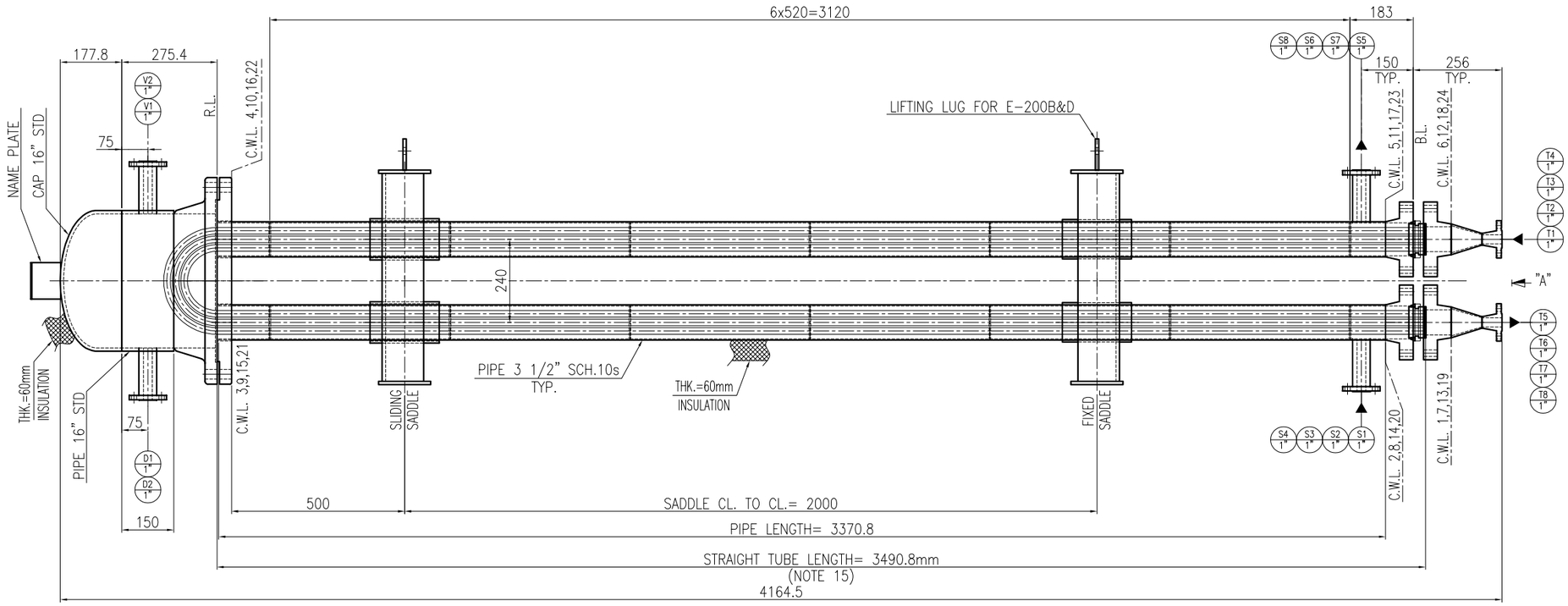
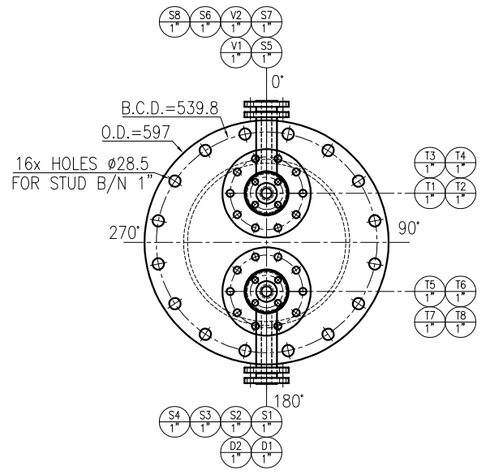


ELEVATION VIEW

SCALE 1:15



VIEW "A"

SCALE 1:15

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.
2. ALL ELEVATIONS ARE SPECIFIED FROM EQUIPMENT T.L. ±0.00
3. ALL THICKNESS SHOWN IN THE DRAWING ARE INTENDED AS MINIMUM AF
4. UNLESS OTHERWISE NOTED OUTSIDE PROJECTIONS OF NOZZLES ARE MEASURED FROM VESSEL HORIZONTAL C.L. TO THE FLANGES CONTACT FACE. FACE OF RADIAL FLANGES ON SHELL SHALL BE PARALLEL TO C.L.
5. FLANGES FACING TO BE IN ACCORDANCE WITH ASME B.16.5 FOR 24" OR LESS AND ASME B.16.47 SERIES A FOR LARGER.
6. FLANGES FACE FINISHING ARE SERRATED WITH 125 TO 250 MICRO INCH ROUGHNESS AS PER ASME B16.5 FOR 24" AND LESS. ALSO ASME B16.47 SERIES "A" FOR MORE THAN 24".
7. GASKETS SHALL BE SPIRAL WOUND WITH FLEXIBLE GRAPHITE FILLER 4.5MM, HOOP SS316, INNER & OUTER RING SS316.
8. BOLT HOLES FOR FLANGES SHALL BE STRADDLED TO NORTH-SOUTH AND/OR EQUIPMENT C.L.
9. SHELL SIDE MATERIAL FROM R.L. TO B.L. IS SS 316L.
10. ALL SHARP CORNERS WILL BE ROUNDED OFF.
11. TUBE BUNDLE IS REMOVABLE.
12. 1/1.4 FACTOR FOR EARTHQUAKE LOADS AND 0.6 FACTOR FOR WIND LOADS HAS BEEN APPLIED FOR LOAD COMBINATION AS PER ASCE-7 2010.
13. FOR MORE SAFETY 10% CONTINGENCY FACTOR IS CONSIDERED ON BASE LOADS CALCULATIONS . SO , OVER LOADS MAY CHANGE THE LOADS & MOMENTS.
14. SETTING BOLTS HAVE 300 MPa TENSILE ALLOWABLE STRESS AND 180 MPa SHEAR ALLOWABLE STRESS AS MINIMUM.
15. THE STRAIGHT TUBE LENGTH IS SUM OF INLET NOZZLE TO TUBESHEET LENGTH AND INLET NOZZLE TO BENDING LINE+3mm.
16. ALL REINFORCED PAD HAVE 1/4" NPT TELLTAIL HOLE WHICH WILL BE PLUGGED WITH GREASE AFTER THE HYDRO TEST.
17. ALL REINFORCED PAD WILL BE AIR LEAK TESTED AT 1 BARG BY USING SOAP SOLUTION.
18. PAINTING WILL BE PERFORMED BASED ON "SURFACE PREPARATION AND INTERNAL/EXTERNAL PAINTING PROCEDURE DOC. NO. BK-GCS-MF-120-QC-PR-0004"
19. PWHT WILL BE PERFORMED BASED ON "PWHT PROCEDURE DOC NO. BK-CGS-MF-120-QC--PR-0006".
20. ALL PRESSURE PARTS BUTT WELDED JOINTS ARE FULLY RADIOGRAPHED.
21. ALL WELDS ARE CONTINUOUS UNLESS OTHERWISE NOTED.
22. WHERE IN ISOLATED CASES REINFORCING PADS COVER VESSEL WELD SEAMS THESE WILL BE GROUND FLUSH AND FULLY RADIOGRAPHED FOR A DISTANCE OF 100MM MEASURED EACH SIDE OF THE COVERED WELD AREA PRIOR TO THE ATTACHMENT OF THE PAD.
23. ALL INTERNAL WELDS WILL BE SMOOTH GRINDED.
24. VESSEL HAS BEEN DESIGNED FOR FIELD HYDROTEST IN CORRODED CONDITION.
25. ALL WET PART MATERIALS MEET "SPECIFICATION FOR MATERIAL REQUIREMENTS IN SOUR SERVICE DOC NO. "BK-GNRAL-PEDCO-000-PI-SP-0008"
26. ALL PRESSURE PARTS ARE NORMALIZED AND COMPLY WITH NACE MR0175/ISO 15156.
27. THE EQUIPMENT IS LOCATED ON SKID AND ELEVATION OF T.O.G. WILL BE FINALIZED LATER.

DESIGN DATA

DESIGN CODE	ASME VIII- DIV I 2019	
SERVICE	RICH-LEAN GLYCOL (E-200)	
TEMA TYPE	HAIRPIN	
ORIENTATION/QTY.	HORIZONTAL/4	
SHELL IN SERIES/PARALLEL	4/1	
SIZE (mm)	95.5x3490.8	
DESIGN DUTY (W)	16100	
SURFACE GROSS/EFF. (m2)	1.76/1.68	
	SHELL SIDE	TUBE SIDE
FLUID	LEAN TEG	RICH TEG
VOLUME (m3)	0.1	0.01
DENSITY (IN/OUT) (Kg/m3)	981.7 L/994.7 L	4.6 V, 993.4 L/ 4 V, 982.1 L
NUMBER OF PASS	1	1
OPERATING PRESSURE (barg)	0.3	3.3
DESIGN PRESSURE (barg)	5.8	7.5
TEST PRESSURE (barg)	8.2	10
MAWP (barg)	11	12
OPERATING TEMPERATURE (IN/OUT) (°C)	191.5/119.4	73.6/140.05
DESIGN TEMPERATURE (°C)	220	165
MDMT (°C)	+5	+5
MEAN METAL TEMPERATURE (°C)	147.7	144.3
CORROSION ALLOWANCE (mm)	3	0
RADIOGRAPHY (SHELL/HEAD)	FULL/FULL	FULL/FULL
JOINT EFFICIENCY (SHELL/HEAD)	1/1	1/1
PWHT	YES	NO
STRESS RELIEVING	NO	NO
INSULATION (DENSITY/TYPE/THK.) (mm)	125/HOT/60	125/HOT/60
FIREPROOFING (DENSITY/THK.) (mm)	-/-	-/-
EXTERNAL PAINTING	NOTE 18	NOTE 18
EARTHQUAKE CONDITIONS	ASCE 7-10 : Fa=1.111, Fv=1.575, Ss=1.377g,S1=0.367g,Site:C,I=1.25, R=3,z/h=0,Sds=1.02g,Sd1=0.385g	
WIND CONDITIONS	ASCE 7-10 : Wind Speed=120km/h, I.F.=1, Surface Roughness=C	

TUBE BUNDLE DATA

TUBE QTY.	4U	BAFFLE TYPE	SINGLE SEGMENTAL
TUBE O.D. (mm)	19.05	BAFFLE ORIENTATION	HORIZONTAL
TUBE THK. (mm)	1.65 (min)	BAFFLE CUT	35%
TUBE PITCH (mm)	28.575	BAFFLE/FULL SUPPORT QTY.	14/-
OUTER TUBE DIAMETER (mm)	68.5	TIE ROD QTY.	2
TUBE LAYOUT	30°	SEALING RING/ROD QTY.	-
TUBE LENGTH (STRAIGHT) (mm)	3490.8	PASS PARTITION QTY.	-
TUBE TO TUBESHEET JOINT:	EXPANDED & FULL STRENGTH WELD (2GROOVES)		

MATERIAL TABLE

SHELL SIDE (NOTE 9)		TUBE SIDE	
DESCRIPTION	DESIGNATION	DESCRIPTION	DESIGNATION
BARREL	SA-106 Gr.B N/SA-312 TP 316L	BARREL	SA-312 TP316L
COVER HEAD	SA-234 WPB N	COVER HEAD	-
GIRTH FLANGE	SA-105 N/SA-182 F316L	GIRTH FLANGE	SA-182 F316L
NOZZLE NECK (PIPE/PLATE)	SA-106 Gr.B N/SA-312 TP316L	NOZZLE NECK (PIPE/PLATE)	SA-312 TP316L/-
NOZZLE FLANGE/FORGING	SA-105 N/SA-182 F316L	NOZZLE FLANGE/FORGING	SA-182 F316L
WELDING FITTING	-	WELDING FITTING	SA-403 316L
GENERAL		**TUBE BUNDLE**	
SUPPORT	-	TUBESHEET	SA-182 F316L
NAME PLATE	S.S.304	TUBE	SA-213 TP316L
PARTITION PLATE	-	BAFFLE & SUPPORT	SS 316L
EARTHING LUG	S.S.304	TIE ROD	SS 316L
TEST RING	-	IMPINGEMENT PLATE	-
BOLTS/NUTS MATERIAL		**GASKET MATERIAL**	
SETTING BOLTS	SA-325M (NOTE 14)	SHELL & CHANNEL NOZZLE FLANGE	(NOTE 7)
EXTERNAL(BOLTS/NUTS)	SA-193-B7/ SA-194-Gr-2H	SHELL & CHANNEL/TUBESHEET	(NOTE 7)
INTERNAL(BOLTS/NUTS)	-		

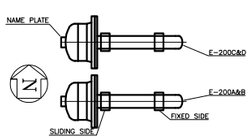
WEIGHTS FOR EACH EQUIPMENT (kg)

FABRICATED	430	SHOP HYDROTEST	530
OPERATING	1060	FIELD HYDROTEST	530
SHUTDOWN (EMPTY)	967	INTERNALS	-
TUBE BUNDLE	26	LADDERS & PLATFORMS	-

LOADING DATA ON EACH SADDLE (NOTE 12 & 13)

WIND		SEISMIC	
SHEAR (N)	MOMENT (N.m)	SHEAR (N)	MOMENT (N.m)
330	211	3300	2112

KEY PLAN



- ☐ NO COMMENT: Documents/Drawings were checked by PIDEC and further steps can be followed. Upon Putting No Comment on vendor documents by PIDEC, VDMS will lock it and there is not possible to upload any new revision,in this case vendors have to send their request through email to VDC for activating it.
- ☐ COMMENT AS MARKED, Manufacturing May Proceed: Means documents/drawings were checked by PIDEC and comments must be considered by vendor. Fabrication can proceed accordingly.
- ☐ MAJOR COMMENT AS MARKED,Manufacturing shall be on hold for the next revision: Means documents/ drawings were checked by PIDEC and marked comments must be considered by vendor.vendor shall revise documents/drawings as per comments and the new revision documents/drawings must be reissued prior to fabrication.
- ☐ REJECTED, new document with the same revision No. shall be issued : Means documents/drawings were checked and it is not comply with purchase requisition requirements.
- ☐ FOR INFORMATION.

Name: Signature: Date:	Req. No.:	Seq. No.:

PIDEC review & comments does not absolve the vendor of the responsibility for the correct design, manufacturing and operation of the equipment.

DE	EXT	
Eng. Phase	Purpose of Distribution (POD)	Purpose of Issue (POI)

REV.	DATE	ISSUED FOR APPROVAL	PREP.	CHK.	APP.	AUT.
V00	DEC.2024	ISSUED FOR APPROVAL	MFS	M.FAKHARIAN	S.FARAMARZPOUR	**.**

REV.	DESCRIPTION	BY	DATE	BY	DATE
		CHECKED		REV. APPR.	

PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS COMPRESSOR STATION

PROJECT NO.: 971020

EPC CONTRACTOR: HIRGAN ENERGY – DESIGN & INSPECTION COMPANIES

EPD/EPC CONTRACTOR (GC): PETROIRAN DEVELOPMENT COMPANY — PEDCO

BINAK OILFIELD DEVELOPMENT
SURFACE FACILITIES
GAS COMPRESSOR STATION

DATE	SCALE	DRAWING BY	CHECKED BY	PROJECT ENG.

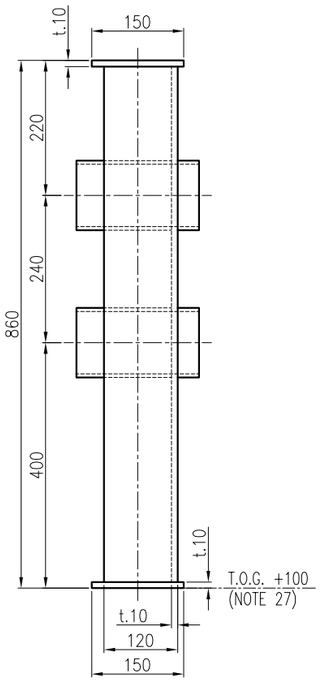
DRAWING TITLE: GENERAL ARRANGEMENT FOR RICH-LEAN GLYCOL H.E. (E-200)

NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED

APPROVED FOR CONSTRUCTION | BY: | DATE:

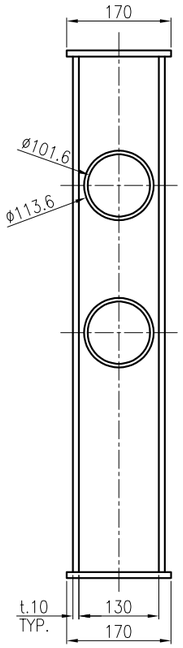
SCALE	SIZE	DRAWING NO.	SHEET NO.	REV.
NTS	A3	BK-GCS-MF-120-ME-DW-0020	1 OF 3	V00

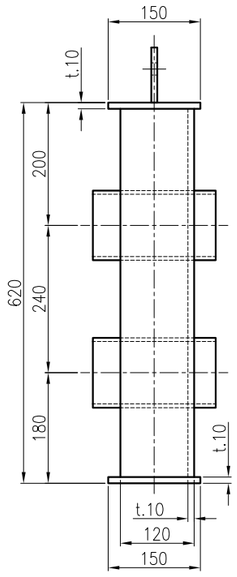
BUDGET REF.	LOCATION	SIZE	CLASS	SERIAL NO.	SHEET	REVISION

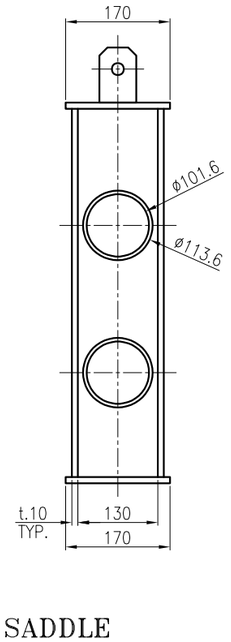


DETAIL OF SADDLE
FOR E-200A&C

SCALE 1:10

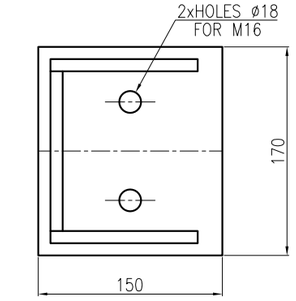






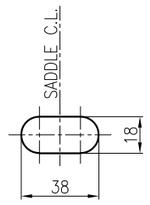
DETAIL OF SADDLE
FOR E-200B&D

SCALE 1:10



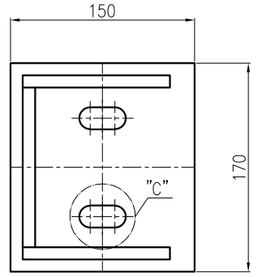
FIXED BASE PLATE

SCALE 1:5



DETAIL "C"

SCALE 1:3



SLIDDING BASE PLATE

SCALE 1:5

ABBREVIATIONS & LEGEND			
T.L.	TANGENT LINE	N	NORMALIZED
B.L.	BASE LINE	P.W.H.T.	POST WELD HEAT TREATMENT
C.O.G.	CENTER OF GRAVITY	R.F.	RAISED FACE
EL.	ELEVATION	S.R.	STRESS RELIEVE
F.B.	FLAT BAR	S.F.	STRAIGHT FLANGE
L.L.H.	LIQUID LEVEL HIGH	T.L.	TANGENT LINE
L.L.H.H.	LIQUID LEVEL HIGH HIGH	T.O.G.	TOP OF GROUTING
L.L.L.	LIQUID LEVEL LOW	W.N.	WELDING NECK
L.L.L.L.	LIQUID LEVEL LOW LOW	L.W.L.	LONGITUDINAL WELDING LINE
N.L.L.	NORMAL LIQUID LEVEL	C.W.L.	CIRCUMFERENTIAL WELDING LINE
M.A.W.P.	MAX. ALLOWABLE WORKING PRESSURE	L.W.N.	LONG WELDING NECK
M.D.M.T.	MIN. DESIGN METAL TEMP.	R.T.	RADIOGRAPHY TEST
D.P.	DESIGN PRESSURE	INT.	INTERNAL
J.E.	JOINT EFFICIENCY	EXT.	EXTERNAL
L.	LIQUID	H.P.P.	HIGHEST POINT OF PAVING
V.	VAPOR	THK.	THICKNESS
DWG	DRAWING	N.A.	NOT APPLICABLE
R.L.	REFERENCE LINE	–	–

N O Z Z L E T A B L E

MARK	FLUID / DESCRIPTION	QTY.	SIZE	RATING	TYPE	FACING	SCH./ THK.	REINFORCE PAD DIA.	REINFORCE PAD THK.	PROJECTION (NOTE 2)	REMARK
T1~T4	RICH TEG INLET	4	1"	150#	W.N.	R.F.	STD/–	–	–	SEE DWG.	–
T5~T8	RICH TEG OUTLET	4	1"	150#	W.N.	R.F.	STD/–	–	–	SEE DWG.	–
S1~S4	LEAN TEG INLET	4	1"	150#	L.W.N.	R.F.	–/12.8	–	–	200	–
S5~S8	LEAN TEG OUTLET	4	1"	150#	L.W.N.	R.F.	–/12.8	–	–	200	–
V1,V2	VENT	2	1"	150#	L.W.N.	R.F.	–/12.8	–	–	345	–
D1,D2	DRAIN	2	1"	150#	L.W.N.	R.F.	–/12.8	–	–	345	–

REV.	DATE	DESCRIPTION	BY	DATE	BY	DATE
			CHECKED		REV. APPR.	
V00	DEC.2024	ISSUED FOR APPROVAL	MFS	M.FAKHARIAN	S.FARAMARZPOUR	**.**
REV.	DATE	P.O.I.S	PREP.	CHK.	APP.	AUT.

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PROJECT NO.: 971020

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BINAK OILFIELD DEVELOPMENT
SURFACE FACILITIES
GAS COMPRESSOR STATION

DATE	SCALE	DRAWING BY	CHECKED BY	PROJECT ENG.

DRAWING TITLE: GENERAL ARRANGEMENT FOR RICH-LEAN GLYCOL H.E. (E-200)

NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED

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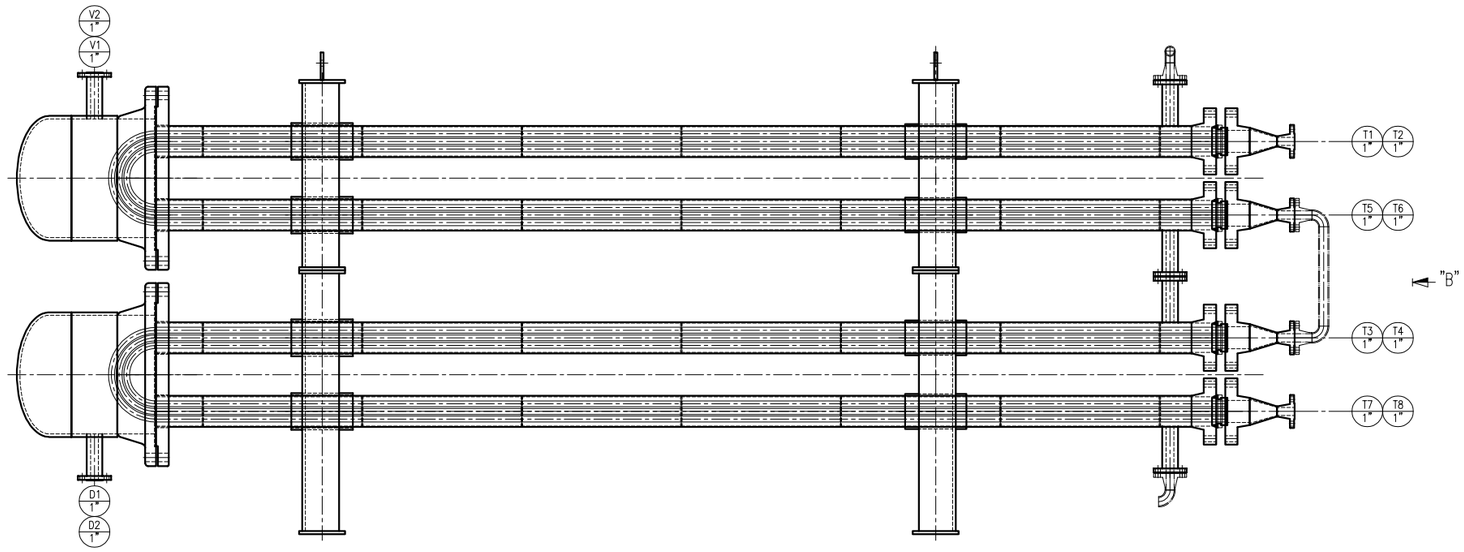
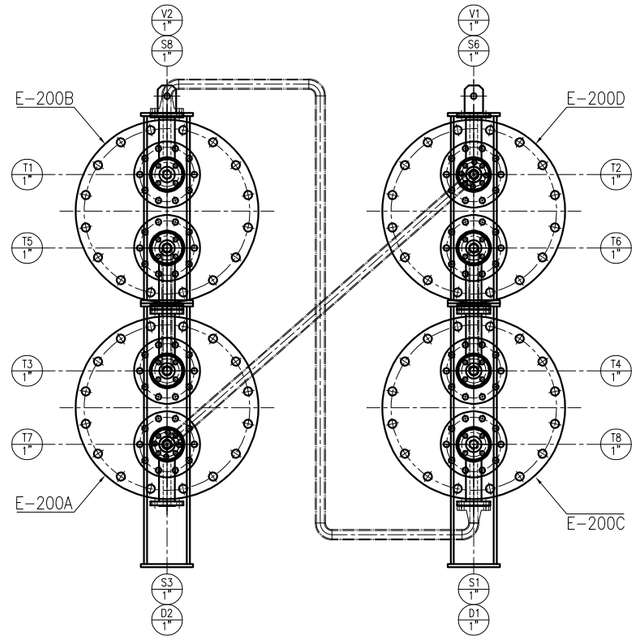
SCALE	SIZE	DRAWING NO.	SHEET NO.	REV.
NTS	A3	BK-GCS-MF-120-ME-DW-0020	2 OF 3	V00

BUDGET REF.	LOCATION	SIZE	CLASS	SERIAL NO.	SHEET	REVISION



ASSEMBLY VIEW

SCALE 1:20



ASSEMBLY VIEW

SCALE 1:20

VIEW "B"

SCALE 1:20

REV.	DATE	P.O.I.S	PREP.	CHK.	APP.	AUT.
V00	DEC.2024	ISSUED FOR APPROVAL	MFS	M.FAKHARIAN	S.FARAHARZPOUR	**.**

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NTS	A3	BK-GCS-MF-120-ME-DW-0020	3 OF 3	V00

BUDGET REF.	LOCATION	SIZE	CLASS	SERIAL NO.	SHEET	REVISION