16400.080	-4687.433	9149.560
2000	-15800.080	-4687.433	9149.560
2020	-15800.080	-4696.183	10824.560
2040	-15800.080	-4696.893	10967.359
2060	-15800.080	-4697.524	11094.357
2080	-15800.080	-4700.303	11653.150
2100	-15800.080	-4700.934	11780.148
2120	-15800.080	-4703.440	12280.143
2140	-15800.080	-4705.734	12737.749
2160	-15357.311	-4705.734	12737.749
2180	-14657.730	-4705.734	12737.749

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2200	-14428.730	-4705.734	12737.749
2220	-14128.730	-4705.734	12737.749
2180	-14657.730	-4705.734	12737.749
2240	-14428.730	-4705.734	12737.749
2260	-14428.730	-4705.734	12309.239
2280	-14428.730	-4705.734	12182.239
2300	-14428.730	-4705.734	11614.239
2320	-14428.730	-4705.734	11487.239
2340	-14428.730	-4705.734	11231.020
2360	-14428.730	-4705.734	11031.020
2380	-14428.730	-4705.734	10904.020
2400	-14428.730	-4705.734	10306.020
2420	-14428.730	-4705.734	10179.020
2440	-14428.730	-4705.734	9979.020
2460	-14428.730	-4705.734	9550.420
2480	-14428.730	-5988.304	9550.420
2500	-13228.131	-5988.304	9550.420
2520	-13228.131	-5988.304	10110.420
2540	-14428.730	-5988.304	10110.420
6695	-14428.730	-7727.704	10110.420
2340	-14428.730	-4705.734	11231.020
2580	-13980.271	-4705.734	11231.020
2600	-13980.271	-4705.734	11154.819
2620	-13980.271	-4705.734	10707.579
2640	-13980.271	-4705.734	10507.579
2660	-13980.271	-4705.734	9979.079
2660	-13980.271	-4705.734	9979.020
2440	-14428.730	-4705.734	9979.020
2680	-14428.730	-7727.704	-50080.578
2700	-14428.730	-7727.704	-51540.578
2680	-14428.730	-7727.704	-50080.578
2720	-14428.730	-7727.704	-49895.578
2560	-14428.730	-7727.704	-49889.578
2740	-14428.730	-7727.704	-43895.578
2760	-14428.730	-7727.704	-37895.578
2780	-14428.730	-7727.704	-31895.580
2800	-14428.730	-7727.704	-25895.580
2820	-14428.730	-7727.704	-19895.580
2830	-14428.730	-7727.704	-19889.580
2840	-14428.730	-7727.704	-13895.580
2020	-15800.080	-4696.183	10824.560
2860	-15800.080	-4324.683	10824.560
2880	-16257.280	-4324.683	10824.560
2900	-16257.280	-4324.683	8608.560
2920	-15700.080	-4324.683	8608.560
2940	-14828.610	-4324.683	8608.560
2960	-14428.610	-4324.683	8608.560
2980	-14428.610	-4324.683	8379.560
3000	-14428.610	-4324.683	8252.560
3020	-14428.610	-4324.683	7684.760
3040	-14428.610	-4324.683	7557.760
3060	-14428.610	-4324.683	7407.760
3080	-14428.610	-4351.683	7268.060
3100	-14428.610	-4351.683	7156.935
3120	-14428.610	-4351.683	6715.135

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INPUT LISTING

3140	-14428.610	-4351.683	6604.010
3160	-14428.610	-4324.683	6464.310
3180	-14428.610	-4324.683	6114.310
3200	-14428.610	-4324.683	5531.830
3220	-14428.610	-4324.683	5404.830
3240	-14428.610	-4324.683	4837.030
3260	-14428.610	-4324.683	4710.030
3280	-14428.610	-4324.683	4557.630
3300	-14428.610	-4324.683	4379.830
3320	-14428.610	-4324.683	4202.030
3340	-14428.610	-4324.683	3494.530
3360	-14428.610	-4324.683	3337.530
3380	-14428.610	-4324.683	2509.530
3400	-14428.610	-4324.683	2309.530
3420	-14428.610	-4324.683	1804.730
3440	-13359.710	-4324.683	1804.730
3460	-13359.710	-4324.683	2109.730
3480	-13359.710	-4324.683	2799.430
3500	-13359.710	-4324.683	3249.430
3520	-13359.710	-4324.683	3554.430
3540	-13359.710	-4324.683	3904.430
3500	-13359.710	-4324.683	3249.430
3560	-13359.710	-4324.683	3554.430
3580	-13359.710	-5501.683	3554.430
3600	-11900.110	-5501.683	3554.430
6970	-11900.110	-7674.683	3554.430
3300	-14428.610	-4324.683	4379.830
3640	-14428.610	-4674.683	4379.830
3660	-14428.610	-5511.683	4379.830
3680	-14428.610	-5511.683	1288.290
3700	-14428.610	-5511.683	288.290
3720	-10400.110	-5511.683	288.290
3740	-7246.710	-5511.683	288.290
3760	-7141.936	-5511.683	288.290
3780	-7116.936	-5511.683	288.290
3800	-7012.936	-5511.683	288.290
3820	-6856.936	-5511.683	288.290
3860	-6396.936	-5511.683	288.290
3880	-6396.936	-7071.683	288.290
3900	-6396.936	-8271.684	288.290
3620	-11900.110	-7674.683	-56445.570
3920	-11900.110	-7674.683	-55712.570
3620	-11900.110	-7674.683	-56445.570
3940	-11900.110	-7674.683	-61711.570
2920	-15700.080	-4324.683	8608.560
3960	-15700.080	-4324.683	8208.560
3980	-15700.080	-4324.683	7978.560
4000	-15700.080	-4324.683	7324.510
4020	-15700.080	-4324.683	7174.510
4040	-15700.080	-4324.683	7024.510
4060	-15700.080	-4337.383	6922.910
4080	-15700.080	-4337.383	6830.834
4100	-15700.080	-4337.383	6465.834
4120	-15700.080	-4337.383	6373.759
4140	-15700.080	-4324.683	6272.159

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INPUT LISTING

4160	-15700.080	-4324.683	6022.159
4180	-15700.080	-4324.683	5755.219
4200	-15700.080	-4324.683	5302.219
4220	-15700.080	-4324.683	5149.219
4240	-15700.080	-6520.683	5149.219
4260	-15700.080	-6520.683	6449.219
6250	-15700.080	-7395.683	7324.219
4280	-15700.080	-7395.683	-53045.914
4300	-15700.080	-7395.683	-55765.914
4280	-15700.080	-7395.683	-53045.914
4320	-15700.080	-7395.683	-49765.914
4340	-15700.080	-7395.683	-47559.242
4360	-15700.080	-7395.683	-44783.031
4380	-15700.080	-7395.683	-43765.910
2160	-15357.311	-4705.734	12737.749
4400	-15357.311	-4329.134	12737.749
4420	-16770.010	-4329.134	12737.749
4430	-16770.010	-4329.134	12963.849
4440	-16770.010	-4329.134	13189.948
4460	-16170.010	-4329.134	13189.948
4480	-14504.109	-4329.134	13189.948
4500	-14045.109	-4329.134	13189.948
4520	-13968.109	-4329.134	13189.948
4540	-13968.109	-4329.134	13416.148
4560	-13968.109	-4329.134	13642.349
4580	-14515.310	-4329.134	13642.349
4600	-14590.310	-4329.134	13642.349
4620	-14665.310	-4329.134	13642.349
4640	-14965.310	-4329.134	13642.349
4660	-15065.310	-4329.134	13642.349
4680	-15542.310	-4329.134	13642.349
4700	-15700.079	-4329.134	13642.349
4720	-15700.079	-6751.134	13642.349
4740	-15700.079	-6751.134	14042.349
6270	-15700.079	-7395.684	14686.898
4460	-16170.010	-4329.134	13189.948
4610	-16170.010	-4329.134	13319.948
4760	-16170.010	-4329.134	13566.148
4780	-16170.010	-4329.134	14043.349
4800	-16170.010	-4329.134	14120.349
4820	-16170.010	-2037.134	14120.349
4840	-16170.010	-1987.134	14170.349
1260	3047.020	-7329.753	6456.759
4860	3047.020	-5599.753	6456.759
4880	3047.020	-5599.753	6709.159
4900	47.020	-5599.753	6709.159
4920	-5452.980	-5599.753	6709.159
4940	-10196.980	-5599.753	6709.159
4960	-10556.980	-5599.753	6709.159
4980	-10556.980	-5599.753	9061.159
5000	-10696.681	-5599.753	9061.159
5020	-11168.121	-5599.753	9061.159
5000	-10696.681	-5599.753	9061.159
5040	-10696.681	-5141.753	9061.159
5060	-10696.681	-4699.753	9061.159

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INPUT LISTING

5080	-10696.681	-4240.753	9061.159
5100	-10696.681	-3840.753	9061.159
5120	-10696.681	-3675.753	9061.159
5140	-10696.681	-3509.753	9061.159
5160	-10696.681	-3509.753	9213.159
5180	-10696.681	-3509.753	9286.185
5200	-10696.681	-3549.453	9425.885
5220	-10696.681	-3549.453	10225.885
5240	-10696.681	-3549.453	11653.885
5260	-10696.681	-3778.453	11653.885
5280	-10696.681	-4229.303	11653.885
5300	-10696.681	-6015.303	11653.885
5320	-11616.381	-6015.303	11653.885
5020	-11168.121	-5599.753	9061.159
5340	-11168.121	-5141.753	9061.159
5360	-11168.121	-4699.753	9061.159
5380	-11168.121	-4240.753	9061.159
5400	-11168.121	-3840.753	9061.159
5420	-11168.121	-3675.753	9061.159
5440	-11168.121	-3509.753	9061.159
5460	-11168.121	-3509.753	9213.159
5480	-11168.121	-3509.753	9286.185
5500	-11168.121	-3549.453	9425.885
5520	-11168.121	-3549.453	10225.885
5540	-11168.121	-3549.453	10882.385
5560	-11168.121	-3778.453	10882.385
5580	-11168.121	-4229.303	10882.385
5600	-11168.121	-6015.303	10882.385
5620	-11168.121	-6015.303	11206.234
5320	-11616.381	-6015.303	11653.885
5640	-12276.921	-6015.303	11653.885
5660	-12586.921	-6015.303	11653.885
5680	-15700.081	-6015.303	11653.885
5700	-15700.081	-6738.683	11653.885
6265	-15700.081	-7395.683	12310.885
5020	-11168.121	-5599.753	9061.159
5720	-11668.121	-5599.753	9061.159
5740	-11668.121	-5599.753	9313.560
5760	-11668.121	-5141.753	9313.560
5780	-11668.121	-4749.753	9313.560
5800	-11668.121	-4290.753	9313.560
5820	-11668.121	-3914.053	9313.560
5840	-11668.121	-3914.053	9501.859
5860	-11668.121	-3914.053	9690.159
5880	-11668.121	-3914.053	10149.159
5900	-11668.121	-3914.053	10226.159
5920	-11668.121	-5141.753	10226.159
5940	-11668.121	-6015.303	10226.159
5960	-11668.121	-6015.303	11037.279
5960	-11660.321	-6015.303	11037.285
5640	-12276.921	-6015.303	11653.885
4380	-15700.080	-7395.683	-43765.910
4701	-15700.080	-7395.683	-41591.309
5021	-21700.080	-7395.683	-41591.309
5181	-21700.080	-7395.683	-40591.309

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INPUT LISTING

5341	-21700.080	-7395.683	-39591.309
5661	-15700.080	-7395.683	-39591.309
5980	-15700.080	-7395.683	-37765.910
6000	-15700.080	-7395.683	-31765.910
6020	-15700.080	-7395.683	-25765.910
6030	-15700.080	-7395.683	-23175.789
6040	-15700.080	-7395.683	-19765.910
6045	-15700.080	-7395.683	-17689.121
6050	-15700.080	-7395.683	-14912.911
6060	-15700.080	-7395.683	-13765.911
6180	-15700.080	-7395.683	-12515.911
6185	-21700.080	-7395.683	-12515.911
6187	-21700.080	-7395.683	-11515.911
6190	-21700.080	-7395.683	-10515.911
6195	-15700.080	-7395.683	-10515.911
6200	-15700.080	-7395.683	-7765.911
6220	-15700.080	-7395.683	-1765.911
6240	-15700.080	-7395.683	4234.089
6250	-15700.080	-7395.683	7324.219
6260	-15700.080	-7395.683	10234.090
6260	-15700.081	-7395.683	10234.095
6265	-15700.081	-7395.683	12310.885
6265	-15700.079	-7395.684	12310.688
6270	-15700.079	-7395.684	14686.898
6280	-15700.079	-7395.684	15433.898
6300	-15700.079	-7395.684	21433.898
6310	-15700.079	-7395.684	26916.898
6320	-21700.078	-7395.684	26916.898
6323	-21700.078	-7395.684	27433.898
6327	-21700.078	-7395.684	27933.898
6326	-21700.078	-7395.684	28916.898
6332	-15700.078	-7395.684	28916.898
6340	-15700.078	-7395.684	33433.898
6360	-15700.078	-7395.684	39433.898
6380	-15700.078	-7395.684	43633.898
6400	-17500.078	-7395.684	45433.898
6420	-23700.078	-7395.684	45433.898
6440	-23700.078	-9095.684	45433.898
6460	-23700.078	-9273.684	45433.898
6480	-23700.078	-9378.459	45433.898
4300	-15700.080	-7395.683	-55765.914
6500	-15700.080	-7395.683	-61765.914
6520	-15700.080	-7395.683	-67765.914
6540	-15700.080	-7395.683	-73765.914
6560	-15700.080	-7395.683	-79765.914
6580	-15700.080	-7395.683	-85765.914
6600	-15700.080	-7395.683	-91765.914
6620	-15700.080	-7395.683	-97765.914
2840	-14428.730	-7727.704	-13895.580
6640	-14428.730	-7727.704	-7895.580
6660	-14428.730	-7727.704	-1895.580
6680	-14428.730	-7727.704	4104.420
6690	-14428.730	-7727.704	10104.420
6695	-14428.730	-7727.704	10110.420
6700	-14428.730	-7727.704	16104.420

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INPUT LISTING

3920	-11900.110	-7674.683	-55712.570
6720	-11900.110	-7674.683	-49712.570
6740	-11900.110	-7674.683	-43712.570
6760	-11900.110	-7674.683	-37712.570
6780	-11900.110	-7674.683	-31712.570
6790	-11900.110	-7674.683	-26445.570
6800	-11900.110	-7674.683	-25712.570
6820	-11900.110	-7674.683	-19712.570
6840	-11900.110	-7674.683	-15512.570
6860	-5470.110	-7674.683	-15512.570
6880	-5470.110	-7674.683	-13712.570
6900	-5470.110	-7674.683	-11912.570
6920	-11900.110	-7674.683	-11912.570
6940	-11900.110	-7674.683	-7712.570
6960	-11900.110	-7674.683	-1712.570
6970	-11900.110	-7674.683	3554.430
6980	-11900.110	-7674.683	4287.430
7000	-11900.110	-7674.683	4987.430
7020	-11900.110	-7674.683	5092.205
3940	-11900.110	-7674.683	-61711.570
7040	-11900.110	-7674.683	-67711.570
7060	-11900.110	-7674.683	-73711.570
7080	-11900.110	-7674.683	-79711.570
7100	-11900.110	-7674.683	-85711.570

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 RESTRAINT SUMMARY REPORT: Loads On Restraints
 Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP+H
 CASE 4 (OPE) W+T1+P1+H
 CASE 6 (OPE) W+T2+P1+H
 CASE 7 (OPE) W+T3+P1+H
 CASE 9 (OPE) W+T1+P2+H
 CASE 10 (SUS) W+P1+H
 CASE 11 (SUS) WNC+H

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
20		TYPE=Rigid ANC;					
	3(HYD)	-165	-669	12	-5	12	253
	4(OPE)	361	1105	39	-26	95	-1083
	6(OPE)	893	2950	58	-37	134	-2507
	7(OPE)	-499	-1118	16	-8	23	451
	9(OPE)	361	1105	39	-26	95	-1083
	10(SUS)	-114	-530	12	-5	11	192
	11(SUS)	-115	-518	12	-5	11	181
	MAX	893/L6	2950/L6	58/L6	-37/L6	134/L6	-2507/L6
121		TYPE=Rigid +Y;					
	3(HYD)	-106	-1809	0	0	0	0
	4(OPE)	0	-1335	0	0	0	0
	6(OPE)	0	-1368	0	0	0	0
	7(OPE)	-131	-1309	0	0	0	0
	9(OPE)	0	-1335	0	0	0	0
	10(SUS)	-70	-1315	0	0	0	0
	11(SUS)	-69	-1315	0	0	0	0
	MAX	-131/L7	-1809/L3				
160		TYPE=Rigid Z; Rigid -X; Rigid X; Prog Design VSH;					
	3(HYD)	-106	-1809	7	0	0	0
	4(OPE)	2232	-2004	433	0	0	0
	6(OPE)	3051	-2284	561	0	0	0
	7(OPE)	-130	-1309	27	0	0	0
	9(OPE)	2232	-2004	433	0	0	0
	10(SUS)	-70	-1315	6	0	0	0
	11(SUS)	-69	-1315	6	0	0	0
	MAX	3051/L6	-2284/L6	561/L6			
300		TYPE=Rigid +Y;					
	3(HYD)	185	-1943	112	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)	-862	-2955	207	0	0	0
	6(OPE)	-1640	-5515	216	0	0	0
	7(OPE)	-272	-912	31	0	0	0
	9(OPE)	-862	-2955	207	0	0	0
	10(SUS)	125	-1710	103	0	0	0
	11(SUS)	125	-1700	102	0	0	0
	MAX	-1640/L6	-5515/L6	216/L6			
400		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	163	-1580	-13	0	0	0
	4(OPE)	-148	-493	401	0	0	0
	6(OPE)	-267	892	527	0	0	0
	7(OPE)	-164	-1562	133	0	0	0
	9(OPE)	-148	-493	401	0	0	0
	10(SUS)	110	-1268	-13	0	0	0
	11(SUS)	109	-1263	-13	0	0	0
	MAX	-267/L6	-1580/L3	527/L6			
480		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	216	-2042	-8	0	0	0
	4(OPE)	-534	-1780	33	0	0	0
	6(OPE)	-694	-2315	201	0	0	0
	7(OPE)	421	-1403	-82	0	0	0
	9(OPE)	-534	-1780	33	0	0	0
	10(SUS)	146	-1452	-5	0	0	0
	11(SUS)	144	-1438	-5	0	0	0
	MAX	-694/L6	-2315/L6	201/L6			
560		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	-325	-3243	34	0	0	0
	4(OPE)	-635	-2117	13	0	0	0
	6(OPE)	-580	-1932	-12	0	0	0
	7(OPE)	665	-2216	37	0	0	0
	9(OPE)	-635	-2117	13	0	0	0
	10(SUS)	-218	-2224	23	0	0	0
	11(SUS)	-216	-2201	23	0	0	0
	MAX	665/L7	-3243/L3	37/L7			
660		TYPE=Rigid +Y;					
	3(HYD)	-123	-1170	-113	0	0	0
	4(OPE)	-150	-859	210	0	0	0
	6(OPE)	-122	-970	264	0	0	0
	7(OPE)	15	-782	-234	0	0	0
	9(OPE)	-150	-859	210	0	0	0
	10(SUS)	-85	-808	-76	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)	-84	-800	-76	0	0	0
	MAX	-150/L4	-1170/L3	264/L6			
780		TYPE=Rigid ANC;					
	3(HYD)	32	-1884	-27	86	99	-1224
	4(OPE)	-250	-1321	-92	-73	-316	-879
	6(OPE)	-614	-1173	-204	-244	-777	-954
	7(OPE)	131	-1457	8	102	227	-857
	9(OPE)	-250	-1321	-92	-73	-316	-879
	10(SUS)	21	-1422	-18	59	67	-845
	11(SUS)	21	-1412	-18	58	66	-836
	MAX	-614/L6	-1884/L3	-204/L6	-244/L6	-777/L6	-1224/L3
860		TYPE=Rigid ANC;					
	3(HYD)	32	-1884	-27	-30	99	-1359
	4(OPE)	-250	-1321	-92	-463	-316	185
	6(OPE)	-614	-1173	-204	-1113	-777	1666
	7(OPE)	131	-1457	8	138	227	-1415
	9(OPE)	-250	-1321	-92	-463	-316	185
	10(SUS)	21	-1422	-18	-19	67	-936
	11(SUS)	21	-1412	-18	-19	66	-926
	MAX	-614/L6	-1884/L3	-204/L6	-1113/L6	-777/L6	1666/L6
920		TYPE=Rigid +Y;					
	3(HYD)	-0	-634	60	0	0	0
	4(OPE)	-72	-1202	353	0	0	0
	6(OPE)	-178	-1409	383	0	0	0
	7(OPE)	-120	-580	-126	0	0	0
	9(OPE)	-72	-1202	353	0	0	0
	10(SUS)	-1	-649	83	0	0	0
	11(SUS)	-1	-648	84	0	0	0
	MAX	-178/L6	-1409/L6	383/L6			
1040		TYPE=Rigid +Y;					
	3(HYD)	121	-2183	-171	0	0	0
	4(OPE)	-668	-2251	99	0	0	0
	6(OPE)	-739	-2466	-33	0	0	0
	7(OPE)	-526	-1766	63	0	0	0
	9(OPE)	-668	-2251	99	0	0	0
	10(SUS)	97	-1859	-185	0	0	0
	11(SUS)	96	-1840	-185	0	0	0
	MAX	-739/L6	-2466/L6	-185/L11			
1180		TYPE=Rigid +Y; Rigid -X;					

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RESTRAINT SUMMARY REPORT: 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)	3	-1194	3	0	0	0
	4(OPE)	7428	-926	-2506	0	0	0
	6(OPE)	8623	-876	-2850	0	0	0
	7(OPE)	-252	-940	126	0	0	0
	9(OPE)	7428	-926	-2506	0	0	0
	10(SUS)	2	-954	3	0	0	0
	11(SUS)	2	-940	3	0	0	0
	MAX	8623/L6	-1194/L3	-2850/L6			
1240		TYPE=Rigid ANC;					
	3(HYD)	4	-762	8	-3	2	249
	4(OPE)	1092	-630	-42	9	-979	191
	6(OPE)	1464	-629	-204	6	-1319	179
	7(OPE)	-1284	-700	-34	-11	1149	205
	9(OPE)	1092	-630	-42	9	-979	191
	10(SUS)	5	-678	10	-4	2	204
	11(SUS)	5	-673	10	-4	2	202
	MAX	1464/L6	-762/L3	-204/L6	-11/L7	-1319/L6	249/L3
1280		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	172	-3795	-22	0	0	0
	4(OPE)	-817	-2723	1072	0	0	0
	6(OPE)	-747	-2490	1243	0	0	0
	7(OPE)	-1105	-3685	-203	0	0	0
	9(OPE)	-817	-2723	1072	0	0	0
	10(SUS)	138	-3465	-24	0	0	0
	11(SUS)	136	-3445	-24	0	0	0
	MAX	-1105/L7	-3795/L3	1243/L6			
1380		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	281	-3311	2	0	0	0
	4(OPE)	-1329	-4431	7	0	0	0
	6(OPE)	-1455	-4851	54	0	0	0
	7(OPE)	674	-2246	4	0	0	0
	9(OPE)	-1329	-4431	7	0	0	0
	10(SUS)	227	-2830	3	0	0	0
	11(SUS)	223	-2801	3	0	0	0
	MAX	-1455/L6	-4851/L6	54/L6			
1460		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	-300	-3254	4	0	0	0
	4(OPE)	-695	-2316	91	0	0	0
	6(OPE)	-680	-2265	115	0	0	0
	7(OPE)	799	-2663	3	0	0	0
	9(OPE)	-695	-2316	91	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)	-234	-2534	2	0	0	0
	11(SUS)	-230	-2494	2	0	0	0
	MAX	799/L7	-3254/L3	115/L6			
1500		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	0	-3561	-8	0	0	0
	4(OPE)	0	-1467	-783	0	0	0
	6(OPE)	0	-1099	-1033	0	0	0
	7(OPE)	0	-3200	8	0	0	0
	9(OPE)	0	-1467	-783	0	0	0
	10(SUS)	0	-2809	-5	0	0	0
	11(SUS)	0	-2765	-5	0	0	0
	MAX		-3561/L3	-1033/L6			
1520		TYPE=Rigid +Y;					
	3(HYD)	109	-3213	32	0	0	0
	4(OPE)	-1070	-3754	-350	0	0	0
	6(OPE)	-1171	-4111	-386	0	0	0
	7(OPE)	682	-2384	216	0	0	0
	9(OPE)	-1070	-3754	-350	0	0	0
	10(SUS)	96	-2533	21	0	0	0
	11(SUS)	93	-2494	21	0	0	0
	MAX	-1171/L6	-4111/L6	-386/L6			
1560		TYPE=Rigid +Y;					
	3(HYD)	-621	-2071	-7	0	0	0
	4(OPE)	-403	-1347	-36	0	0	0
	6(OPE)	-372	-1245	-34	0	0	0
	7(OPE)	469	-1570	48	0	0	0
	9(OPE)	-403	-1347	-36	0	0	0
	10(SUS)	-490	-1633	0	0	0	0
	11(SUS)	-482	-1608	1	0	0	0
	MAX	-621/L3	-2071/L3	48/L7			
1700		TYPE=Rigid ANC;					
	3(HYD)	156	-3040	-21	9	-99	-1138
	4(OPE)	-2910	-1925	968	86	3468	-3692
	6(OPE)	-3808	-1774	1228	133	4543	-4515
	7(OPE)	286	-2618	-254	91	-261	-815
	9(OPE)	-2910	-1925	968	86	3468	-3692
	10(SUS)	124	-2490	-18	6	-75	-903
	11(SUS)	122	-2458	-18	6	-74	-890
	MAX	-3808/L6	-3040/L3	1228/L6	133/L6	4543/L6	-4515/L6
1780		TYPE=Rigid					

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RESTRAINT SUMMARY REPORT: Loads On Restraints

Various Load Cases

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
		ANC;					
	3(HYD)	-286	-1825	23	-411	104	-481
	4(OPE)	-1621	-1218	-164	-36	988	-863
	6(OPE)	-6428	-1113	-1353	719	3781	-3119
	7(OPE)	837	-1325	16	-240	-391	185
	9(OPE)	-1621	-1218	-164	-36	988	-863
	10(SUS)	-387	-1301	29	-234	157	-410
	11(SUS)	-393	-1267	29	-223	160	-406
	MAX	-6428/L6	-1825/L3	-1353/L6	719/L6	3781/L6	-3119/L6
1840		TYPE=Rigid X; Rigid Z w/gap; Rigid Y;					
	3(HYD)	-63	-10742	1	0	0	0
	4(OPE)	-763	-9825	1211	0	0	0
	6(OPE)	-2328	-10374	1736	0	0	0
	7(OPE)	-237	-9777	-1049	0	0	0
	9(OPE)	-763	-9825	1211	0	0	0
	10(SUS)	-101	-9758	6	0	0	0
	11(SUS)	-104	-9693	6	0	0	0
	MAX	-2328/L6	-10742/L3	1736/L6			
1860		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	0	-8207	0	0	0	0
	4(OPE)	-695	-7538	293	0	0	0
	6(OPE)	-667	-7244	282	0	0	0
	7(OPE)	755	-7809	-200	0	0	0
	9(OPE)	-695	-7538	293	0	0	0
	10(SUS)	0	-7742	-1	0	0	0
	11(SUS)	0	-7708	-1	0	0	0
	MAX	755/L7	-8207/L3	293/L4			
1880		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	-0	-8201	-0	0	0	0
	4(OPE)	-754	-7543	-4	0	0	0
	6(OPE)	-727	-7266	-3	0	0	0
	7(OPE)	771	-7805	124	0	0	0
	9(OPE)	-754	-7543	-4	0	0	0
	10(SUS)	-0	-7739	-1	0	0	0
	11(SUS)	-0	-7704	-1	0	0	0
	MAX	771/L7	-8201/L3	124/L7			
1900		TYPE=Rigid X; 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.
		w/gap; Rigid Y;					
	3(HYD)	-67	-11023	1	0	0	0
	4(OPE)	-2266	-9606	-838	0	0	0
	6(OPE)	-6506	-9372	-2476	0	0	0
	7(OPE)	-175	-9922	1045	0	0	0
	9(OPE)	-2266	-9606	-838	0	0	0
	10(SUS)	-162	-9921	6	0	0	0
	11(SUS)	-168	-9848	6	0	0	0
	MAX	-6506/L6	-11023/L3	-2476/L6			
1980		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	362	-3049	9	0	0	0
	4(OPE)	777	-2692	220	0	0	0
	6(OPE)	3727	-2987	9811	0	0	0
	7(OPE)	-594	-2140	-244	0	0	0
	9(OPE)	777	-2692	220	0	0	0
	10(SUS)	442	-2166	-36	0	0	0
	11(SUS)	447	-2110	-38	0	0	0
	MAX	3727/L6	-3049/L3	9811/L6			
2120		TYPE=Rigid +Y;					
	3(HYD)	153	-4783	200	0	0	0
	4(OPE)	-324	-4165	1207	0	0	0
	6(OPE)	-658	-3846	948	0	0	0
	7(OPE)	160	-4103	-1220	0	0	0
	9(OPE)	-324	-4165	1207	0	0	0
	10(SUS)	83	-4098	197	0	0	0
	11(SUS)	79	-4054	196	0	0	0
	MAX	-658/L6	-4783/L3	-1220/L7			
2220		TYPE=Rigid +Y;					
	3(HYD)	0	-4200	0	0	0	0
	4(OPE)	0	-3568	0	0	0	0
	6(OPE)	0	-2599	0	0	0	0
	7(OPE)	0	-4085	0	0	0	0
	9(OPE)	0	-3568	0	0	0	0
	10(SUS)	0	-3935	0	0	0	0
	11(SUS)	0	-3920	0	0	0	0
	MAX		-4200/L3				
2440		TYPE=Rigid +Y;					
	3(HYD)	0	-5350	0	0	0	0
	4(OPE)	0	-4554	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	-4836	0	0	0	0
	7(OPE)	0	-4459	0	0	0	0
	9(OPE)	0	-4554	0	0	0	0
	10(SUS)	0	-4604	0	0	0	0
	11(SUS)	0	-4556	0	0	0	0
	MAX		-5350/L3				
2640		TYPE=Rigid +Y;					
	3(HYD)	0	-994	0	0	0	0
	4(OPE)	0	-1091	0	0	0	0
	6(OPE)	0	-1520	0	0	0	0
	7(OPE)	0	-837	0	0	0	0
	9(OPE)	0	-1091	0	0	0	0
	10(SUS)	0	-904	0	0	0	0
	11(SUS)	0	-898	0	0	0	0
	MAX		-1520/L6				
2700		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
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
2720		TYPE=Rigid +Y;					
	3(HYD)	0	-2003	0	0	0	0
	4(OPE)	-0	-1265	-379	0	0	0
	6(OPE)	1	-1265	-379	0	0	0
	7(OPE)	0	-1265	379	0	0	0
	9(OPE)	-0	-1265	-379	0	0	0
	10(SUS)	0	-1265	-0	0	0	0
	11(SUS)	0	-1218	-0	0	0	0
	MAX	1/L6	-2003/L3	379/L7			
2740		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	-0	-3002	0	0	0	0
	4(OPE)	0	-1896	-569	0	0	0
	6(OPE)	-2	-1896	-569	0	0	0
	7(OPE)	-0	-1896	569	0	0	0
	9(OPE)	0	-1896	-569	0	0	0
	10(SUS)	-0	-1896	-0	0	0	0
	11(SUS)	-0	-1825	-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	-2/L6	-3002/L3	-569/L6			
2760		TYPE=Rigid +Y;					
	3(HYD)	0	-2742	0	0	0	0
	4(OPE)	0	-1731	-519	0	0	0
	6(OPE)	-3	-1731	-519	0	0	0
	7(OPE)	-0	-1731	519	0	0	0
	9(OPE)	0	-1731	-519	0	0	0
	10(SUS)	0	-1731	-0	0	0	0
	11(SUS)	0	-1667	-0	0	0	0
	MAX	-3/L6	-2742/L3	519/L7			
2780		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-2811	0	0	0	0
	4(OPE)	0	-1775	-533	0	0	0
	6(OPE)	-8	-1776	-533	0	0	0
	7(OPE)	0	-1775	533	0	0	0
	9(OPE)	0	-1775	-533	0	0	0
	10(SUS)	-0	-1775	-0	0	0	0
	11(SUS)	-0	-1710	-0	0	0	0
	MAX	-8/L6	-2811/L3	-533/L6			
2800		TYPE=Rigid +Y;					
	3(HYD)	0	-2793	0	0	0	0
	4(OPE)	0	-1763	-529	0	0	0
	6(OPE)	-15	-1762	-528	0	0	0
	7(OPE)	0	-1764	529	0	0	0
	9(OPE)	0	-1763	-529	0	0	0
	10(SUS)	0	-1764	-0	0	0	0
	11(SUS)	0	-1698	-0	0	0	0
	MAX	-15/L6	-2793/L3	529/L7			
2820		TYPE=Rigid +Y;					
	3(HYD)	-0	-2797	0	0	0	0
	4(OPE)	0	-1768	-530	0	0	0
	6(OPE)	-29	-1773	-531	0	0	0
	7(OPE)	-0	-1766	530	0	0	0
	9(OPE)	0	-1768	-530	0	0	0
	10(SUS)	-0	-1766	-0	0	0	0
	11(SUS)	-0	-1701	-0	0	0	0
	MAX	-29/L6	-2797/L3	-531/L6			
2840		TYPE=Rigid X w/gap;					

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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.
		Rigid Z w/gap; Rigid +Y;					
	3(HYD)	0	-2799	0	0	0	0
	4(OPE)	0	-1762	-602	0	0	0
	6(OPE)	0	-1743	-5039	0	0	0
	7(OPE)	0	-1770	0	0	0	0
	9(OPE)	0	-1762	-602	0	0	0
	10(SUS)	0	-1767	0	0	0	0
	11(SUS)	0	-1702	0	0	0	0
	MAX		-2799/L3	-5039/L6			
2940		TYPE=Rigid +Y;					
	3(HYD)	-260	-5153	-9	0	0	0
	4(OPE)	-249	-5836	1733	0	0	0
	6(OPE)	-128	-5246	1568	0	0	0
	7(OPE)	-35	-4861	-1458	0	0	0
	9(OPE)	-249	-5836	1733	0	0	0
	10(SUS)	-175	-4823	-86	0	0	0
	11(SUS)	-170	-4806	-88	0	0	0
	MAX	-260/L3	-5836/L4	1733/L4			
3180		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	1634	-5641	-723	0	0	0
	4(OPE)	2556	-3882	1932	0	0	0
	6(OPE)	5989	-2130	2436	0	0	0
	7(OPE)	482	-5833	-1894	0	0	0
	9(OPE)	2556	-3882	1932	0	0	0
	10(SUS)	1310	-5301	-719	0	0	0
	11(SUS)	1308	-5281	-720	0	0	0
	MAX	5989/L6	-5833/L7	2436/L6			
3400		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	1060	-7930	-508	0	0	0
	4(OPE)	746	-7264	-2047	0	0	0
	6(OPE)	105	-6602	-1978	0	0	0
	7(OPE)	786	-6899	1915	0	0	0
	9(OPE)	746	-7264	-2047	0	0	0
	10(SUS)	830	-6687	-504	0	0	0
	11(SUS)	829	-6680	-505	0	0	0
	MAX	1060/L3	-7930/L3	-2047/L4			
3540		TYPE=Rigid +Y;					
	3(HYD)	0	-2014	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.
	4(OPE)	0	-592	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	0	-2024	0	0	0	0
	9(OPE)	0	-592	0	0	0	0
	10(SUS)	0	-1336	0	0	0	0
	11(SUS)	0	-1333	0	0	0	0
	MAX		-2024/L7				
3640		TYPE=Rigid X; Rigid Z; Rigid +Y;					
	3(HYD)	-2073	-7893	574	0	0	0
	4(OPE)	-2254	-7538	-3660	0	0	0
	6(OPE)	-4410	-9204	-8326	0	0	0
	7(OPE)	-909	-6200	612	0	0	0
	9(OPE)	-2254	-7538	-3660	0	0	0
	10(SUS)	-1745	-6908	859	0	0	0
	11(SUS)	-1743	-6897	862	0	0	0
	MAX	-4410/L6	-9204/L6	-8326/L6			
3680		TYPE=Rigid +Y;					
	3(HYD)	-944	-3216	198	0	0	0
	4(OPE)	-590	-2117	-236	0	0	0
	6(OPE)	-715	-2620	-326	0	0	0
	7(OPE)	400	-1517	216	0	0	0
	9(OPE)	-590	-2117	-236	0	0	0
	10(SUS)	-534	-1805	89	0	0	0
	11(SUS)	-532	-1797	89	0	0	0
	MAX	-944/L3	-3216/L3	-326/L6			
3720		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	203	-3404	-7	0	0	0
	4(OPE)	-365	-1298	-136	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	758	-2696	282	0	0	0
	9(OPE)	-365	-1298	-136	0	0	0
	10(SUS)	104	-1981	16	0	0	0
	11(SUS)	104	-1972	16	0	0	0
	MAX	758/L7	-3404/L3	282/L7			
3820		TYPE=Rigid ANC;					
	3(HYD)	419	-1417	1	-92	2	608
	4(OPE)	1100	-1486	-68	-19	-392	1627
	6(OPE)	1830	-2545	-680	58	-2510	4253
	7(OPE)	-1454	-413	1	-46	300	-880

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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.
	9(OPE)	1100	-1486	-68	-19	-392	1627
	10(SUS)	230	-950	-6	-43	-7	370
	11(SUS)	229	-947	-6	-43	-7	369
	MAX	1830/L6	-2545/L6	-680/L6	-92/L3	-2510/L6	4253/L6
3900		TYPE=Rigid ANC;					
	3(HYD)	419	-1417	1	-88	2	102
	4(OPE)	1100	-1486	-68	-208	-424	-724
	6(OPE)	1830	-2545	-680	-1819	-2822	371
	7(OPE)	-1454	-413	1	-43	301	3322
	9(OPE)	1100	-1486	-68	-208	-424	-724
	10(SUS)	230	-950	-6	-59	-10	171
	11(SUS)	229	-947	-6	-59	-10	171
	MAX	1830/L6	-2545/L6	-680/L6	-1819/L6	-2822/L6	3322/L7
3920		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-0	-6536	0	0	0	0
	4(OPE)	-3	-3561	-1068	0	0	0
	6(OPE)	958	-3561	-4253	0	0	0
	7(OPE)	0	-3561	1068	0	0	0
	9(OPE)	-3	-3561	-1068	0	0	0
	10(SUS)	-0	-3561	0	0	0	0
	11(SUS)	-0	-3543	0	0	0	0
	MAX	958/L6	-6536/L3	-4253/L6			
3940		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6516	0	0	0	0
	4(OPE)	-1	-3550	-1065	0	0	0
	6(OPE)	-0	-3550	-1065	0	0	0
	7(OPE)	0	-3550	1065	0	0	0
	9(OPE)	-1	-3550	-1065	0	0	0
	10(SUS)	0	-3550	0	0	0	0
	11(SUS)	0	-3532	0	0	0	0
	MAX	-1/L4	-6516/L3	-1065/L6			
3960		TYPE=Rigid +Y;					
	3(HYD)	54	-647	-154	0	0	0
	4(OPE)	-16	-79	18	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	16	-278	-82	0	0	0
	9(OPE)	-16	-79	18	0	0	0
	10(SUS)	18	-114	-29	0	0	0
	11(SUS)	13	-77	-19	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	54/L3	-647/L3	-154/L3			
4020		TYPE=Rigid +Y;					
	3(HYD)	17	-683	-134	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	6	-409	-123	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	14	-907	-147	0	0	0
	11(SUS)	15	-911	-149	0	0	0
	MAX	17/L3	-911/L11	-149/L11			
4160		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	-52	-3470	-213	0	0	0
	4(OPE)	91	0	0	0	0	0
	6(OPE)	777	0	0	0	0	0
	7(OPE)	-103	-3622	1086	0	0	0
	9(OPE)	91	0	0	0	0	0
	10(SUS)	-30	-2982	-190	0	0	0
	11(SUS)	-30	-2975	-191	0	0	0
	MAX	777/L6	-3622/L7	1086/L7			
4300		TYPE=Rigid +Y;					
	3(HYD)	0	-6859	0	0	0	0
	4(OPE)	152	-3722	-1106	0	0	0
	6(OPE)	152	-3722	-1106	0	0	0
	7(OPE)	20	-3722	1117	0	0	0
	9(OPE)	152	-3722	-1106	0	0	0
	10(SUS)	0	-3722	0	0	0	0
	11(SUS)	0	-3718	0	0	0	0
	MAX	152/L6	-6859/L3	1117/L7			
4320		TYPE=Rigid X w/gap; Rigid Z; Rigid +Y;					
	3(HYD)	-0	-5301	0	0	0	0
	4(OPE)	1396	-2877	-190	0	0	0
	6(OPE)	1395	-2877	-190	0	0	0
	7(OPE)	-83	-2877	-5841	0	0	0
	9(OPE)	1396	-2877	-190	0	0	0
	10(SUS)	-0	-2877	0	0	0	0
	11(SUS)	-0	-2873	0	0	0	0
	MAX	1396/L4	-5301/L3	-5841/L7			
4380		TYPE=Rigid					

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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.
		+Y;					
	3(HYD)	0	-9649	0	0	0	0
	4(OPE)	-353	-5236	1531	0	0	0
	6(OPE)	-353	-5236	1531	0	0	0
	7(OPE)	-145	-5237	-1564	0	0	0
	9(OPE)	-353	-5236	1531	0	0	0
	10(SUS)	0	-5237	0	0	0	0
	11(SUS)	0	-5230	0	0	0	0
	MAX	-353/L6	-9649/L3	-1564/L7			
4430		TYPE=Rigid +Y;					
	3(HYD)	0	-7	0	0	0	0
	4(OPE)	0	-46	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	-46	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	MAX		-46/L4				
4540		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	0	-289	0	0	0	0
	4(OPE)	0	-355	-11	0	0	0
	6(OPE)	0	-159	-358	0	0	0
	7(OPE)	0	-129	0	0	0	0
	9(OPE)	0	-355	-11	0	0	0
	10(SUS)	0	-268	0	0	0	0
	11(SUS)	0	-266	0	0	0	0
	MAX		-355/L4	-358/L6			
4610		TYPE=Rigid +Y;					
	3(HYD)	74	-482	-6	0	0	0
	4(OPE)	-86	-314	37	0	0	0
	6(OPE)	-106	-356	8	0	0	0
	7(OPE)	128	-436	-27	0	0	0
	9(OPE)	-86	-314	37	0	0	0
	10(SUS)	78	-408	7	0	0	0
	11(SUS)	78	-403	9	0	0	0
	MAX	128/L7	-482/L3	37/L4			
4640		TYPE=Rigid +Y;					
	3(HYD)	-126	-694	-68	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(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.
	7(OPE)	-102	-1094	4	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	-112	-629	-62	0	0	0
	11(SUS)	-112	-627	-62	0	0	0
	MAX	-126/L3	-1094/L7	-68/L3			
4800		TYPE=Rigid X w/gap; Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-19	-284	6	0	0	0
	4(OPE)	-6	-195	58	0	0	0
	6(OPE)	-584	-91	945	0	0	0
	7(OPE)	-13	-225	-66	0	0	0
	9(OPE)	-6	-195	58	0	0	0
	10(SUS)	-19	-244	-8	0	0	0
	11(SUS)	-19	-242	-8	0	0	0
	MAX	-584/L6	-284/L3	945/L6			
4900		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	0	-588	0	0	0	0
	4(OPE)	0	-353	16	0	0	0
	6(OPE)	0	-286	36	0	0	0
	7(OPE)	0	-552	0	0	0	0
	9(OPE)	0	-353	16	0	0	0
	10(SUS)	0	-523	0	0	0	0
	11(SUS)	0	-520	0	0	0	0
	MAX		-588/L3	36/L6			
4920		TYPE=Rigid +Y;					
	3(HYD)	-6	-691	8	0	0	0
	4(OPE)	-184	-629	-43	0	0	0
	6(OPE)	-186	-638	-44	0	0	0
	7(OPE)	-22	-611	3	0	0	0
	9(OPE)	-184	-629	-43	0	0	0
	10(SUS)	-7	-615	6	0	0	0
	11(SUS)	-7	-612	6	0	0	0
	MAX	-186/L6	-691/L3	-44/L6			
4940		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-10	-405	-83	0	0	0
	4(OPE)	-153	-520	-644	0	0	0
	6(OPE)	-165	-556	-1075	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.
	7(OPE)	102	-340	9	0	0	0
	9(OPE)	-153	-520	-644	0	0	0
	10(SUS)	-11	-362	-45	0	0	0
	11(SUS)	-11	-360	-45	0	0	0
	MAX	-165/L6	-556/L6	-1075/L6			
5040		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
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
5181		TYPE=Rigid +Y;					
	3(HYD)	-0	-8355	-0	0	0	0
	4(OPE)	-1283	-4533	-450	0	0	0
	6(OPE)	-1283	-4533	-450	0	0	0
	7(OPE)	1323	-4535	315	0	0	0
	9(OPE)	-1283	-4533	-450	0	0	0
	10(SUS)	-0	-4535	-0	0	0	0
	11(SUS)	-0	-4529	-0	0	0	0
	MAX	1323/L7	-8355/L3	-450/L4			
5220		TYPE=Rigid X; Rigid +Y; Rigid Z;					
	3(HYD)	169	-3431	268	0	0	0
	4(OPE)	2435	0	-1242	0	0	0
	6(OPE)	2367	0	-1084	0	0	0
	7(OPE)	15	-2816	244	0	0	0
	9(OPE)	2435	0	-1242	0	0	0
	10(SUS)	127	-2890	201	0	0	0
	11(SUS)	127	-2885	201	0	0	0
	MAX	2435/L4	-3431/L3	-1242/L4			
5340		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	-145	0	0	0	0
	6(OPE)	0	-869	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	-145	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	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		-869/L6				
5520		TYPE=Rigid X; Rigid +Y; Rigid Z;					
	3(HYD)	69	-5086	396	0	0	0
	4(OPE)	2522	0	-1711	0	0	0
	6(OPE)	2417	0	-1439	0	0	0
	7(OPE)	-105	-4894	336	0	0	0
	9(OPE)	2522	0	-1711	0	0	0
	10(SUS)	52	-4069	286	0	0	0
	11(SUS)	52	-4067	286	0	0	0
	MAX	2522/L4	-5086/L3	-1711/L4			
5660		TYPE=Rigid +Y;					
	3(HYD)	-485	-3527	-940	0	0	0
	4(OPE)	886	-7332	2013	0	0	0
	6(OPE)	888	-6911	1874	0	0	0
	7(OPE)	-261	-2167	-596	0	0	0
	9(OPE)	886	-7332	2013	0	0	0
	10(SUS)	-306	-2554	-702	0	0	0
	11(SUS)	-306	-2555	-703	0	0	0
	MAX	888/L6	-7332/L4	2013/L4			
5760		TYPE=Rigid +Y;					
	3(HYD)	0	-421	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	0	-208	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	0	-507	0	0	0	0
	11(SUS)	0	-504	0	0	0	0
	MAX		-507/L10				
5840		TYPE=Rigid X; Rigid Z;					
	3(HYD)	-35	0	97	0	0	0
	4(OPE)	-99	0	-140	0	0	0
	6(OPE)	-112	0	131	0	0	0
	7(OPE)	-29	0	61	0	0	0
	9(OPE)	-99	0	-140	0	0	0
	10(SUS)	-23	0	85	0	0	0
	11(SUS)	-23	0	85	0	0	0
	MAX	-112/L6		-140/L4			
5920		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.
	3(HYD)	-40	-613	-179	0	0	0
	4(OPE)	182	-673	88	0	0	0
	6(OPE)	70	-250	28	0	0	0
	7(OPE)	-54	-616	-177	0	0	0
	9(OPE)	182	-673	88	0	0	0
	10(SUS)	-29	-575	-170	0	0	0
	11(SUS)	-29	-574	-170	0	0	0
	MAX	182/L4	-673/L4	-179/L3			
5980		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	0	-9038	0	0	0	0
	4(OPE)	-2018	-4907	-1472	0	0	0
	6(OPE)	-2017	-4907	-1472	0	0	0
	7(OPE)	-1092	-4905	1471	0	0	0
	9(OPE)	-2018	-4907	-1472	0	0	0
	10(SUS)	0	-4905	0	0	0	0
	11(SUS)	0	-4899	0	0	0	0
	MAX	-2018/L4	-9038/L3	-1472/L6			
6000		TYPE=Rigid +Y;					
	3(HYD)	-0	-5701	0	0	0	0
	4(OPE)	168	-3091	-912	0	0	0
	6(OPE)	168	-3091	-912	0	0	0
	7(OPE)	33	-3094	928	0	0	0
	9(OPE)	168	-3091	-912	0	0	0
	10(SUS)	-0	-3094	0	0	0	0
	11(SUS)	-0	-3090	0	0	0	0
	MAX	168/L6	-5701/L3	928/L7			
6020		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6809	0	0	0	0
	4(OPE)	3581	-3704	-1104	0	0	0
	6(OPE)	3579	-3704	-1104	0	0	0
	7(OPE)	79	-3695	1106	0	0	0
	9(OPE)	3581	-3704	-1104	0	0	0
	10(SUS)	0	-3695	0	0	0	0
	11(SUS)	0	-3691	0	0	0	0
	MAX	3581/L4	-6809/L3	1106/L7			
6040		TYPE=Rigid X w/gap; Rigid Z; Rigid +Y;					
	3(HYD)	-0	-6246	-0	0	0	0
	4(OPE)	-504	-3359	3079	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)	-499	-3358	3074	0	0	0
	7(OPE)	-161	-3392	-2627	0	0	0
	9(OPE)	-504	-3359	3079	0	0	0
	10(SUS)	-0	-3390	-0	0	0	0
	11(SUS)	-0	-3386	-0	0	0	0
	MAX	-504/L4	-6246/L3	3079/L4			
6060		TYPE=Rigid +Y;					
	3(HYD)	0	-7890	-0	0	0	0
	4(OPE)	-662	-4313	1112	0	0	0
	6(OPE)	-661	-4314	1113	0	0	0
	7(OPE)	-659	-4280	-1102	0	0	0
	9(OPE)	-662	-4313	1112	0	0	0
	10(SUS)	0	-4282	-0	0	0	0
	11(SUS)	0	-4277	-0	0	0	0
	MAX	-662/L4	-7890/L3	1113/L6			
6187		TYPE=Rigid +Y;					
	3(HYD)	0	-8304	0	0	0	0
	4(OPE)	-1284	-4648	-544	0	0	0
	6(OPE)	-1285	-4653	-545	0	0	0
	7(OPE)	1347	-4498	82	0	0	0
	9(OPE)	-1284	-4648	-544	0	0	0
	10(SUS)	0	-4507	0	0	0	0
	11(SUS)	0	-4501	0	0	0	0
	MAX	1347/L7	-8304/L3	-545/L6			
6195		TYPE=Rigid +Y;					
	3(HYD)	0	-4209	6	0	0	0
	4(OPE)	-112	-2048	-604	0	0	0
	6(OPE)	-112	-2039	-602	0	0	0
	7(OPE)	-230	-2298	650	0	0	0
	9(OPE)	-112	-2048	-604	0	0	0
	10(SUS)	0	-2282	5	0	0	0
	11(SUS)	0	-2279	5	0	0	0
	MAX	-230/L7	-4209/L3	650/L7			
6200		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-1	-5032	7	0	0	0
	4(OPE)	-125	-2880	-863	0	0	0
	6(OPE)	-150	-2885	-865	0	0	0
	7(OPE)	-282	-2723	767	0	0	0
	9(OPE)	-125	-2880	-863	0	0	0
	10(SUS)	-1	-2737	6	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.
	11(SUS)	-1	-2733	6	0	0	0
	MAX	-282/L7	-5032/L3	-865/L6			
6220		TYPE=Rigid +Y;					
	3(HYD)	2	-6703	16	0	0	0
	4(OPE)	172	-3378	-999	0	0	0
	6(OPE)	171	-3368	-996	0	0	0
	7(OPE)	-172	-3652	1082	0	0	0
	9(OPE)	172	-3378	-999	0	0	0
	10(SUS)	1	-3622	14	0	0	0
	11(SUS)	1	-3617	14	0	0	0
	MAX	-172/L7	-6703/L3	1082/L7			
6240		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	4	-6831	35	0	0	0
	4(OPE)	162	-4948	-1476	0	0	0
	6(OPE)	290	-5030	-1500	0	0	0
	7(OPE)	-47	-3635	1089	0	0	0
	9(OPE)	162	-4948	-1476	0	0	0
	10(SUS)	2	-3792	31	0	0	0
	11(SUS)	1	-3787	31	0	0	0
	MAX	290/L6	-6831/L3	-1500/L6			
6260		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	255	-7282	462	0	0	0
	4(OPE)	-2397	-7988	5506	0	0	0
	6(OPE)	-2416	-8055	5295	0	0	0
	7(OPE)	511	-3921	-398	0	0	0
	9(OPE)	-2397	-7988	5506	0	0	0
	10(SUS)	148	-4211	379	0	0	0
	11(SUS)	148	-4206	379	0	0	0
	MAX	-2416/L6	-8055/L6	5506/L4			
6280		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	118	-6656	53	0	0	0
	4(OPE)	-741	-4745	1412	0	0	0
	6(OPE)	-623	-4987	1484	0	0	0
	7(OPE)	269	-3513	-1019	0	0	0
	9(OPE)	-741	-4745	1412	0	0	0
	10(SUS)	74	-3799	42	0	0	0
	11(SUS)	74	-3794	42	0	0	0
	MAX	-741/L4	-6656/L3	1484/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.
6300		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	-25	-6931	33	0	0	0
	4(OPE)	-2352	-3578	1073	0	0	0
	6(OPE)	-2414	-3542	1063	0	0	0
	7(OPE)	-548	-3770	-1131	0	0	0
	9(OPE)	-2352	-3578	1073	0	0	0
	10(SUS)	-16	-3736	26	0	0	0
	11(SUS)	-16	-3732	26	0	0	0
	MAX	-2414/L6	-6931/L3	-1131/L7			
6310		TYPE=Rigid +Y;					
	3(HYD)	0	-5935	-4	0	0	0
	4(OPE)	-317	-2981	836	0	0	0
	6(OPE)	-316	-2972	834	0	0	0
	7(OPE)	-206	-3237	-949	0	0	0
	9(OPE)	-317	-2981	836	0	0	0
	10(SUS)	0	-3226	-1	0	0	0
	11(SUS)	0	-3222	-1	0	0	0
	MAX	-317/L4	-5935/L3	-949/L7			
6327		TYPE=Rigid +Y;					
	3(HYD)	9	-8016	-1	0	0	0
	4(OPE)	-1317	-4465	245	0	0	0
	6(OPE)	-1322	-4481	246	0	0	0
	7(OPE)	1302	-4346	-71	0	0	0
	9(OPE)	-1317	-4465	245	0	0	0
	10(SUS)	5	-4350	-1	0	0	0
	11(SUS)	5	-4344	-1	0	0	0
	MAX	-1322/L6	-8016/L3	246/L6			
6332		TYPE=Rigid +Y;					
	3(HYD)	-20	-5089	-292	0	0	0
	4(OPE)	-451	-2987	-774	0	0	0
	6(OPE)	-451	-2991	-776	0	0	0
	7(OPE)	-275	-2744	776	0	0	0
	9(OPE)	-451	-2987	-774	0	0	0
	10(SUS)	-11	-2762	-159	0	0	0
	11(SUS)	-11	-2758	-158	0	0	0
	MAX	-451/L6	-5089/L3	776/L7			
6340		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	59	-6258	-428	0	0	0
	4(OPE)	2653	-3300	-990	0	0	0
	6(OPE)	2662	-3295	-988	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.
	7(OPE)	-323	-3405	1022	0	0	0
	9(OPE)	2653	-3300	-990	0	0	0
	10(SUS)	32	-3396	-232	0	0	0
	11(SUS)	32	-3392	-232	0	0	0
	MAX	2662/L6	-6258/L3	1022/L7			
6360		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-292	-4788	-913	0	0	0
	4(OPE)	735	-2465	3762	0	0	0
	6(OPE)	735	-2466	3764	0	0	0
	7(OPE)	-217	-2598	-749	0	0	0
	9(OPE)	735	-2465	3762	0	0	0
	10(SUS)	-159	-2598	-496	0	0	0
	11(SUS)	-158	-2595	-495	0	0	0
	MAX	735/L6	-4788/L3	3764/L6			
6380		TYPE=Rigid +Y;					
	3(HYD)	1591	-7550	1476	0	0	0
	4(OPE)	995	-3841	580	0	0	0
	6(OPE)	995	-3841	580	0	0	0
	7(OPE)	-674	-4175	-1055	0	0	0
	9(OPE)	995	-3841	580	0	0	0
	10(SUS)	863	-4098	801	0	0	0
	11(SUS)	862	-4092	800	0	0	0
	MAX	1591/L3	-7550/L3	1476/L3			
6480		TYPE=Rigid ANC;					
	3(HYD)	-1342	-6823	159	1304	-47	-1264
	4(OPE)	-2345	-4170	3233	5630	-10791	58
	6(OPE)	-2347	-4170	3234	5632	-10792	62
	7(OPE)	902	-3689	-344	8	955	-3350
	9(OPE)	-2345	-4170	3233	5630	-10791	58
	10(SUS)	-728	-3768	86	708	-26	-686
	11(SUS)	-727	-3764	86	707	-26	-685
	MAX	-2347/L6	-6823/L3	3234/L6	5632/L6	-10792/L6	-3350/L7
6500		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-6446	0	0	0	0
	4(OPE)	53	-3498	-1048	0	0	0
	6(OPE)	53	-3498	-1048	0	0	0
	7(OPE)	1	-3498	1049	0	0	0
	9(OPE)	53	-3498	-1048	0	0	0
	10(SUS)	-0	-3498	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.
	11(SUS)	-0	-3494	0	0	0	0
	MAX	53/L6	-6446/L3	1049/L7			
6520		TYPE=Rigid +Y;					
	3(HYD)	0	-6560	0	0	0	0
	4(OPE)	21	-3560	-1068	0	0	0
	6(OPE)	21	-3560	-1068	0	0	0
	7(OPE)	-1	-3560	1068	0	0	0
	9(OPE)	21	-3560	-1068	0	0	0
	10(SUS)	0	-3560	0	0	0	0
	11(SUS)	0	-3556	0	0	0	0
	MAX	21/L6	-6560/L3	1068/L7			
6540		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-6511	0	0	0	0
	4(OPE)	7	-3533	-1060	0	0	0
	6(OPE)	7	-3533	-1060	0	0	0
	7(OPE)	-0	-3533	1060	0	0	0
	9(OPE)	7	-3533	-1060	0	0	0
	10(SUS)	-0	-3533	0	0	0	0
	11(SUS)	-0	-3529	0	0	0	0
	MAX	7/L6	-6511/L3	1060/L7			
6560		TYPE=Rigid +Y;					
	3(HYD)	0	-6595	0	0	0	0
	4(OPE)	1	-3579	-1074	0	0	0
	6(OPE)	1	-3579	-1074	0	0	0
	7(OPE)	-0	-3579	1074	0	0	0
	9(OPE)	1	-3579	-1074	0	0	0
	10(SUS)	0	-3579	0	0	0	0
	11(SUS)	0	-3575	0	0	0	0
	MAX	1/L6	-6595/L3	1074/L7			
6580		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-6302	0	0	0	0
	4(OPE)	-2	-3420	-1026	0	0	0
	6(OPE)	-2	-3420	-1026	0	0	0
	7(OPE)	0	-3420	1026	0	0	0
	9(OPE)	-2	-3420	-1026	0	0	0
	10(SUS)	-0	-3420	0	0	0	0
	11(SUS)	-0	-3416	0	0	0	0
	MAX	-2/L4	-6302/L3	1026/L7			

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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.
6600		TYPE=Rigid +Y;					
	3(HYD)	0	-7403	0	0	0	0
	4(OPE)	-4	-4018	-1205	0	0	0
	6(OPE)	-4	-4018	-1205	0	0	0
	7(OPE)	0	-4018	1205	0	0	0
	9(OPE)	-4	-4018	-1205	0	0	0
	10(SUS)	0	-4018	0	0	0	0
	11(SUS)	0	-4013	0	0	0	0
	MAX	-4/L6	-7403/L3	1205/L7			
6620		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-2578	0	0	0	0
	4(OPE)	-2	-1399	-420	0	0	0
	6(OPE)	-2	-1399	-420	0	0	0
	7(OPE)	0	-1399	420	0	0	0
	9(OPE)	-2	-1399	-420	0	0	0
	10(SUS)	0	-1399	0	0	0	0
	11(SUS)	0	-1397	0	0	0	0
	MAX	-2/L6	-2578/L3	420/L7			
6640		TYPE=Rigid +Y;					
	3(HYD)	1	-2789	1	0	0	0
	4(OPE)	-1	-1781	534	0	0	0
	6(OPE)	-9	-1852	556	0	0	0
	7(OPE)	3	-1751	-525	0	0	0
	9(OPE)	-1	-1781	534	0	0	0
	10(SUS)	1	-1761	-0	0	0	0
	11(SUS)	1	-1696	-0	0	0	0
	MAX	-9/L6	-2789/L3	556/L6			
6660		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-4	-2826	2	0	0	0
	4(OPE)	1	-1711	513	0	0	0
	6(OPE)	7	-1442	433	0	0	0
	7(OPE)	4	-1824	-547	0	0	0
	9(OPE)	1	-1711	513	0	0	0
	10(SUS)	-2	-1784	-0	0	0	0
	11(SUS)	-2	-1718	-0	0	0	0
	MAX	7/L6	-2826/L3	-547/L7			
6680		TYPE=Rigid +Y;					
	3(HYD)	15	-2686	5	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.
	4(OPE)	7	-1971	591	0	0	0
	6(OPE)	34	-2979	893	0	0	0
	7(OPE)	-26	-1547	-463	0	0	0
	9(OPE)	7	-1971	591	0	0	0
	10(SUS)	9	-1697	-1	0	0	0
	11(SUS)	9	-1635	-1	0	0	0
	MAX	34/L6	-2979/L6	893/L6			
6690		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-200	-4521	16	0	0	0
	4(OPE)	21	-3133	940	0	0	0
	6(OPE)	398	-4014	1203	0	0	0
	7(OPE)	-147	-2796	-826	0	0	0
	9(OPE)	21	-3133	940	0	0	0
	10(SUS)	-125	-2832	-2	0	0	0
	11(SUS)	-120	-2725	-3	0	0	0
	MAX	398/L6	-4521/L3	1203/L6			
6700		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-9	-1109	7	0	0	0
	4(OPE)	2	-551	165	0	0	0
	6(OPE)	20	-2	1	0	0	0
	7(OPE)	-30	-781	-233	0	0	0
	9(OPE)	2	-551	165	0	0	0
	10(SUS)	-5	-700	-1	0	0	0
	11(SUS)	-5	-674	-1	0	0	0
	MAX	-30/L7	-1109/L3	-233/L7			
6720		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6533	0	0	0	0
	4(OPE)	11	-3559	-1068	0	0	0
	6(OPE)	22	-3559	1067	0	0	0
	7(OPE)	4	-3559	163	0	0	0
	9(OPE)	11	-3559	-1068	0	0	0
	10(SUS)	0	-3559	0	0	0	0
	11(SUS)	0	-3541	0	0	0	0
	MAX	22/L6	-6533/L3	-1068/L4			
6740		TYPE=Rigid +Y;					
	3(HYD)	-0	-6530	0	0	0	0
	4(OPE)	21	-3557	1067	0	0	0
	6(OPE)	4	-3557	1067	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.
	7(OPE)	-12	-3557	-1067	0	0	0
	9(OPE)	21	-3557	1067	0	0	0
	10(SUS)	-0	-3557	0	0	0	0
	11(SUS)	-0	-3539	0	0	0	0
	MAX	21/L4	-6530/L3	1067/L6			
6760		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6544	0	0	0	0
	4(OPE)	5	-3565	1069	0	0	0
	6(OPE)	-32	-3565	1069	0	0	0
	7(OPE)	-28	-3565	-1069	0	0	0
	9(OPE)	5	-3565	1069	0	0	0
	10(SUS)	0	-3565	0	0	0	0
	11(SUS)	0	-3547	0	0	0	0
	MAX	-32/L6	-6544/L3	1069/L4			
6780		TYPE=Rigid +Y;					
	3(HYD)	-0	-6490	0	0	0	0
	4(OPE)	-56	-3536	1059	0	0	0
	6(OPE)	-91	-3536	1057	0	0	0
	7(OPE)	8	-3536	-1061	0	0	0
	9(OPE)	-56	-3536	1059	0	0	0
	10(SUS)	-0	-3536	0	0	0	0
	11(SUS)	-0	-3518	0	0	0	0
	MAX	-91/L6	-6490/L3	-1061/L7			
6800		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6695	0	0	0	0
	4(OPE)	-165	-3647	1081	0	0	0
	6(OPE)	-149	-3647	1084	0	0	0
	7(OPE)	174	-3647	-1080	0	0	0
	9(OPE)	-165	-3647	1081	0	0	0
	10(SUS)	0	-3647	0	0	0	0
	11(SUS)	0	-3629	0	0	0	0
	MAX	174/L7	-6695/L3	1084/L6			
6820		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-6105	0	0	0	0
	4(OPE)	-736	-3331	976	0	0	0
	6(OPE)	-1032	-3330	992	0	0	0
	7(OPE)	342	-3325	-937	0	0	0
	9(OPE)	-736	-3331	976	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)	-0	-3327	0	0	0	0
	11(SUS)	-0	-3310	0	0	0	0
	MAX	-1032/L6	-6105/L3	992/L6			
6840		TYPE=Rigid +Y;					
	3(HYD)	-1	-5272	-0	0	0	0
	4(OPE)	-93	-2867	855	0	0	0
	6(OPE)	24	-2868	860	0	0	0
	7(OPE)	260	-2873	-822	0	0	0
	9(OPE)	-93	-2867	855	0	0	0
	10(SUS)	-1	-2871	-0	0	0	0
	11(SUS)	-1	-2857	-0	0	0	0
	MAX	260/L7	-5272/L3	860/L6			
6880		TYPE=Rigid +Y;					
	3(HYD)	3	-10169	1	0	0	0
	4(OPE)	1534	-5523	626	0	0	0
	6(OPE)	1415	-5525	863	0	0	0
	7(OPE)	-1320	-5543	-161	0	0	0
	9(OPE)	1534	-5523	626	0	0	0
	10(SUS)	2	-5537	0	0	0	0
	11(SUS)	2	-5509	0	0	0	0
	MAX	1534/L4	-10169/L3	863/L6			
6920		TYPE=Rigid +Y;					
	3(HYD)	-17	-5446	31	0	0	0
	4(OPE)	-20	-3025	-907	0	0	0
	6(OPE)	235	-3053	-885	0	0	0
	7(OPE)	340	-2948	817	0	0	0
	9(OPE)	-20	-3025	-907	0	0	0
	10(SUS)	-11	-2973	22	0	0	0
	11(SUS)	-11	-2958	22	0	0	0
	MAX	340/L7	-5446/L3	-907/L4			
6940		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	58	-5386	45	0	0	0
	4(OPE)	-174	-2799	-822	0	0	0
	6(OPE)	-54	-2686	-804	0	0	0
	7(OPE)	341	-2989	829	0	0	0
	9(OPE)	-174	-2799	-822	0	0	0
	10(SUS)	38	-2924	31	0	0	0
	11(SUS)	37	-2909	31	0	0	0
	MAX	341/L7	-5386/L3	829/L7			

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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.
6960		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-199	-7819	97	0	0	0
	4(OPE)	-176	-4702	911	0	0	0
	6(OPE)	-51	-5096	1528	0	0	0
	7(OPE)	-235	-4073	-527	0	0	0
	9(OPE)	-176	-4702	911	0	0	0
	10(SUS)	-130	-4290	67	0	0	0
	11(SUS)	-129	-4269	67	0	0	0
	MAX	-235/L7	-7819/L3	1528/L6			
6980		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	18	-6154	184	0	0	0
	4(OPE)	23	-3793	1138	0	0	0
	6(OPE)	245	-4520	1334	0	0	0
	7(OPE)	-77	-3278	-980	0	0	0
	9(OPE)	23	-3793	1138	0	0	0
	10(SUS)	38	-3675	127	0	0	0
	11(SUS)	38	-3660	127	0	0	0
	MAX	245/L6	-6154/L3	1334/L6			
7040		TYPE=Rigid +Y;					
	3(HYD)	-0	-6594	0	0	0	0
	4(OPE)	0	-3592	-1078	0	0	0
	6(OPE)	-0	-3592	-1078	0	0	0
	7(OPE)	-0	-3592	1078	0	0	0
	9(OPE)	0	-3592	-1078	0	0	0
	10(SUS)	-0	-3592	0	0	0	0
	11(SUS)	-0	-3574	0	0	0	0
	MAX	-0/L6	-6594/L3	-1078/L4			
7060		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6303	0	0	0	0
	4(OPE)	0	-3433	-1030	0	0	0
	6(OPE)	-0	-3433	-1030	0	0	0
	7(OPE)	-0	-3433	1030	0	0	0
	9(OPE)	0	-3433	-1030	0	0	0
	10(SUS)	0	-3433	0	0	0	0
	11(SUS)	0	-3416	0	0	0	0
	MAX	-0/L6	-6303/L3	-1030/L4			
7080		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.
	3(HYD)	-0	-7403	0	0	0	0
	4(OPE)	0	-4033	-1210	0	0	0
	6(OPE)	-0	-4033	-1210	0	0	0
	7(OPE)	-0	-4033	1210	0	0	0
	9(OPE)	0	-4033	-1210	0	0	0
	10(SUS)	-0	-4033	0	0	0	0
	11(SUS)	-0	-4013	0	0	0	0
	MAX	0/L4	-7403/L3	-1210/L4			
7100		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-2578	0	0	0	0
	4(OPE)	-0	-1404	-421	0	0	0
	6(OPE)	0	-1404	-421	0	0	0
	7(OPE)	0	-1404	421	0	0	0
	9(OPE)	-0	-1404	-421	0	0	0
	10(SUS)	0	-1404	0	0	0	0
	11(SUS)	0	-1397	0	0	0	0
	MAX	0/L6	-2578/L3	-421/L4			

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 STRESS SUMMARY REPORT: Highest Stresses Mini Statement
 Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP+H
 CASE 10 (SUS) W+P1+H
 CASE 11 (SUS) WNC+H
 CASE 32 (OCC) L32=L22+L10
 CASE 33 (OCC) L33=L23+L10
 CASE 34 (OCC) L34=L24+L10
 CASE 35 (OCC) L35=L25+L10
 CASE 36 (OCC) L36=L26+L10
 CASE 37 (OCC) L37=L27+L10
 CASE 38 (OCC) L38=L28+L10
 CASE 39 (OCC) L39=L29+L10
 CASE 40 (OCC) L40=L30+L10
 CASE 41 (OCC) L41=L31+L10
 CASE 42 (EXP) L42=L4-L10
 CASE 43 (EXP) L43=L6-L10
 CASE 44 (EXP) L44=L7-L10
 CASE 45 (EXP) L45=L6-L7
 CASE 46 (OPE) L46=L4,L6,L7

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

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

Highest Stresses: (MPa	)	LOADCASE 3 (HYD) WW+HP+H	
Ratio (%):	47.1	@Node 2340	
Code Stress:	81.1	Allowable Stress:	172.4
Axial Stress:	48.5	@Node 1920	
Bending Stress:	107.7	@Node 2200	
Torsion Stress:	2.9	@Node 2578	
Hoop Stress:	100.7	@Node 1939	
Max Stress Intensity:	114.9	@Node 2239	

CODE STRESS CHECK PASSED : LOADCASE 10 (SUS) W+P1+H

Highest Stresses: (MPa	)	LOADCASE 10 (SUS) W+P1+H	
Ratio (%):	65.9	@Node 2200	
Code Stress:	75.8	Allowable Stress:	115.1
Axial Stress:	34.7	@Node 3260	
Bending Stress:	101.1	@Node 2200	
Torsion Stress:	6.6	@Node 3320	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	101.1	@Node 2200	

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

Highest Stresses: (MPa	)	LOADCASE 11 (SUS) WNC+H	
Ratio (%):	65.6	@Node 2200	
Code Stress:	75.5	Allowable Stress:	115.1
Axial Stress:	4.2	@Node 3640	

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 Various Load Cases

Bending Stress:	100.7	@Node	2200
Torsion Stress:	6.6	@Node	3320
Hoop Stress:	0.0	@Node	40
Max Stress Intensity:	100.7	@Node	2200

CODE STRESS CHECK PASSED : LOADCASE 32 (OCC) L32=L22+L10

Highest Stresses: (MPa	)	LOADCASE 32 (OCC) L32=L22+L10	
Ratio (%):	91.9	@Node	3260
Code Stress:	168.6	Allowable Stress:	183.4
Axial Stress:	35.3	@Node	3260
Bending Stress:	156.1	@Node	6270
Torsion Stress:	15.2	@Node	5180
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	168.8	@Node	3260

CODE STRESS CHECK PASSED : LOADCASE 33 (OCC) L33=L23+L10

Highest Stresses: (MPa	)	LOADCASE 33 (OCC) L33=L23+L10	
Ratio (%):	90.9	@Node	6270
Code Stress:	143.0	Allowable Stress:	157.3
Axial Stress:	37.2	@Node	3260
Bending Stress:	184.8	@Node	6270
Torsion Stress:	11.2	@Node	4720
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	190.0	@Node	6270

CODE STRESS CHECK PASSED : LOADCASE 34 (OCC) L34=L24+L10

Highest Stresses: (MPa	)	LOADCASE 34 (OCC) L34=L24+L10	
Ratio (%):	93.0	@Node	6270
Code Stress:	146.3	Allowable Stress:	157.3
Axial Stress:	38.5	@Node	3260
Bending Stress:	189.4	@Node	6270
Torsion Stress:	12.1	@Node	4720
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	194.5	@Node	6270

CODE STRESS CHECK PASSED : LOADCASE 35 (OCC) L35=L25+L10

Highest Stresses: (MPa	)	LOADCASE 35 (OCC) L35=L25+L10	
Ratio (%):	81.1	@Node	3260
Code Stress:	148.7	Allowable Stress:	183.4
Axial Stress:	34.0	@Node	3260
Bending Stress:	150.5	@Node	6270
Torsion Stress:	15.8	@Node	5180
Hoop Stress:	67.2	@Node	3260
Max Stress Intensity:	154.7	@Node	6270

CODE STRESS CHECK PASSED : LOADCASE 36 (OCC) L36=L26+L10

Highest Stresses: (MPa	)	LOADCASE 36 (OCC) L36=L26+L10	
Ratio (%):	70.7	@Node	3260

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 Various Load Cases

Code Stress:	129.7	Allowable Stress:	183.4
Axial Stress:	44.0	@Node 3260	
Bending Stress:	140.9	@Node 6270	
Torsion Stress:	7.4	@Node 4698	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	145.6	@Node 6270	

CODE STRESS CHECK PASSED : LOADCASE 37 (OCC) L37=L27+L10

Highest Stresses: (MPa	)	LOADCASE 37 (OCC) L37=L27+L10	
Ratio (%):	71.2	@Node 3260	
Code Stress:	130.6	Allowable Stress:	183.4
Axial Stress:	32.9	@Node 2840	
Bending Stress:	106.0	@Node 2200	
Torsion Stress:	7.5	@Node 3600	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	130.8	@Node 3260	

CODE STRESS CHECK PASSED : LOADCASE 38 (OCC) L38=L28+L10

Highest Stresses: (MPa	)	LOADCASE 38 (OCC) L38=L28+L10	
Ratio (%):	67.2	@Node 3260	
Code Stress:	123.3	Allowable Stress:	183.4
Axial Stress:	42.7	@Node 3260	
Bending Stress:	119.7	@Node 2200	
Torsion Stress:	8.3	@Node 3320	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	123.6	@Node 3260	

CODE STRESS CHECK PASSED : LOADCASE 39 (OCC) L39=L29+L10

Highest Stresses: (MPa	)	LOADCASE 39 (OCC) L39=L29+L10	
Ratio (%):	69.1	@Node 3260	
Code Stress:	126.6	Allowable Stress:	183.4
Axial Stress:	33.0	@Node 2840	
Bending Stress:	122.4	@Node 2200	
Torsion Stress:	7.9	@Node 6460	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	126.9	@Node 3260	

CODE STRESS CHECK PASSED : LOADCASE 40 (OCC) L40=L30+L10

Highest Stresses: (MPa	)	LOADCASE 40 (OCC) L40=L30+L10	
Ratio (%):	49.5	@Node 2200	
Code Stress:	75.9	Allowable Stress:	153.1
Axial Stress:	34.7	@Node 3260	
Bending Stress:	101.1	@Node 2200	
Torsion Stress:	9.0	@Node 5180	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	101.1	@Node 2200	

CODE STRESS CHECK PASSED : LOADCASE 41 (OCC) L41=L31+L10

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 Various Load Cases

Highest Stresses: (MPa	)	LOADCASE 41 (OCC)	L41=L31+L10	
Ratio (%):	49.5	@Node	2200	
Code Stress:	75.8	Allowable Stress:		153.1
Axial Stress:	34.7	@Node	3260	
Bending Stress:	101.1	@Node	2200	
Torsion Stress:	6.6	@Node	3320	
Hoop Stress:	67.2	@Node	3260	
Max Stress Intensity:	101.1	@Node	2200	

CODE STRESS CHECK PASSED : LOADCASE 42 (EXP) L42=L4-L10

Highest Stresses: (MPa	)	LOADCASE 42 (EXP)	L42=L4-L10	
Ratio (%):	55.1	@Node	4120	
Code Stress:	122.9	Allowable Stress:		223.0
Axial Stress:	2.3	@Node	3140	
Bending Stress:	142.8	@Node	5320	
Torsion Stress:	19.5	@Node	6460	
Hoop Stress:	0.0	@Node	40	
Max Stress Intensity:	350.9	@Node	5021	

CODE STRESS CHECK PASSED : LOADCASE 43 (EXP) L43=L6-L10

Highest Stresses: (MPa	)	LOADCASE 43 (EXP)	L43=L6-L10	
Ratio (%):	60.2	@Node	6270	
Code Stress:	128.4	Allowable Stress:		213.1
Axial Stress:	4.6	@Node	3140	
Bending Stress:	142.1	@Node	5320	
Torsion Stress:	23.3	@Node	2858	
Hoop Stress:	0.0	@Node	40	
Max Stress Intensity:	350.9	@Node	5021	

CODE STRESS CHECK PASSED : LOADCASE 44 (EXP) L44=L7-L10

Highest Stresses: (MPa	)	LOADCASE 44 (EXP)	L44=L7-L10	
Ratio (%):	12.1	@Node	6270	
Code Stress:	28.7	Allowable Stress:		237.6
Axial Stress:	1.0	@Node	4300	
Bending Stress:	28.3	@Node	6270	
Torsion Stress:	2.6	@Node	2858	
Hoop Stress:	0.0	@Node	40	
Max Stress Intensity:	67.1	@Node	6270	

CODE STRESS CHECK PASSED : LOADCASE 45 (EXP) L45=L6-L7

Highest Stresses: (MPa	)	LOADCASE 45 (EXP)	L45=L6-L7	
Ratio (%):	73.6	@Node	6270	
Code Stress:	156.8	Allowable Stress:		213.1
Axial Stress:	5.4	@Node	3140	
Bending Stress:	155.3	@Node	6270	
Torsion Stress:	25.9	@Node	2858	
Hoop Stress:	0.0	@Node	40	
Max Stress Intensity:	367.4	@Node	6270	

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 STRESS SUMMARY REPORT: Highest Stresses Mini Statement
 Various Load Cases

NO CODE STRESS CHECK PROCESSED: LOADCASE 46 (OPE) L46=L4,L6,L7

Highest Stresses: (MPa	)	LOADCASE 46 (OPE) L46=L4,L6,L7	
Ratio (%):	0.0	@Node 4419	
OPE Stress:	158.0	Allowable Stress:	0.0
Axial Stress:	34.4	@Node 2000	
Bending Stress:	141.3	@Node 5320	
Torsion Stress:	23.5	@Node 2858	
Hoop Stress:	67.2	@Node 1939	
Max Stress Intensity:	366.0	@Node 5021	

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 NOZZLE CHECK REPORT: Nozzle Loads Screening
 Various Load Cases

LOAD CASE DEFINITION KEY

CASE 4 (OPE) W+T1+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	
20		Absolute Method								
	Limits	2160	2160	2160		1155	1155	1155		
	4(OPE)	-361	1105	-39	0.512	26	95	1083	0.938	
	10(SUS)	114	-530	-12	0.245	5	11	-192	0.166	
	11(SUS)	115	-518	-12	0.240	5	11	-181	0.157	
780		Absolute Method								
	Limits	8400	8400	6300		3780	2520	3280		
	4(OPE)	1321	-92	250	0.157	316	-879	73	0.349	
	10(SUS)	1422	-18	-21	0.169	-67	-845	-59	0.335	
	11(SUS)	1412	-18	-21	0.168	-66	-836	-58	0.332	
1240		Absolute Method								
	Limits	2160	2160	2160		1155	1155	1155		
	4(OPE)	1092	-630	-42	0.506	9	-979	191	0.848	
	10(SUS)	5	-678	10	0.314	-4	2	204	0.177	
	11(SUS)	5	-673	10	0.312	-4	2	202	0.175	
1700		Absolute Method								
	Limits	15090	15090	12000		9150	4890	6420		
	4(OPE)	1925	968	2910	0.243	-3468	-3692	-86	0.755	
	10(SUS)	2490	-18	-124	0.165	75	-903	-6	0.185	
	11(SUS)	2458	-18	-122	0.163	74	-890	-6	0.182	

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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	
1780		Absolute Method								
	Limits	15090	15090	12000		9150	4890	6420		
	4(OPE)	1218	-164	1621	0.135	-988	-863	36	0.177	
	10(SUS)	1301	29	387	0.086	-157	-410	234	0.084	
	11(SUS)	1267	29	393	0.084	-160	-406	223	0.083	
3820		Absolute Method								
	Limits	9600	9600	7200		5760	3840	4990		
	4(OPE)	1100	-1486	-68	0.155	-19	-392	1627	0.326	
	10(SUS)	230	-950	-6	0.099	-43	-7	370	0.074	
	11(SUS)	229	-947	-6	0.099	-43	-7	369	0.074	

CN-013

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Line no.

Stress sketch

Input echo

Restraint summary

Stress summary

Nozzle load Table

LINE NO.:

GAS-111-0044B-CN05-6"-ET

GAS-111-0051B-FN05-6"-IS

GAS-111-0047B-FN05-2"-PT

GAS-111-0048B-FN05-2"-PT

FL-112-0020B-AN07-6"-PT

FL-112-0022B-AN07-6"-PT

GAS-111-0054B-FS00-2"-NP

GAS-111-0082B-FS00-2"-NP

FL-112-0023B-AN07-2"-PT

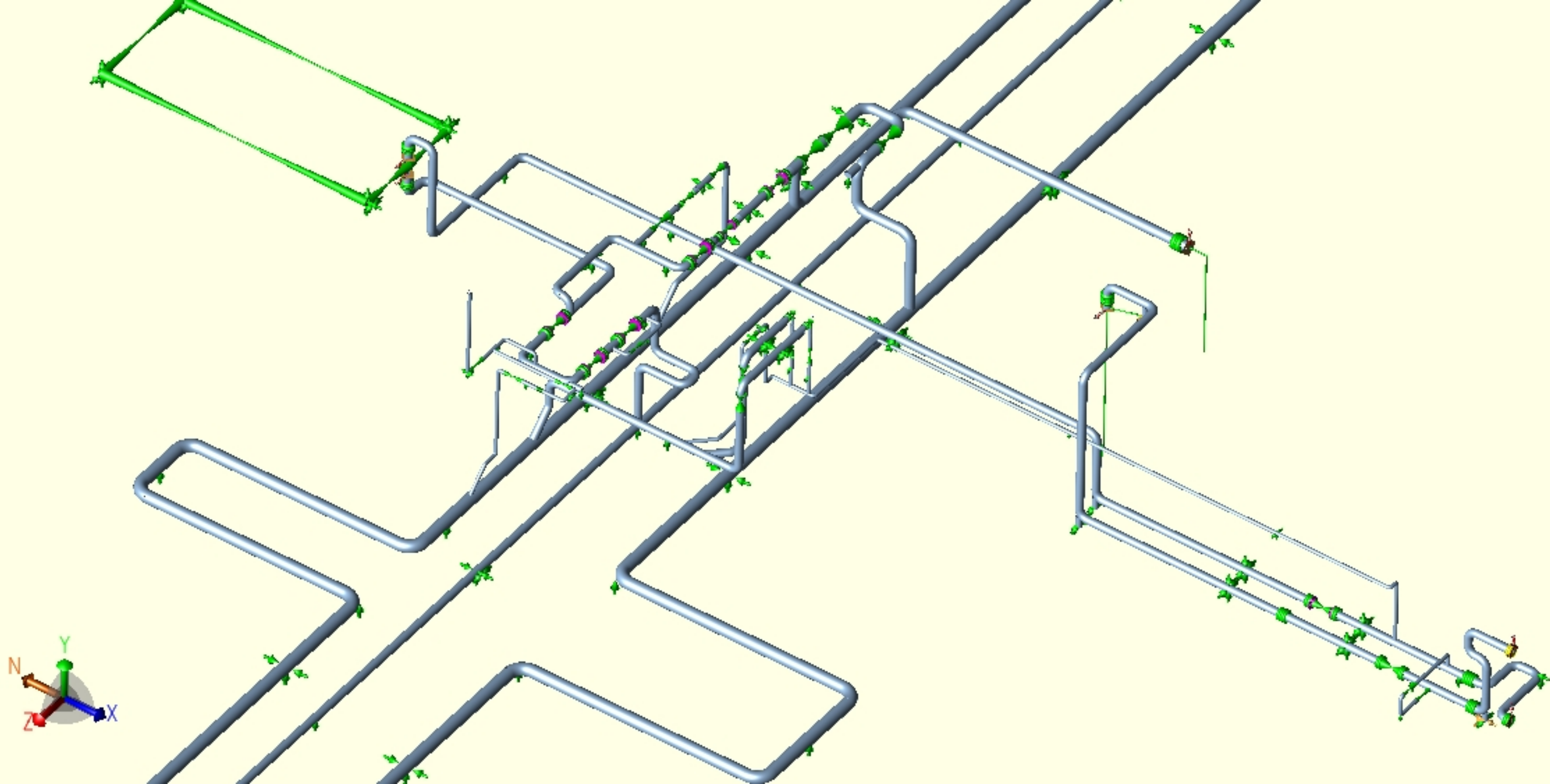
GAS-111-0058B-FS00-6"-NP

GAS-111-0055B-FS00-6"-NP

GAS-111-0057B-FS00-4"-NP

FL-112-0024B-AN07-4"-PT

FL-112-0001-AN07-10"-PT



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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+H
4 (OPE) W+T1+P1+H
5 (Alt-SUS) W+P1+H
6 (OPE) W+T2+P1+H
7 (OPE) W+T3+P1+H
8 (Alt-SUS) W+P1+H
9 (OPE) W+T1+P2+H
10 (SUS) W+P1+H
11 (SUS) WNC+H
12 (OPE) W+T1+P1+H+U1+0.67U2
13 (OPE) W+T1+P1+H-U1-0.67U2
14 (OPE) W+T1+P1+H-U1+0.67U2
15 (OPE) W+T1+P1+H+U1-0.67U2
16 (OPE) W+T1+P1+H+0.67U2+U3
17 (OPE) W+T1+P1+H-0.67U2-U3
18 (OPE) W+T1+P1+H-0.67U2+U3
19 (OPE) W+T1+P1+H+0.67U2-U3
20 (OPE) W+T1+P1+H+F1
21 (OPE) W+T1+P1+H+F2
22 (OCC) L22=L12-L4
23 (OCC) L23=L13-L4
24 (OCC) L24=L14-L4
25 (OCC) L25=L15-L4
26 (OCC) L26=L16-L4
27 (OCC) L27=L17-L4
28 (OCC) L28=L18-L4
29 (OCC) L29=L19-L4
30 (OCC) L30=L20-L4
31 (OCC) L31=L21-L4
32 (OCC) L32=L22+L10
33 (OCC) L33=L23+L10
34 (OCC) L34=L24+L10
35 (OCC) L35=L25+L10
36 (OCC) L36=L26+L10
37 (OCC) L37=L27+L10
38 (OCC) L38=L28+L10
39 (OCC) L39=L29+L10
40 (OCC) L40=L30+L10
41 (OCC) L41=L31+L10
42 (EXP) L42=L4-L10
43 (EXP) L43=L6-L10
44 (EXP) L44=L7-L10
45 (EXP) L45=L6-L7
46 (OPE) L46=L4, L6, L7
47 (OCC) L47=L22, L23, L24, L25

```

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HANGER REPORT

(TABLE DATA FROM DESIGN RUNS)

NODE	NUM RQD	FIG. NO.	SIZE	VERTICAL MOVEMENT	HOT LOAD	THEORETICAL INSTALLED LOAD	ACTUAL INSTALLED LOAD	SPRING RATE	HORIZONTAL MOVEMENT
-----+-----+-----+-----+----- (mm.)	----- (N.)	----- (N.)	----- (N.)	----- (N./mm.)	----- (mm.)	---			
160	1		2921	-0.586	1334.	1315.	0.	33.3	0.000
LISEGA						LOAD	VARIATION =	1%	

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RESTRAINT SUMMARY REPORT: Loads On Restraints

Various Load Cases

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP+H

CASE 4 (OPE) W+T1+P1+H

CASE 6 (OPE) W+T2+P1+H

CASE 7 (OPE) W+T3+P1+H

CASE 9 (OPE) W+T1+P2+H

CASE 10 (SUS) W+P1+H

CASE 11 (SUS) WNC+H

Node	Load Case	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.
20		TYPE=Rigid ANC;					
	3(HYD)	-165	-669	12	-5	12	253
	4(OPE)	361	1106	40	-26	95	-1083
	6(OPE)	893	2950	58	-37	134	-2507
	7(OPE)	-499	-1118	16	-8	23	451
	9(OPE)	361	1106	40	-26	95	-1083
	10(SUS)	-114	-530	12	-5	11	192
	11(SUS)	-115	-518	12	-5	11	182
	MAX	893/L6	2950/L6	58/L6	-37/L6	134/L6	-2507/L6
121		TYPE=Rigid +Y;					
	3(HYD)	-106	-1809	0	0	0	0
	4(OPE)	0	-1334	0	0	0	0
	6(OPE)	0	-1368	0	0	0	0
	7(OPE)	-131	-1309	0	0	0	0
	9(OPE)	0	-1334	0	0	0	0
	10(SUS)	-70	-1315	0	0	0	0
	11(SUS)	-69	-1315	0	0	0	0
	MAX	-131/L7	-1809/L3				
160		TYPE=Rigid Z; Rigid -X; Rigid X; Prog Design VSH;					
	3(HYD)	-106	-1809	7	0	0	0
	4(OPE)	2234	-2004	433	0	0	0
	6(OPE)	3052	-2283	562	0	0	0
	7(OPE)	-130	-1309	27	0	0	0
	9(OPE)	2234	-2004	433	0	0	0
	10(SUS)	-70	-1315	6	0	0	0
	11(SUS)	-69	-1315	6	0	0	0
	MAX	3052/L6	-2283/L6	562/L6			
300		TYPE=Rigid +Y;					
	3(HYD)	185	-1943	112	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)	-862	-2955	207	0	0	0
	6(OPE)	-1640	-5513	216	0	0	0
	7(OPE)	-272	-912	31	0	0	0
	9(OPE)	-862	-2955	207	0	0	0
	10(SUS)	125	-1710	103	0	0	0
	11(SUS)	125	-1700	102	0	0	0
	MAX	-1640/L6	-5513/L6	216/L6			
400		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	163	-1580	-13	0	0	0
	4(OPE)	-148	-494	401	0	0	0
	6(OPE)	-267	891	530	0	0	0
	7(OPE)	-165	-1562	133	0	0	0
	9(OPE)	-148	-494	401	0	0	0
	10(SUS)	110	-1268	-13	0	0	0
	11(SUS)	109	-1263	-13	0	0	0
	MAX	-267/L6	-1580/L3	530/L6			
480		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	216	-2042	-8	0	0	0
	4(OPE)	-534	-1780	33	0	0	0
	6(OPE)	-694	-2315	200	0	0	0
	7(OPE)	421	-1403	-82	0	0	0
	9(OPE)	-534	-1780	33	0	0	0
	10(SUS)	146	-1452	-5	0	0	0
	11(SUS)	144	-1438	-5	0	0	0
	MAX	-694/L6	-2315/L6	200/L6			
560		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	-325	-3243	34	0	0	0
	4(OPE)	-635	-2117	13	0	0	0
	6(OPE)	-580	-1932	-12	0	0	0
	7(OPE)	665	-2216	37	0	0	0
	9(OPE)	-635	-2117	13	0	0	0
	10(SUS)	-218	-2224	23	0	0	0
	11(SUS)	-216	-2201	23	0	0	0
	MAX	665/L7	-3243/L3	37/L7			
660		TYPE=Rigid +Y;					
	3(HYD)	-123	-1170	-113	0	0	0
	4(OPE)	-150	-859	210	0	0	0
	6(OPE)	-122	-970	264	0	0	0
	7(OPE)	15	-782	-234	0	0	0
	9(OPE)	-150	-859	210	0	0	0
	10(SUS)	-85	-808	-76	0	0	0
	11(SUS)	-84	-800	-76	0	0	0
	MAX	-150/L4	-1170/L3	264/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.
780		TYPE=Rigid ANC;					
	3(HYD)	32	-1884	-27	86	99	-1224
	4(OPE)	-250	-1321	-92	-73	-316	-879
	6(OPE)	-614	-1173	-204	-244	-777	-954
	7(OPE)	131	-1457	8	102	227	-857
	9(OPE)	-250	-1321	-92	-73	-316	-879
	10(SUS)	21	-1422	-18	59	67	-845
	11(SUS)	21	-1412	-18	58	66	-836
	MAX	-614/L6	-1884/L3	-204/L6	-244/L6	-777/L6	-1224/L3
860		TYPE=Rigid ANC;					
	3(HYD)	32	-1884	-27	-30	99	-1359
	4(OPE)	-250	-1321	-92	-463	-316	185
	6(OPE)	-614	-1173	-204	-1113	-777	1666
	7(OPE)	131	-1457	8	138	227	-1415
	9(OPE)	-250	-1321	-92	-463	-316	185
	10(SUS)	21	-1422	-18	-19	67	-936
	11(SUS)	21	-1412	-18	-19	66	-926
	MAX	-614/L6	-1884/L3	-204/L6	-1113/L6	-777/L6	1666/L6
920		TYPE=Rigid +Y;					
	3(HYD)	-0	-634	60	0	0	0
	4(OPE)	-72	-1202	353	0	0	0
	6(OPE)	-178	-1411	384	0	0	0
	7(OPE)	-120	-580	-126	0	0	0
	9(OPE)	-72	-1202	353	0	0	0
	10(SUS)	-1	-649	83	0	0	0
	11(SUS)	-1	-648	84	0	0	0
	MAX	-178/L6	-1411/L6	384/L6			
1040		TYPE=Rigid +Y;					
	3(HYD)	121	-2183	-171	0	0	0
	4(OPE)	-668	-2252	99	0	0	0
	6(OPE)	-739	-2465	-22	0	0	0
	7(OPE)	-525	-1763	62	0	0	0
	9(OPE)	-668	-2252	99	0	0	0
	10(SUS)	97	-1859	-185	0	0	0
	11(SUS)	96	-1840	-185	0	0	0
	MAX	-739/L6	-2465/L6	-185/L11			
1180		TYPE=Rigid +Y; Rigid - X;					
	3(HYD)	3	-1194	3	0	0	0
	4(OPE)	7427	-926	-2506	0	0	0
	6(OPE)	8706	-879	-2876	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.
	7(OPE)	-254	-944	126	0	0	0
	9(OPE)	7427	-926	-2506	0	0	0
	10(SUS)	2	-954	3	0	0	0
	11(SUS)	2	-940	3	0	0	0
	MAX	8706/L6	-1194/L3	-2876/L6			
1240		TYPE=Rigid ANC;					
	3(HYD)	4	-762	8	-3	2	249
	4(OPE)	1093	-630	-38	9	-978	191
	6(OPE)	1459	-627	-252	7	-1332	180
	7(OPE)	-1293	-699	-32	-11	1158	205
	9(OPE)	1093	-630	-38	9	-978	191
	10(SUS)	5	-678	10	-4	2	204
	11(SUS)	5	-673	10	-4	2	202
	MAX	1459/L6	-762/L3	-252/L6	-11/L7	-1332/L6	249/L3
1280		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	172	-3795	-22	0	0	0
	4(OPE)	-816	-2721	1072	0	0	0
	6(OPE)	-746	-2487	1260	0	0	0
	7(OPE)	-1106	-3688	-203	0	0	0
	9(OPE)	-816	-2721	1072	0	0	0
	10(SUS)	138	-3465	-24	0	0	0
	11(SUS)	136	-3445	-24	0	0	0
	MAX	-1106/L7	-3795/L3	1260/L6			
1380		TYPE=Rigid Z; Rigid Y;					
	3(HYD)	281	-3311	2	0	0	0
	4(OPE)	-1332	-4438	7	0	0	0
	6(OPE)	-1458	-4859	49	0	0	0
	7(OPE)	671	-2238	2	0	0	0
	9(OPE)	-1332	-4438	7	0	0	0
	10(SUS)	227	-2830	3	0	0	0
	11(SUS)	223	-2801	3	0	0	0
	MAX	-1458/L6	-4859/L6	49/L6			
1460		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	-300	-3254	4	0	0	0
	4(OPE)	-694	-2314	91	0	0	0
	6(OPE)	-679	-2263	116	0	0	0
	7(OPE)	800	-2665	-0	0	0	0
	9(OPE)	-694	-2314	91	0	0	0
	10(SUS)	-234	-2534	2	0	0	0
	11(SUS)	-230	-2494	2	0	0	0
	MAX	800/L7	-3254/L3	116/L6			
1500		TYPE=Rigid					

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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.
		Z; Rigid +Y;					
	3(HYD)	0	-3561	-8	0	0	0
	4(OPE)	0	-1463	-782	0	0	0
	6(OPE)	0	-1095	-1031	0	0	0
	7(OPE)	0	-3205	26	0	0	0
	9(OPE)	0	-1463	-782	0	0	0
	10(SUS)	0	-2809	-5	0	0	0
	11(SUS)	0	-2765	-5	0	0	0
	MAX		-3561/L3	-1031/L6			
1520		TYPE=Rigid +Y;					
	3(HYD)	109	-3213	32	0	0	0
	4(OPE)	-1071	-3754	-350	0	0	0
	6(OPE)	-1171	-4111	-386	0	0	0
	7(OPE)	669	-2383	254	0	0	0
	9(OPE)	-1071	-3754	-350	0	0	0
	10(SUS)	96	-2533	21	0	0	0
	11(SUS)	93	-2494	21	0	0	0
	MAX	-1171/L6	-4111/L6	-386/L6			
1560		TYPE=Rigid +Y;					
	3(HYD)	-621	-2071	-7	0	0	0
	4(OPE)	-403	-1349	-36	0	0	0
	6(OPE)	-373	-1247	-34	0	0	0
	7(OPE)	482	-1617	51	0	0	0
	9(OPE)	-403	-1349	-36	0	0	0
	10(SUS)	-490	-1633	0	0	0	0
	11(SUS)	-482	-1608	1	0	0	0
	MAX	-621/L3	-2071/L3	51/L7			
1700		TYPE=Rigid ANC;					
	3(HYD)	156	-3040	-21	9	-99	-1138
	4(OPE)	-2907	-1923	970	85	3465	-3687
	6(OPE)	-3803	-1772	1230	132	4538	-4509
	7(OPE)	274	-2570	-155	25	-310	-803
	9(OPE)	-2907	-1923	970	85	3465	-3687
	10(SUS)	124	-2490	-18	6	-75	-903
	11(SUS)	122	-2458	-18	6	-74	-890
	MAX	-3803/L6	-3040/L3	1230/L6	132/L6	4538/L6	-4509/L6
1780		TYPE=Rigid ANC;					
	3(HYD)	-291	-1825	24	-414	106	-483
	4(OPE)	-2348	-1201	-184	-35	1520	-1205
	6(OPE)	-6576	-1134	-276	47	3454	-3231
	7(OPE)	1264	-1336	16	-241	-659	389
	9(OPE)	-2348	-1201	-184	-35	1520	-1205
	10(SUS)	-391	-1301	29	-236	158	-412

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RESTRAINT SUMMARY REPORT: 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)	-396	-1267	30	-225	161	-407
	MAX	-6576/L6	-1825/L3	-276/L6	-414/L3	3454/L6	-3231/L6
1840		TYPE=Rigid X; Rigid Z w/gap; Rigid Y;					
	3(HYD)	-65	-10741	1	0	0	0
	4(OPE)	-286	-9854	985	0	0	0
	6(OPE)	-2512	-10077	1008	0	0	0
	7(OPE)	-339	-9721	-972	0	0	0
	9(OPE)	-286	-9854	985	0	0	0
	10(SUS)	-103	-9758	4	0	0	0
	11(SUS)	-105	-9692	4	0	0	0
	MAX	-2512/L6	-10741/L3	1008/L6			
1860		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	0	-8207	0	0	0	0
	4(OPE)	-690	-7502	294	0	0	0
	6(OPE)	-667	-7241	282	0	0	0
	7(OPE)	722	-7832	-304	0	0	0
	9(OPE)	-690	-7502	294	0	0	0
	10(SUS)	0	-7742	-1	0	0	0
	11(SUS)	0	-7707	-1	0	0	0
	MAX	722/L7	-8207/L3	-304/L7			
1880		TYPE=Rigid Z w/gap; Rigid Y;					
	3(HYD)	-0	-8201	-0	0	0	0
	4(OPE)	-751	-7507	-1	0	0	0
	6(OPE)	-725	-7249	-3	0	0	0
	7(OPE)	783	-7828	4	0	0	0
	9(OPE)	-751	-7507	-1	0	0	0
	10(SUS)	-0	-7738	-1	0	0	0
	11(SUS)	-0	-7704	-1	0	0	0
	MAX	783/L7	-8201/L3	4/L7			
1900		TYPE=Rigid X; Rigid Z w/gap; Rigid Y;					
	3(HYD)	-70	-11024	2	0	0	0
	4(OPE)	-3599	-9631	-100	0	0	0
	6(OPE)	-6464	-9709	-240	0	0	0
	7(OPE)	296	-9896	848	0	0	0
	9(OPE)	-3599	-9631	-100	0	0	0
	10(SUS)	-164	-9922	8	0	0	0
	11(SUS)	-170	-9849	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.
	MAX	-6464/L6	-11024/L3	848/L7			
1980		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	283	-3035	-60	0	0	0
	4(OPE)	682	-2553	-348	0	0	0
	6(OPE)	746	-2487	16	0	0	0
	7(OPE)	-643	-2164	90	0	0	0
	9(OPE)	682	-2553	-348	0	0	0
	10(SUS)	382	-2154	-88	0	0	0
	11(SUS)	388	-2098	-90	0	0	0
	MAX	746/L6	-3035/L3	-348/L4			
2120		TYPE=Rigid +Y;					
	3(HYD)	18	-4970	309	0	0	0
	4(OPE)	-242	-5018	1486	0	0	0
	6(OPE)	980	-6643	1735	0	0	0
	7(OPE)	134	-3850	-1147	0	0	0
	9(OPE)	-242	-5018	1486	0	0	0
	10(SUS)	10	-4234	260	0	0	0
	11(SUS)	10	-4187	256	0	0	0
	MAX	980/L6	-6643/L6	1735/L6			
2220		TYPE=Rigid +Y;					
	3(HYD)	-116	-4038	-7	0	0	0
	4(OPE)	349	-3570	1012	0	0	0
	6(OPE)	967	-3847	631	0	0	0
	7(OPE)	-540	-3904	-1039	0	0	0
	9(OPE)	349	-3570	1012	0	0	0
	10(SUS)	-109	-3821	-3	0	0	0
	11(SUS)	-108	-3809	-3	0	0	0
	MAX	967/L6	-4038/L3	-1039/L7			
2440		TYPE=Rigid +Y;					
	3(HYD)	317	-5434	55	0	0	0
	4(OPE)	208	-3338	-980	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	502	-5164	1466	0	0	0
	9(OPE)	208	-3338	-980	0	0	0
	10(SUS)	210	-4665	66	0	0	0
	11(SUS)	203	-4616	67	0	0	0
	MAX	502/L7	-5434/L3	1466/L7			
2640		TYPE=Rigid +Y;					
	3(HYD)	0	-829	15	0	0	0
	4(OPE)	177	-624	-62	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)	0	0	0	0	0	0
	7(OPE)	-213	-870	-151	0	0	0
	9(OPE)	177	-624	-62	0	0	0
	10(SUS)	-1	-793	14	0	0	0
	11(SUS)	-1	-790	14	0	0	0
	MAX	-213/L7	-870/L7	-151/L7			
2700		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
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
2720		TYPE=Rigid +Y;					
	3(HYD)	-0	-2003	-0	0	0	0
	4(OPE)	-0	-1265	-379	0	0	0
	6(OPE)	0	-1264	-379	0	0	0
	7(OPE)	-0	-1265	379	0	0	0
	9(OPE)	-0	-1265	-379	0	0	0
	10(SUS)	-0	-1265	-0	0	0	0
	11(SUS)	-0	-1218	-0	0	0	0
	MAX	0/L6	-2003/L3	379/L7			
2740		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	0	-3002	-0	0	0	0
	4(OPE)	0	-1896	-569	0	0	0
	6(OPE)	2	-1904	-571	0	0	0
	7(OPE)	0	-1896	569	0	0	0
	9(OPE)	0	-1896	-569	0	0	0
	10(SUS)	0	-1896	-0	0	0	0
	11(SUS)	0	-1825	-0	0	0	0
	MAX	2/L6	-3002/L3	-571/L6			
2760		TYPE=Rigid +Y;					
	3(HYD)	-1	-2743	-1	0	0	0
	4(OPE)	1	-1732	-519	0	0	0
	6(OPE)	-1	-1700	-510	0	0	0
	7(OPE)	1	-1732	520	0	0	0
	9(OPE)	1	-1732	-519	0	0	0
	10(SUS)	-1	-1732	-1	0	0	0
	11(SUS)	-1	-1668	-1	0	0	0
	MAX	-1/L6	-2743/L3	520/L7			

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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.
2780		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	4	-2810	-3	0	0	0
	4(OPE)	2	-1775	-532	0	0	0
	6(OPE)	-6	-1895	-569	0	0	0
	7(OPE)	1	-1774	532	0	0	0
	9(OPE)	2	-1775	-532	0	0	0
	10(SUS)	3	-1773	-4	0	0	0
	11(SUS)	3	-1707	-4	0	0	0
	MAX	-6/L6	-2810/L3	-569/L6			
2800		TYPE=Rigid +Y;					
	3(HYD)	-13	-2799	-10	0	0	0
	4(OPE)	0	-1766	-530	0	0	0
	6(OPE)	-18	-1313	-394	0	0	0
	7(OPE)	-10	-1769	531	0	0	0
	9(OPE)	0	-1766	-530	0	0	0
	10(SUS)	-11	-1772	-12	0	0	0
	11(SUS)	-10	-1707	-12	0	0	0
	MAX	-18/L6	-2799/L3	531/L7			
2820		TYPE=Rigid +Y;					
	3(HYD)	-297	-4228	-30	0	0	0
	4(OPE)	-373	-3926	-1117	0	0	0
	6(OPE)	-373	-6838	-2017	0	0	0
	7(OPE)	-133	-2148	-359	0	0	0
	9(OPE)	-373	-3926	-1117	0	0	0
	10(SUS)	-191	-2650	-38	0	0	0
	11(SUS)	-184	-2550	-39	0	0	0
	MAX	-373/L6	-6838/L6	-2017/L6			
2840		TYPE=Rigid X w/gap; Rigid Z w/gap; Rigid +Y;					
	3(HYD)	13	-2783	-10	0	0	0
	4(OPE)	-505	-1759	1880	0	0	0
	6(OPE)	-1371	-2215	5058	0	0	0
	7(OPE)	10	-1756	-527	0	0	0
	9(OPE)	-505	-1759	1880	0	0	0
	10(SUS)	10	-1753	-12	0	0	0
	11(SUS)	10	-1687	-12	0	0	0
	MAX	-1371/L6	-2783/L3	5058/L6			
2940		TYPE=Rigid +Y;					
	3(HYD)	-257	-5146	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.
	4(OPE)	-569	-5802	1645	0	0	0
	6(OPE)	-42	-5364	1609	0	0	0
	7(OPE)	85	-4809	-1440	0	0	0
	9(OPE)	-569	-5802	1645	0	0	0
	10(SUS)	-173	-4822	-67	0	0	0
	11(SUS)	-168	-4805	-69	0	0	0
	MAX	-569/L4	-5802/L4	1645/L4			
3180		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	1508	-5627	-530	0	0	0
	4(OPE)	1234	-4275	1653	0	0	0
	6(OPE)	2846	-3071	1775	0	0	0
	7(OPE)	322	-5805	-1838	0	0	0
	9(OPE)	1234	-4275	1653	0	0	0
	10(SUS)	1226	-5279	-488	0	0	0
	11(SUS)	1224	-5259	-488	0	0	0
	MAX	2846/L6	-5805/L7	-1838/L7			
3400		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	1005	-7923	-372	0	0	0
	4(OPE)	1252	-8587	-2251	0	0	0
	6(OPE)	875	-9126	-2594	0	0	0
	7(OPE)	302	-6431	1906	0	0	0
	9(OPE)	1252	-8587	-2251	0	0	0
	10(SUS)	792	-6701	-346	0	0	0
	11(SUS)	791	-6694	-346	0	0	0
	MAX	1252/L4	-9126/L6	-2594/L6			
3540		TYPE=Rigid +Y;					
	3(HYD)	0	-1877	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	0	-2076	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	0	-1262	0	0	0	0
	11(SUS)	0	-1259	0	0	0	0
	MAX		-2076/L7				
3640		TYPE=Rigid X w/gap; Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-1987	-7908	321	0	0	0
	4(OPE)	-684	-7015	-1990	0	0	0
	6(OPE)	-483	-7826	-4115	0	0	0
	7(OPE)	-618	-6310	660	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.
	9(OPE)	-684	-7015	-1990	0	0	0
	10(SUS)	-1674	-6909	484	0	0	0
	11(SUS)	-1671	-6898	485	0	0	0
	MAX	-1987/L3	-7908/L3	-4115/L6			
3680		TYPE=Rigid +Y;					
	3(HYD)	-930	-3218	260	0	0	0
	4(OPE)	-423	-1937	-398	0	0	0
	6(OPE)	-506	-2359	-494	0	0	0
	7(OPE)	406	-1537	219	0	0	0
	9(OPE)	-423	-1937	-398	0	0	0
	10(SUS)	-524	-1806	139	0	0	0
	11(SUS)	-521	-1798	139	0	0	0
	MAX	-930/L3	-3218/L3	-494/L6			
3720		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	199	-3400	-5	0	0	0
	4(OPE)	-387	-1506	-233	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	753	-2673	276	0	0	0
	9(OPE)	-387	-1506	-233	0	0	0
	10(SUS)	99	-1980	21	0	0	0
	11(SUS)	99	-1971	21	0	0	0
	MAX	753/L7	-3400/L3	276/L7			
3820		TYPE=Rigid ANC;					
	3(HYD)	413	-1418	0	-93	0	609
	4(OPE)	957	-1427	-38	33	-542	1551
	6(OPE)	1724	-2754	-845	156	-3636	4811
	7(OPE)	-1503	-419	-4	-52	289	-872
	9(OPE)	957	-1427	-38	33	-542	1551
	10(SUS)	223	-951	-8	-43	-10	370
	11(SUS)	222	-948	-8	-43	-10	369
	MAX	1724/L6	-2754/L6	-845/L6	156/L6	-3636/L6	4811/L6
3900		TYPE=Rigid ANC;					
	3(HYD)	413	-1418	0	-92	0	122
	4(OPE)	957	-1427	-38	-72	-559	-435
	6(OPE)	1724	-2754	-845	-2177	-4025	1319
	7(OPE)	-1503	-419	-4	-63	287	3470
	9(OPE)	957	-1427	-38	-72	-559	-435
	10(SUS)	223	-951	-8	-66	-14	192
	11(SUS)	222	-948	-8	-65	-14	192
	MAX	1724/L6	-2754/L6	-845/L6	-2177/L6	-4025/L6	3470/L7
3920		TYPE=Rigid					

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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.
		Z w/gap; Rigid +Y;					
	3(HYD)	-0	-6538	2	0	0	0
	4(OPE)	1600	-3567	-5109	0	0	0
	6(OPE)	107	-3572	-10875	0	0	0
	7(OPE)	-0	-3560	1068	0	0	0
	9(OPE)	1600	-3567	-5109	0	0	0
	10(SUS)	-0	-3562	2	0	0	0
	11(SUS)	-0	-3544	2	0	0	0
	MAX	1600/L4	-6538/L3	-10875/L6			
3940		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6516	1	0	0	0
	4(OPE)	178	-3548	-1050	0	0	0
	6(OPE)	1	-3547	-1064	0	0	0
	7(OPE)	-0	-3550	1065	0	0	0
	9(OPE)	178	-3548	-1050	0	0	0
	10(SUS)	0	-3550	1	0	0	0
	11(SUS)	0	-3532	1	0	0	0
	MAX	178/L4	-6516/L3	1065/L7			
3960		TYPE=Rigid +Y;					
	3(HYD)	59	-665	-153	0	0	0
	4(OPE)	-25	-235	-66	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	53	-386	-103	0	0	0
	9(OPE)	-25	-235	-66	0	0	0
	10(SUS)	21	-124	-31	0	0	0
	11(SUS)	15	-87	-21	0	0	0
	MAX	59/L3	-665/L3	-153/L3			
4020		TYPE=Rigid +Y;					
	3(HYD)	9	-616	-133	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	-59	-491	135	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	10	-845	-145	0	0	0
	11(SUS)	10	-849	-146	0	0	0
	MAX	-59/L7	-849/L11	-146/L11			
4160		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	-49	-3632	-225	0	0	0
	4(OPE)	461	0	0	0	0	0
	6(OPE)	1020	0	0	0	0	0
	7(OPE)	-174	-3517	1055	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.
	9(OPE)	461	0	0	0	0	0
	10(SUS)	-28	-3127	-200	0	0	0
	11(SUS)	-28	-3120	-201	0	0	0
	MAX	1020/L6	-3632/L3	1055/L7			
4300		TYPE=Rigid +Y;					
	3(HYD)	-0	-6857	-0	0	0	0
	4(OPE)	154	-3728	-1108	0	0	0
	6(OPE)	154	-3728	-1108	0	0	0
	7(OPE)	20	-3721	1116	0	0	0
	9(OPE)	154	-3728	-1108	0	0	0
	10(SUS)	-0	-3721	-0	0	0	0
	11(SUS)	-0	-3717	-0	0	0	0
	MAX	154/L6	-6857/L3	1116/L7			
4320		TYPE=Rigid X w/gap; Rigid Z; Rigid +Y;					
	3(HYD)	0	-5308	-0	0	0	0
	4(OPE)	1386	-2855	-151	0	0	0
	6(OPE)	1385	-2855	-150	0	0	0
	7(OPE)	-86	-2882	-5828	0	0	0
	9(OPE)	1386	-2855	-151	0	0	0
	10(SUS)	0	-2881	-0	0	0	0
	11(SUS)	0	-2877	-0	0	0	0
	MAX	1386/L4	-5308/L3	-5828/L7			
4380		TYPE=Rigid +Y;					
	3(HYD)	-0	-9642	-0	0	0	0
	4(OPE)	-359	-5254	1535	0	0	0
	6(OPE)	-359	-5253	1534	0	0	0
	7(OPE)	-129	-5232	-1564	0	0	0
	9(OPE)	-359	-5254	1535	0	0	0
	10(SUS)	-0	-5233	-0	0	0	0
	11(SUS)	-0	-5226	-0	0	0	0
	MAX	-359/L6	-9642/L3	-1564/L7			
4440		TYPE=Rigid +Y;					
	3(HYD)	69	-248	28	0	0	0
	4(OPE)	-48	-213	-42	0	0	0
	6(OPE)	51	-268	-62	0	0	0
	7(OPE)	53	-221	40	0	0	0
	9(OPE)	-48	-213	-42	0	0	0
	10(SUS)	59	-212	23	0	0	0
	11(SUS)	59	-210	22	0	0	0
	MAX	69/L3	-268/L6	-62/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.
4540		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	10	-304	58	0	0	0
	4(OPE)	123	-458	62	0	0	0
	6(OPE)	152	-481	132	0	0	0
	7(OPE)	-26	-145	35	0	0	0
	9(OPE)	123	-458	62	0	0	0
	10(SUS)	20	-275	53	0	0	0
	11(SUS)	20	-273	53	0	0	0
	MAX	152/L6	-481/L6	132/L6			
4640		TYPE=Rigid +Y;					
	3(HYD)	-21	-671	-109	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	-45	-1087	-31	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	-19	-620	-100	0	0	0
	11(SUS)	-19	-618	-100	0	0	0
	MAX	-45/L7	-1087/L7	-109/L3			
4800		TYPE=Rigid X; Rigid Z; Rigid +Y;					
	3(HYD)	-2	-416	-70	0	0	0
	4(OPE)	-164	-248	395	0	0	0
	6(OPE)	-562	-32	2466	0	0	0
	7(OPE)	75	-370	-346	0	0	0
	9(OPE)	-164	-248	395	0	0	0
	10(SUS)	-3	-356	-63	0	0	0
	11(SUS)	-3	-353	-63	0	0	0
	MAX	-562/L6	-416/L3	2466/L6			
4900		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	0	-588	0	0	0	0
	4(OPE)	0	-353	16	0	0	0
	6(OPE)	0	-285	36	0	0	0
	7(OPE)	0	-552	0	0	0	0
	9(OPE)	0	-353	16	0	0	0
	10(SUS)	0	-523	0	0	0	0
	11(SUS)	0	-520	0	0	0	0
	MAX		-588/L3	36/L6			
4920		TYPE=Rigid +Y;					
	3(HYD)	-6	-691	8	0	0	0
	4(OPE)	-183	-629	-44	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)	-186	-638	-45	0	0	0
	7(OPE)	-14	-611	3	0	0	0
	9(OPE)	-183	-629	-44	0	0	0
	10(SUS)	-6	-615	6	0	0	0
	11(SUS)	-6	-612	6	0	0	0
	MAX	-186/L6	-691/L3	-45/L6			
4940		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-8	-405	-92	0	0	0
	4(OPE)	-153	-518	-644	0	0	0
	6(OPE)	-165	-554	-1071	0	0	0
	7(OPE)	101	-339	5	0	0	0
	9(OPE)	-153	-518	-644	0	0	0
	10(SUS)	-10	-362	-49	0	0	0
	11(SUS)	-10	-360	-50	0	0	0
	MAX	-165/L6	-554/L6	-1071/L6			
5040		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
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
5181		TYPE=Rigid +Y;					
	3(HYD)	1	-8323	0	0	0	0
	4(OPE)	-1311	-4625	-456	0	0	0
	6(OPE)	-1310	-4622	-456	0	0	0
	7(OPE)	1315	-4510	318	0	0	0
	9(OPE)	-1311	-4625	-456	0	0	0
	10(SUS)	1	-4517	0	0	0	0
	11(SUS)	1	-4511	0	0	0	0
	MAX	1315/L7	-8323/L3	-456/L4			
5220		TYPE=Rigid X; Rigid +Y; Rigid Z;					
	3(HYD)	164	-3449	267	0	0	0
	4(OPE)	2388	0	-1068	0	0	0
	6(OPE)	2323	0	-938	0	0	0
	7(OPE)	-3	-2851	247	0	0	0
	9(OPE)	2388	0	-1068	0	0	0
	10(SUS)	125	-2899	199	0	0	0
	11(SUS)	125	-2893	199	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	2388/L4	-3449/L3	-1068/L4			
5340		TYPE=Rigid +Y;					
	3(HYD)	0	0	0	0	0	0
	4(OPE)	0	-842	0	0	0	0
	6(OPE)	0	-1484	0	0	0	0
	7(OPE)	0	0	0	0	0	0
	9(OPE)	0	-842	0	0	0	0
	10(SUS)	0	0	0	0	0	0
	11(SUS)	0	0	0	0	0	0
	MAX		-1484/L6				
5520		TYPE=Rigid X; Rigid +Y; Rigid Z;					
	3(HYD)	61	-5112	382	0	0	0
	4(OPE)	2454	0	-1244	0	0	0
	6(OPE)	2353	0	-1029	0	0	0
	7(OPE)	-129	-4935	324	0	0	0
	9(OPE)	2454	0	-1244	0	0	0
	10(SUS)	49	-4078	275	0	0	0
	11(SUS)	49	-4075	275	0	0	0
	MAX	2454/L4	-5112/L3	-1244/L4			
5660		TYPE=Rigid +Y;					
	3(HYD)	-600	-3473	-852	0	0	0
	4(OPE)	840	-6587	1789	0	0	0
	6(OPE)	840	-6307	1695	0	0	0
	7(OPE)	-334	-2111	-538	0	0	0
	9(OPE)	840	-6587	1789	0	0	0
	10(SUS)	-388	-2537	-654	0	0	0
	11(SUS)	-388	-2538	-655	0	0	0
	MAX	840/L6	-6587/L4	1789/L4			
5760		TYPE=Rigid +Y;					
	3(HYD)	0	-387	0	0	0	0
	4(OPE)	0	0	0	0	0	0
	6(OPE)	0	0	0	0	0	0
	7(OPE)	0	-165	0	0	0	0
	9(OPE)	0	0	0	0	0	0
	10(SUS)	0	-488	0	0	0	0
	11(SUS)	0	-485	0	0	0	0
	MAX		-488/L10				
5840		TYPE=Rigid X; Rigid Z;					
	3(HYD)	-35	0	93	0	0	0
	4(OPE)	-104	0	-57	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)	-120	0	205	0	0	0
	7(OPE)	-27	0	55	0	0	0
	9(OPE)	-104	0	-57	0	0	0
	10(SUS)	-23	0	83	0	0	0
	11(SUS)	-23	0	83	0	0	0
	MAX	-120/L6		205/L6			
5920		TYPE=Rigid +Y;					
	3(HYD)	-49	-618	-179	0	0	0
	4(OPE)	170	-661	102	0	0	0
	6(OPE)	64	-240	33	0	0	0
	7(OPE)	-70	-626	-174	0	0	0
	9(OPE)	170	-661	102	0	0	0
	10(SUS)	-34	-577	-170	0	0	0
	11(SUS)	-34	-578	-170	0	0	0
	MAX	170/L4	-661/L4	-179/L3			
5980		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	-2	-9096	9	0	0	0
	4(OPE)	-1969	-4814	-1444	0	0	0
	6(OPE)	-1963	-4823	-1447	0	0	0
	7(OPE)	-1038	-4946	1484	0	0	0
	9(OPE)	-1969	-4814	-1444	0	0	0
	10(SUS)	-1	-4938	8	0	0	0
	11(SUS)	-1	-4932	8	0	0	0
	MAX	-1969/L4	-9096/L3	1484/L7			
6000		TYPE=Rigid +Y;					
	3(HYD)	4	-5615	15	0	0	0
	4(OPE)	164	-2925	-862	0	0	0
	6(OPE)	163	-2904	-856	0	0	0
	7(OPE)	26	-3043	913	0	0	0
	9(OPE)	164	-2925	-862	0	0	0
	10(SUS)	3	-3037	13	0	0	0
	11(SUS)	3	-3033	13	0	0	0
	MAX	164/L4	-5615/L3	913/L7			
6020		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-7	-7141	31	0	0	0
	4(OPE)	4086	-4779	-1425	0	0	0
	6(OPE)	4022	-4897	-1460	0	0	0
	7(OPE)	29	-3876	1162	0	0	0
	9(OPE)	4086	-4779	-1425	0	0	0
	10(SUS)	-6	-3934	27	0	0	0
	11(SUS)	-6	-3929	27	0	0	0
	MAX	4086/L4	-7141/L3	-1460/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.
6040		TYPE=Rigid X w/gap; Rigid Z; Rigid +Y;					
	3(HYD)	355	-6998	467	0	0	0
	4(OPE)	-6390	-8391	7064	0	0	0
	6(OPE)	-6200	-8278	6860	0	0	0
	7(OPE)	345	-3808	-2322	0	0	0
	9(OPE)	-6390	-8391	7064	0	0	0
	10(SUS)	210	-4092	389	0	0	0
	11(SUS)	209	-4087	388	0	0	0
	MAX	-6390/L4	-8391/L4	7064/L4			
6060		TYPE=Rigid +Y;					
	3(HYD)	263	-8296	57	0	0	0
	4(OPE)	-877	-4607	1069	0	0	0
	6(OPE)	-879	-4636	1078	0	0	0
	7(OPE)	-581	-4427	-1194	0	0	0
	9(OPE)	-877	-4607	1069	0	0	0
	10(SUS)	164	-4649	47	0	0	0
	11(SUS)	164	-4644	47	0	0	0
	MAX	-879/L6	-8296/L3	-1194/L7			
6187		TYPE=Rigid +Y;					
	3(HYD)	-207	-8239	2	0	0	0
	4(OPE)	-1358	-4830	-506	0	0	0
	6(OPE)	-1352	-4813	-508	0	0	0
	7(OPE)	1333	-4445	30	0	0	0
	9(OPE)	-1358	-4830	-506	0	0	0
	10(SUS)	-128	-4470	1	0	0	0
	11(SUS)	-128	-4464	1	0	0	0
	MAX	-1358/L4	-8239/L3	-508/L6			
6195		TYPE=Rigid +Y;					
	3(HYD)	100	-4126	1	0	0	0
	4(OPE)	-137	-2428	-715	0	0	0
	6(OPE)	-136	-2419	-713	0	0	0
	7(OPE)	-215	-2225	632	0	0	0
	9(OPE)	-137	-2428	-715	0	0	0
	10(SUS)	62	-2240	1	0	0	0
	11(SUS)	62	-2238	1	0	0	0
	MAX	-215/L7	-4126/L3	-715/L4			
6200		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-10	-5063	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.
	4(OPE)	-1251	-2548	-764	0	0	0
	6(OPE)	-1214	-2557	-767	0	0	0
	7(OPE)	-278	-2763	781	0	0	0
	9(OPE)	-1251	-2548	-764	0	0	0
	10(SUS)	-6	-2744	1	0	0	0
	11(SUS)	-6	-2741	1	0	0	0
	MAX	-1251/L4	-5063/L3	781/L7			
6220		TYPE=Rigid +Y;					
	3(HYD)	0	-6775	0	0	0	0
	4(OPE)	173	-3692	-1094	0	0	0
	6(OPE)	173	-3691	-1094	0	0	0
	7(OPE)	-168	-3675	1090	0	0	0
	9(OPE)	173	-3692	-1094	0	0	0
	10(SUS)	0	-3677	0	0	0	0
	11(SUS)	0	-3672	0	0	0	0
	MAX	173/L4	-6775/L3	-1094/L4			
6240		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-6465	0	0	0	0
	4(OPE)	1236	-3504	-1045	0	0	0
	6(OPE)	1226	-3504	-1045	0	0	0
	7(OPE)	-0	-3509	1053	0	0	0
	9(OPE)	1236	-3504	-1045	0	0	0
	10(SUS)	-0	-3508	0	0	0	0
	11(SUS)	-0	-3504	0	0	0	0
	MAX	1236/L4	-6465/L3	1053/L7			
6260		TYPE=Rigid Z; Rigid +Y;					
	3(HYD)	0	-6567	0	0	0	0
	4(OPE)	878	-3567	1011	0	0	0
	6(OPE)	883	-3567	1004	0	0	0
	7(OPE)	52	-3564	-484	0	0	0
	9(OPE)	878	-3567	1011	0	0	0
	10(SUS)	0	-3564	0	0	0	0
	11(SUS)	0	-3560	0	0	0	0
	MAX	883/L6	-6567/L3	1011/L4			
6280		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-6462	-0	0	0	0
	4(OPE)	1119	-3500	1043	0	0	0
	6(OPE)	1118	-3500	1043	0	0	0
	7(OPE)	124	-3508	-1045	0	0	0
	9(OPE)	1119	-3500	1043	0	0	0
	10(SUS)	-0	-3507	-0	0	0	0

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Various Load Cases

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	11(SUS)	-0	-3502	-0	0	0	0
	MAX	1119/L4	-6462/L3	-1045/L7			
6300		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	-0	-6915	-0	0	0	0
	4(OPE)	-1510	-3782	1134	0	0	0
	6(OPE)	-1510	-3782	1134	0	0	0
	7(OPE)	-564	-3750	-1125	0	0	0
	9(OPE)	-1510	-3782	1134	0	0	0
	10(SUS)	-0	-3753	-0	0	0	0
	11(SUS)	-0	-3748	-0	0	0	0
	MAX	-1510/L6	-6915/L3	1134/L4			
6310		TYPE=Rigid +Y;					
	3(HYD)	-4	-5888	0	0	0	0
	4(OPE)	-351	-3167	883	0	0	0
	6(OPE)	-351	-3167	883	0	0	0
	7(OPE)	-168	-3198	-945	0	0	0
	9(OPE)	-351	-3167	883	0	0	0
	10(SUS)	-2	-3196	0	0	0	0
	11(SUS)	-2	-3192	0	0	0	0
	MAX	-351/L4	-5888/L3	-945/L7			
6327		TYPE=Rigid +Y;					
	3(HYD)	8	-8063	-1	0	0	0
	4(OPE)	-1242	-4249	285	0	0	0
	6(OPE)	-1242	-4249	285	0	0	0
	7(OPE)	1312	-4386	-101	0	0	0
	9(OPE)	-1242	-4249	285	0	0	0
	10(SUS)	4	-4376	-1	0	0	0
	11(SUS)	4	-4370	-1	0	0	0
	MAX	1312/L7	-8063/L3	285/L6			
6332		TYPE=Rigid +Y;					
	3(HYD)	-19	-5102	-292	0	0	0
	4(OPE)	-466	-2925	-744	0	0	0
	6(OPE)	-466	-2925	-744	0	0	0
	7(OPE)	-231	-2756	794	0	0	0
	9(OPE)	-466	-2925	-744	0	0	0
	10(SUS)	-11	-2769	-159	0	0	0
	11(SUS)	-10	-2766	-158	0	0	0
	MAX	-466/L6	-5102/L3	794/L7			
6340		TYPE=Rigid X; Rigid +Y;					
	3(HYD)	59	-6245	-428	0	0	0
	4(OPE)	2235	-3363	-1009	0	0	0

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Various Load Cases

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	6(OPE)	2235	-3363	-1009	0	0	0
	7(OPE)	-273	-3393	1018	0	0	0
	9(OPE)	2235	-3363	-1009	0	0	0
	10(SUS)	32	-3389	-232	0	0	0
	11(SUS)	32	-3385	-232	0	0	0
	MAX	2235/L4	-6245/L3	1018/L7			
6360		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	-292	-4790	-913	0	0	0
	4(OPE)	732	-2455	3910	0	0	0
	6(OPE)	732	-2455	3910	0	0	0
	7(OPE)	-222	-2601	-748	0	0	0
	9(OPE)	732	-2455	3910	0	0	0
	10(SUS)	-159	-2600	-496	0	0	0
	11(SUS)	-158	-2596	-495	0	0	0
	MAX	732/L6	-4790/L3	3910/L4			
6380		TYPE=Rigid +Y;					
	3(HYD)	1590	-7550	1475	0	0	0
	4(OPE)	999	-3848	579	0	0	0
	6(OPE)	999	-3848	579	0	0	0
	7(OPE)	-670	-4174	-1058	0	0	0
	9(OPE)	999	-3848	579	0	0	0
	10(SUS)	863	-4098	801	0	0	0
	11(SUS)	862	-4093	800	0	0	0
	MAX	1590/L3	-7550/L3	1475/L3			
6480		TYPE=Rigid ANC;					
	3(HYD)	-1341	-6822	159	1304	-47	-1264
	4(OPE)	-2124	-4164	3161	5505	-10680	-316
	6(OPE)	-2124	-4164	3161	5505	-10680	-316
	7(OPE)	890	-3689	-344	8	961	-3329
	9(OPE)	-2124	-4164	3161	5505	-10680	-316
	10(SUS)	-728	-3768	86	708	-25	-686
	11(SUS)	-727	-3763	86	707	-25	-685
	MAX	-2124/L4	-6822/L3	3161/L4	5505/L4	-10680/L4	-3329/L7
6500		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6446	-0	0	0	0
	4(OPE)	54	-3496	-1048	0	0	0
	6(OPE)	54	-3497	-1048	0	0	0
	7(OPE)	1	-3498	1050	0	0	0
	9(OPE)	54	-3496	-1048	0	0	0
	10(SUS)	0	-3498	-0	0	0	0
	11(SUS)	0	-3494	-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	54/L6	-6446/L3	1050/L7			
6520		TYPE=Rigid +Y;					
	3(HYD)	-0	-6560	-0	0	0	0
	4(OPE)	21	-3561	-1068	0	0	0
	6(OPE)	21	-3561	-1068	0	0	0
	7(OPE)	-1	-3560	1068	0	0	0
	9(OPE)	21	-3561	-1068	0	0	0
	10(SUS)	-0	-3560	-0	0	0	0
	11(SUS)	-0	-3556	-0	0	0	0
	MAX	21/L6	-6560/L3	1068/L7			
6540		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6511	-0	0	0	0
	4(OPE)	7	-3533	-1060	0	0	0
	6(OPE)	7	-3533	-1060	0	0	0
	7(OPE)	-0	-3533	1060	0	0	0
	9(OPE)	7	-3533	-1060	0	0	0
	10(SUS)	0	-3533	-0	0	0	0
	11(SUS)	0	-3529	-0	0	0	0
	MAX	7/L6	-6511/L3	1060/L7			
6560		TYPE=Rigid +Y;					
	3(HYD)	-0	-6595	-0	0	0	0
	4(OPE)	1	-3579	-1074	0	0	0
	6(OPE)	1	-3579	-1074	0	0	0
	7(OPE)	-0	-3579	1074	0	0	0
	9(OPE)	1	-3579	-1074	0	0	0
	10(SUS)	-0	-3579	-0	0	0	0
	11(SUS)	-0	-3575	-0	0	0	0
	MAX	1/L6	-6595/L3	-1074/L4			
6580		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6302	-0	0	0	0
	4(OPE)	-2	-3420	-1026	0	0	0
	6(OPE)	-2	-3420	-1026	0	0	0
	7(OPE)	0	-3420	1026	0	0	0
	9(OPE)	-2	-3420	-1026	0	0	0
	10(SUS)	0	-3420	-0	0	0	0
	11(SUS)	0	-3416	-0	0	0	0
	MAX	-2/L4	-6302/L3	1026/L7			
6600		TYPE=Rigid +Y;					
	3(HYD)	-0	-7403	-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.
	4(OPE)	-4	-4018	-1205	0	0	0
	6(OPE)	-4	-4018	-1205	0	0	0
	7(OPE)	0	-4018	1205	0	0	0
	9(OPE)	-4	-4018	-1205	0	0	0
	10(SUS)	-0	-4018	-0	0	0	0
	11(SUS)	-0	-4013	-0	0	0	0
	MAX	-4/L6	-7403/L3	1205/L7			
6620		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-2578	-0	0	0	0
	4(OPE)	-2	-1399	-420	0	0	0
	6(OPE)	-2	-1399	-420	0	0	0
	7(OPE)	0	-1399	420	0	0	0
	9(OPE)	-2	-1399	-420	0	0	0
	10(SUS)	0	-1399	-0	0	0	0
	11(SUS)	0	-1397	-0	0	0	0
	MAX	-2/L6	-2578/L3	420/L7			
6640		TYPE=Rigid +Y;					
	3(HYD)	-3	-2825	-3	0	0	0
	4(OPE)	-14	-1784	535	0	0	0
	6(OPE)	22	-1662	498	0	0	0
	7(OPE)	-1	-1784	-535	0	0	0
	9(OPE)	-14	-1784	535	0	0	0
	10(SUS)	-3	-1785	-4	0	0	0
	11(SUS)	-3	-1719	-4	0	0	0
	MAX	22/L6	-2825/L3	-535/L7			
6660		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	1	-2697	-1	0	0	0
	4(OPE)	21	-1703	510	0	0	0
	6(OPE)	9	-1735	520	0	0	0
	7(OPE)	-0	-1703	-511	0	0	0
	9(OPE)	21	-1703	510	0	0	0
	10(SUS)	1	-1702	-1	0	0	0
	11(SUS)	1	-1639	-1	0	0	0
	MAX	21/L4	-2697/L3	520/L6			
6680		TYPE=Rigid +Y;					
	3(HYD)	-0	-3171	-0	0	0	0
	4(OPE)	44	-2002	599	0	0	0
	6(OPE)	2	-1994	598	0	0	0
	7(OPE)	-0	-2002	-601	0	0	0
	9(OPE)	44	-2002	599	0	0	0
	10(SUS)	-0	-2002	-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.
	11(SUS)	-0	-1928	-0	0	0	0
	MAX	44/L4	-3171/L3	-601/L7			
6700		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-1103	-0	0	0	0
	4(OPE)	19	-697	208	0	0	0
	6(OPE)	-1	-698	209	0	0	0
	7(OPE)	0	-697	-209	0	0	0
	9(OPE)	19	-697	208	0	0	0
	10(SUS)	0	-697	-0	0	0	0
	11(SUS)	0	-671	-0	0	0	0
	MAX	19/L4	-1103/L3	209/L6			
6720		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	2	-6527	5	0	0	0
	4(OPE)	411	-3535	-978	0	0	0
	6(OPE)	25	-3515	1054	0	0	0
	7(OPE)	5	-3562	1069	0	0	0
	9(OPE)	411	-3535	-978	0	0	0
	10(SUS)	1	-3555	4	0	0	0
	11(SUS)	1	-3537	4	0	0	0
	MAX	411/L4	-6527/L3	1069/L7			
6740		TYPE=Rigid +Y;					
	3(HYD)	-6	-6550	11	0	0	0
	4(OPE)	-36	-3647	1094	0	0	0
	6(OPE)	56	-3722	1115	0	0	0
	7(OPE)	9	-3545	-1064	0	0	0
	9(OPE)	-36	-3647	1094	0	0	0
	10(SUS)	-4	-3570	8	0	0	0
	11(SUS)	-4	-3552	8	0	0	0
	MAX	56/L6	-6550/L3	1115/L6			
6760		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	23	-6468	24	0	0	0
	4(OPE)	29	-3226	967	0	0	0
	6(OPE)	54	-2941	881	0	0	0
	7(OPE)	-80	-3611	-1080	0	0	0
	9(OPE)	29	-3226	967	0	0	0
	10(SUS)	16	-3516	18	0	0	0
	11(SUS)	16	-3498	18	0	0	0
	MAX	-80/L7	-6468/L3	-1080/L7			
6780		TYPE=Rigid					

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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.
		+Y;					
	3(HYD)	-91	-6778	52	0	0	0
	4(OPE)	-31	-4867	1460	0	0	0
	6(OPE)	10	-5990	1797	0	0	0
	7(OPE)	-120	-3349	-998	0	0	0
	9(OPE)	-31	-4867	1460	0	0	0
	10(SUS)	-65	-3720	40	0	0	0
	11(SUS)	-65	-3702	39	0	0	0
	MAX	-120/L7	-6778/L3	1797/L6			
6800		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-26	-9510	96	0	0	0
	4(OPE)	-288	-4896	1440	0	0	0
	6(OPE)	-586	-4121	1222	0	0	0
	7(OPE)	209	-5268	-1567	0	0	0
	9(OPE)	-288	-4896	1440	0	0	0
	10(SUS)	3	-5442	73	0	0	0
	11(SUS)	3	-5417	73	0	0	0
	MAX	-586/L6	-9510/L3	-1567/L7			
6820		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	48	-5867	60	0	0	0
	4(OPE)	-1305	-2619	767	0	0	0
	6(OPE)	-1752	-2078	619	0	0	0
	7(OPE)	381	-3365	-935	0	0	0
	9(OPE)	-1305	-2619	767	0	0	0
	10(SUS)	34	-3176	45	0	0	0
	11(SUS)	34	-3160	45	0	0	0
	MAX	-1752/L6	-5867/L3	-935/L7			
6840		TYPE=Rigid +Y;					
	3(HYD)	-12	-5430	-6	0	0	0
	4(OPE)	-104	-3184	950	0	0	0
	6(OPE)	37	-3378	1013	0	0	0
	7(OPE)	299	-2890	-814	0	0	0
	9(OPE)	-104	-3184	950	0	0	0
	10(SUS)	-9	-2968	-4	0	0	0
	11(SUS)	-9	-2953	-4	0	0	0
	MAX	299/L7	-5430/L3	1013/L6			
6880		TYPE=Rigid +Y;					
	3(HYD)	-1	-10174	-1	0	0	0
	4(OPE)	1469	-5465	728	0	0	0
	6(OPE)	1306	-5410	963	0	0	0
	7(OPE)	-1665	-5567	-127	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)	1469	-5465	728	0	0	0
	10(SUS)	-1	-5538	-1	0	0	0
	11(SUS)	-1	-5510	-1	0	0	0
	MAX	-1665/L7	-10174/L3	963/L6			
6920		TYPE=Rigid +Y;					
	3(HYD)	0	-5280	-0	0	0	0
	4(OPE)	109	-2852	-849	0	0	0
	6(OPE)	359	-2835	-771	0	0	0
	7(OPE)	441	-2883	744	0	0	0
	9(OPE)	109	-2852	-849	0	0	0
	10(SUS)	0	-2874	-0	0	0	0
	11(SUS)	0	-2859	-0	0	0	0
	MAX	441/L7	-5280/L3	-849/L4			
6940		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-5556	-0	0	0	0
	4(OPE)	-357	-3058	-473	0	0	0
	6(OPE)	7	-3076	-923	0	0	0
	7(OPE)	424	-3023	802	0	0	0
	9(OPE)	-357	-3058	-473	0	0	0
	10(SUS)	-0	-3033	-0	0	0	0
	11(SUS)	-0	-3018	-0	0	0	0
	MAX	424/L7	-5556/L3	-923/L6			
6960		TYPE=Rigid Z w/gap; Rigid +Y;					
	3(HYD)	0	-7442	-0	0	0	0
	4(OPE)	1	-4034	1210	0	0	0
	6(OPE)	-370	-4032	2312	0	0	0
	7(OPE)	-80	-4039	-1209	0	0	0
	9(OPE)	1	-4034	1210	0	0	0
	10(SUS)	0	-4038	-0	0	0	0
	11(SUS)	0	-4017	-0	0	0	0
	MAX	-370/L6	-7442/L3	2312/L6			
6980		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	-0	-3702	-0	0	0	0
	4(OPE)	0	-2109	633	0	0	0
	6(OPE)	24	-2110	632	0	0	0
	7(OPE)	0	-2108	-633	0	0	0
	9(OPE)	0	-2109	633	0	0	0
	10(SUS)	-0	-2109	-0	0	0	0
	11(SUS)	-0	-2099	-0	0	0	0
	MAX	24/L6	-3702/L3	633/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.
7040		TYPE=Rigid +Y;					
	3(HYD)	-0	-6594	0	0	0	0
	4(OPE)	22	-3593	-1078	0	0	0
	6(OPE)	0	-3593	-1078	0	0	0
	7(OPE)	-0	-3592	1078	0	0	0
	9(OPE)	22	-3593	-1078	0	0	0
	10(SUS)	-0	-3592	0	0	0	0
	11(SUS)	-0	-3574	0	0	0	0
	MAX	22/L4	-6594/L3	-1078/L6			
7060		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-6303	0	0	0	0
	4(OPE)	-7	-3433	-1030	0	0	0
	6(OPE)	0	-3433	-1030	0	0	0
	7(OPE)	0	-3433	1030	0	0	0
	9(OPE)	-7	-3433	-1030	0	0	0
	10(SUS)	0	-3433	0	0	0	0
	11(SUS)	0	-3416	0	0	0	0
	MAX	-7/L4	-6303/L3	1030/L7			
7080		TYPE=Rigid +Y;					
	3(HYD)	-0	-7403	0	0	0	0
	4(OPE)	-8	-4033	-1210	0	0	0
	6(OPE)	-0	-4033	-1210	0	0	0
	7(OPE)	0	-4033	1210	0	0	0
	9(OPE)	-8	-4033	-1210	0	0	0
	10(SUS)	-0	-4033	0	0	0	0
	11(SUS)	-0	-4013	0	0	0	0
	MAX	-8/L4	-7403/L3	-1210/L6			
7100		TYPE=Rigid X w/gap; Rigid +Y;					
	3(HYD)	0	-2578	0	0	0	0
	4(OPE)	-1	-1404	-421	0	0	0
	6(OPE)	-0	-1404	-421	0	0	0
	7(OPE)	0	-1404	421	0	0	0
	9(OPE)	-1	-1404	-421	0	0	0
	10(SUS)	0	-1404	0	0	0	0
	11(SUS)	0	-1397	0	0	0	0
	MAX	-1/L4	-2578/L3	421/L7			

LOAD CASE DEFINITION KEY

CASE 3 (HYD) WW+HP+H
 CASE 10 (SUS) W+P1+H
 CASE 11 (SUS) WNC+H
 CASE 32 (OCC) L32=L22+L10
 CASE 33 (OCC) L33=L23+L10
 CASE 34 (OCC) L34=L24+L10
 CASE 35 (OCC) L35=L25+L10
 CASE 36 (OCC) L36=L26+L10
 CASE 37 (OCC) L37=L27+L10
 CASE 38 (OCC) L38=L28+L10
 CASE 39 (OCC) L39=L29+L10
 CASE 40 (OCC) L40=L30+L10
 CASE 41 (OCC) L41=L31+L10
 CASE 42 (EXP) L42=L4-L10
 CASE 43 (EXP) L43=L6-L10
 CASE 44 (EXP) L44=L7-L10
 CASE 45 (EXP) L45=L6-L7

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

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

Highest Stresses: (MPa	)	LOADCASE 3 (HYD) WW+HP+H	
Ratio (%):	46.7	@Node 2340	
Code Stress:	80.4	Allowable Stress:	172.4
Axial Stress:	48.5	@Node 1920	
Bending Stress:	103.5	@Node 2200	
Torsion Stress:	3.0	@Node 5720	
Hoop Stress:	100.7	@Node 1939	
Max Stress Intensity:	114.9	@Node 2920	

CODE STRESS CHECK PASSED : LOADCASE 10 (SUS) W+P1+H

Highest Stresses: (MPa	)	LOADCASE 10 (SUS) W+P1+H	
Ratio (%):	64.0	@Node 2200	
Code Stress:	73.7	Allowable Stress:	115.1
Axial Stress:	34.3	@Node 3260	
Bending Stress:	98.2	@Node 2200	
Torsion Stress:	6.4	@Node 3320	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	98.2	@Node 2200	

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

Highest Stresses: (MPa	)	LOADCASE 11 (SUS) WNC+H	
Ratio (%):	63.8	@Node 2200	
Code Stress:	73.5	Allowable Stress:	115.1
Axial Stress:	4.2	@Node 3640	
Bending Stress:	97.9	@Node 2200	
Torsion Stress:	6.4	@Node 3320	
Hoop Stress:	0.0	@Node 40	
Max Stress Intensity:	97.9	@Node 2200	

CODE STRESS CHECK PASSED : LOADCASE 32 (OCC) L32=L22+L10

Highest Stresses: (MPa	)	LOADCASE 32 (OCC) L32=L22+L10	
Ratio (%):	58.4	@Node 3260	

Code Stress:	107.2	Allowable Stress:	183.4
Axial Stress:	35.7	@Node 3260	
Bending Stress:	114.5	@Node 2200	
Torsion Stress:	15.1	@Node 5180	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	123.7	@Node 3300	

CODE STRESS CHECK PASSED : LOADCASE 33 (OCC) L33=L23+L10

Highest Stresses: (MPa	)	LOADCASE 33 (OCC) L33=L23+L10	
Ratio (%):	53.7	@Node 3260	
Code Stress:	98.6	Allowable Stress:	183.4
Axial Stress:	34.7	@Node 3260	
Bending Stress:	105.5	@Node 2200	
Torsion Stress:	7.7	@Node 3320	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	106.1	@Node 2200	

CODE STRESS CHECK PASSED : LOADCASE 34 (OCC) L34=L24+L10

Highest Stresses: (MPa	)	LOADCASE 34 (OCC) L34=L24+L10	
Ratio (%):	56.8	@Node 3260	
Code Stress:	104.2	Allowable Stress:	183.4
Axial Stress:	36.2	@Node 3260	
Bending Stress:	114.6	@Node 2200	
Torsion Stress:	7.2	@Node 4860	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	115.1	@Node 2200	

CODE STRESS CHECK PASSED : LOADCASE 35 (OCC) L35=L25+L10

Highest Stresses: (MPa	)	LOADCASE 35 (OCC) L35=L25+L10	
Ratio (%):	59.3	@Node 3260	
Code Stress:	108.8	Allowable Stress:	183.4
Axial Stress:	35.1	@Node 3260	
Bending Stress:	119.0	@Node 2200	
Torsion Stress:	16.1	@Node 5180	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	123.4	@Node 3300	

CODE STRESS CHECK PASSED : LOADCASE 36 (OCC) L36=L26+L10

Highest Stresses: (MPa	)	LOADCASE 36 (OCC) L36=L26+L10	
Ratio (%):	66.1	@Node 3260	
Code Stress:	121.2	Allowable Stress:	183.4
Axial Stress:	41.1	@Node 3260	
Bending Stress:	104.7	@Node 6050	
Torsion Stress:	12.8	@Node 4398	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	121.4	@Node 3260	

CODE STRESS CHECK PASSED : LOADCASE 37 (OCC) L37=L27+L10

Highest Stresses: (MPa	)	LOADCASE 37 (OCC) L37=L27+L10	
Ratio (%):	76.2	@Node 2200	
Code Stress:	116.7	Allowable Stress:	153.1
Axial Stress:	40.4	@Node 3260	
Bending Stress:	155.3	@Node 2200	
Torsion Stress:	6.6	@Node 3320	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	155.5	@Node 2200	

CODE STRESS CHECK PASSED : LOADCASE 38 (OCC) L38=L28+L10

Highest Stresses: (MPa	)	LOADCASE 38 (OCC) L38=L28+L10	
Ratio (%):	56.8	@Node 3260	
Code Stress:	104.1	Allowable Stress:	183.4
Axial Stress:	39.7	@Node 3260	
Bending Stress:	109.3	@Node 2200	
Torsion Stress:	8.8	@Node 3320	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	109.4	@Node 2200	

CODE STRESS CHECK PASSED : LOADCASE 39 (OCC) L39=L29+L10

Highest Stresses: (MPa	)	LOADCASE 39 (OCC) L39=L29+L10	
Ratio (%):	75.2	@Node 2200	
Code Stress:	115.2	Allowable Stress:	153.1
Axial Stress:	40.4	@Node 3260	
Bending Stress:	153.4	@Node 2200	
Torsion Stress:	8.0	@Node 6460	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	153.6	@Node 2200	

CODE STRESS CHECK PASSED : LOADCASE 40 (OCC) L40=L30+L10

Highest Stresses: (MPa	)	LOADCASE 40 (OCC) L40=L30+L10	
Ratio (%):	48.1	@Node 2200	
Code Stress:	73.7	Allowable Stress:	153.1
Axial Stress:	34.4	@Node 3260	
Bending Stress:	98.2	@Node 2200	
Torsion Stress:	7.9	@Node 5180	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	98.3	@Node 2200	

CODE STRESS CHECK PASSED : LOADCASE 41 (OCC) L41=L31+L10

Highest Stresses: (MPa	)	LOADCASE 41 (OCC) L41=L31+L10	
Ratio (%):	48.1	@Node 2200	
Code Stress:	73.7	Allowable Stress:	153.1
Axial Stress:	34.3	@Node 3260	
Bending Stress:	98.2	@Node 2200	
Torsion Stress:	6.4	@Node 3320	
Hoop Stress:	67.2	@Node 3260	
Max Stress Intensity:	98.3	@Node 2200	

CODE STRESS CHECK PASSED : LOADCASE 42 (EXP) L42=L4-L10

Highest Stresses: (MPa	)	LOADCASE 42 (EXP) L42=L4-L10	
Ratio (%):	55.8	@Node 4120	
Code Stress:	123.0	Allowable Stress:	220.2
Axial Stress:	2.7	@Node 3140	
Bending Stress:	144.6	@Node 5320	
Torsion Stress:	19.3	@Node 6460	
Hoop Stress:	0.0	@Node 40	
Max Stress Intensity:	350.8	@Node 5021	

CODE STRESS CHECK PASSED : LOADCASE 43 (EXP) L43=L6-L10

Highest Stresses: (MPa	)	LOADCASE 43 (EXP) L43=L6-L10	
Ratio (%):	63.1	@Node 2160	
Code Stress:	163.9	Allowable Stress:	259.9

Axial Stress:	5.4	@Node	3140
Bending Stress:	162.4	@Node	4400
Torsion Stress:	68.0	@Node	4398
Hoop Stress:	0.0	@Node	40
Max Stress Intensity:	350.7	@Node	5021

CODE STRESS CHECK PASSED : LOADCASE 44 (EXP) L44=L7-L10

Highest Stresses: (MPa	)	LOADCASE 44 (EXP) L44=L7-L10	
Ratio (%):	14.6	@Node	2200
Code Stress:	30.9	Allowable Stress:	212.4
Axial Stress:	1.0	@Node	4300
Bending Stress:	29.9	@Node	2200
Torsion Stress:	6.1	@Node	4398
Hoop Stress:	0.0	@Node	40
Max Stress Intensity:	70.2	@Node	6050

CODE STRESS CHECK PASSED : LOADCASE 45 (EXP) L45=L6-L7

Highest Stresses: (MPa	)	LOADCASE 45 (EXP) L45=L6-L7	
Ratio (%):	68.9	@Node	2160
Code Stress:	179.0	Allowable Stress:	259.9
Axial Stress:	6.3	@Node	3140
Bending Stress:	176.6	@Node	4400
Torsion Stress:	74.1	@Node	4398
Hoop Stress:	0.0	@Node	40
Max Stress Intensity:	360.8	@Node	5021

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NOZZLE CHECK REPORT: Nozzle Loads Screening

Various Load Cases

LOAD CASE DEFINITION KEY

CASE 4 (OPE) W+T1+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	
20		Absolute Method								
	Limits	2160	2160	2160		1155	1155	1155		
	4(OPE)	-361	1106	-40	0.512	26	95	1083	0.938	
	10(SUS)	114	-530	-12	0.245	5	11	-192	0.166	
	11(SUS)	115	-518	-12	0.240	5	11	-182	0.157	
780		Absolute Method								
	Limits	8400	8400	6300		3780	2520	3280		
	4(OPE)	1321	-92	250	0.157	316	-879	73	0.349	
	10(SUS)	1422	-18	-21	0.169	-67	-845	-59	0.335	
	11(SUS)	1412	-18	-21	0.168	-66	-836	-58	0.332	
1240		Absolute Method								
	Limits	2160	2160	2160		1155	1155	1155		
	4(OPE)	1093	-630	-38	0.506	9	-978	191	0.847	
	10(SUS)	5	-678	10	0.314	-4	2	204	0.177	
	11(SUS)	5	-673	10	0.312	-4	2	202	0.175	
1700		Absolute Method								
	Limits	15090	15090	12000		9150	4890	6420		
	4(OPE)	1923	970	2907	0.242	-3465	-3687	-85	0.754	
	10(SUS)	2490	-18	-124	0.165	75	-903	-6	0.185	
	11(SUS)	2458	-18	-122	0.163	74	-890	-6	0.182	

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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	
1780		Absolute Method								
	Limits	15090	15090	12000		9150	4890	6420		
	4(OPE)	1201	-184	2348	0.196	-1520	-1205	35	0.246	
	10(SUS)	1301	29	391	0.086	-158	-412	236	0.084	
	11(SUS)	1267	30	396	0.084	-161	-407	225	0.083	
3820		Absolute Method								
	Limits	9600	9600	7200		5760	3840	4990		
	4(OPE)	957	-1427	-38	0.149	33	-542	1551	0.311	
	10(SUS)	223	-951	-8	0.099	-43	-10	370	0.074	
	11(SUS)	222	-948	-8	0.099	-43	-10	369	0.074	