Evaporator (Chiller) Drawing

Code1	■ **No Comment/ Approved** (Applicable Only for "FOR REVIEW" and "For Approval" Documents) No comment and the document are released for Manufacturing.
Code2	☐ **No Comment/ Approved with Note(s)** Vendor/Sub-Contractor shall correct, revise and resubmit the document. The document is released for Manufacturing if changes incorporated.
Code3	☐ **Commented** Vendor/Sub-Contractor shall correct, revise and resubmit the document by the date specified. The document shall be revised under the Status of "R: Revised Issue". All corrected documents shall be resubmitted before starting the Manufacturing Process.
Code 4	☐ **Not Accepted (Rejected)** Vendor/Sub-Contractor shall re-work / re-design / re-specify the contents of the document according to the comments / reasons for rejection. All corrected documents shall be resubmitted before starting the manufacturing. Vendor/Sub-Contractor shall not proceed with subsequent works of Material Supply or Manufacturing until receiving Code1/Code2 or No Code from PURCHASER. Vendor/Sub-Contractor shall resubmit the document with the same revision within 6 working days after receiving comments.
No code	☐ **No Code** (Applicable Only for "For Information" Documents and "As Built DWGs") Document has been submitted for PURCHASER's Information (FI). Consistency, completeness and correctness of document content is in Vendor/Sub-Contractor's responsibility.
Above checking results by EIED shall in no way relieve Vendor of any liability, obligation and responsibility out of the purchase order and the mutual agreement in writing.	
EIED Energy Industries Engineering & Design co.	**Date:** Dec. 07, 2025 **Dept.:** MA **Signature:** F.Hamooni

Rev.	DATE	PURPOSE OF ISSUE	PREPARED	CHECKED	APPROVED
05					
04					
03	18-Nov-25	IFR	N.B	F.T	A.M
02	25-Oct-25	IFR	N.B	F.T	A.M
01	7-Oct-25	IFR	N.B	F.T	A.M
00	30-Aug-25	IFR	N.B	F.T	A.M

Revision Index

Page	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04
1	X	X	X	X	
2	X	X	X	X	
3	X	X	X	X	
4		X	X	X	
5		X	X	X	
6		X	X	X	
7		X	X	X	
8		X	X	X	
9		X	X	X	
10		X	X	X	
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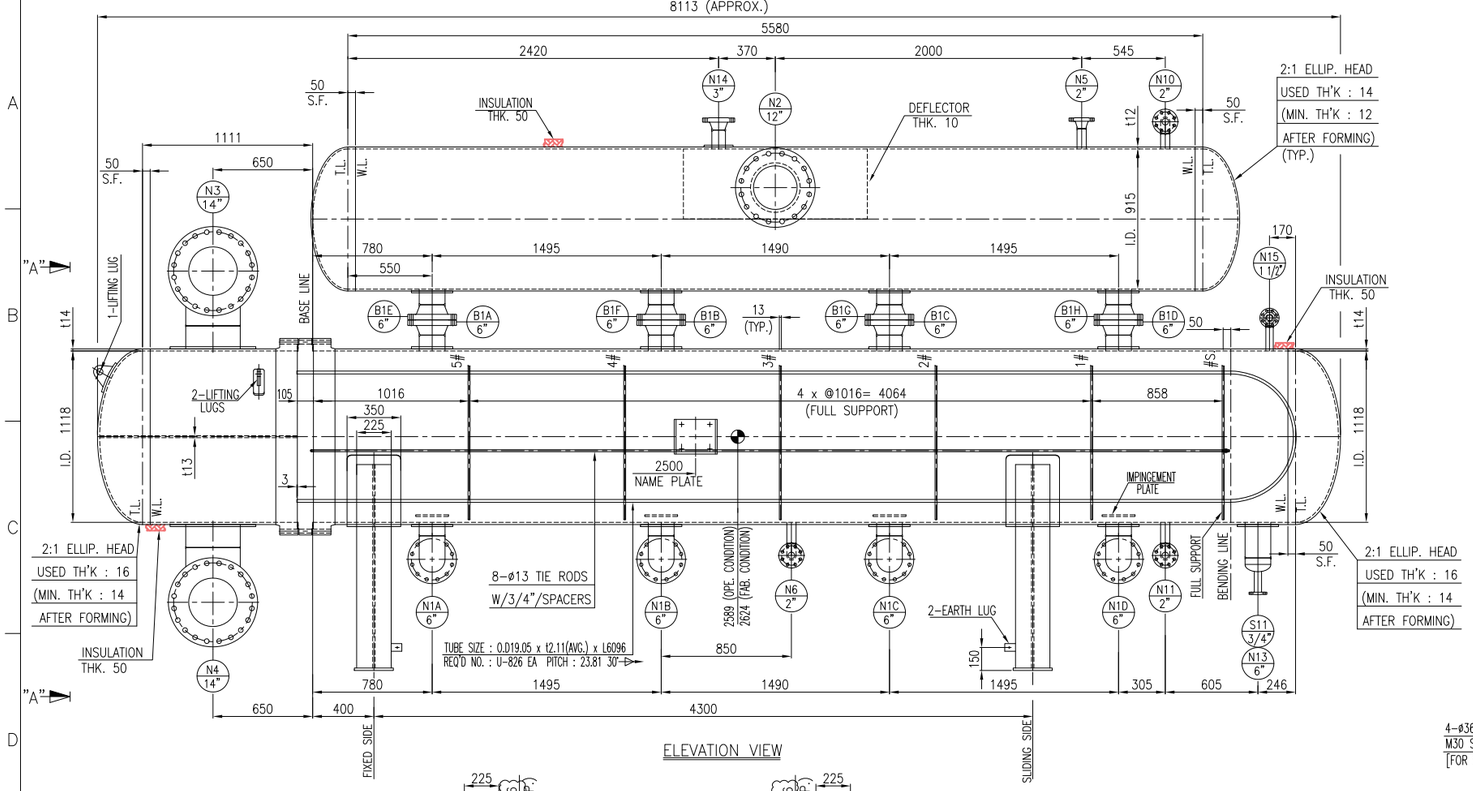
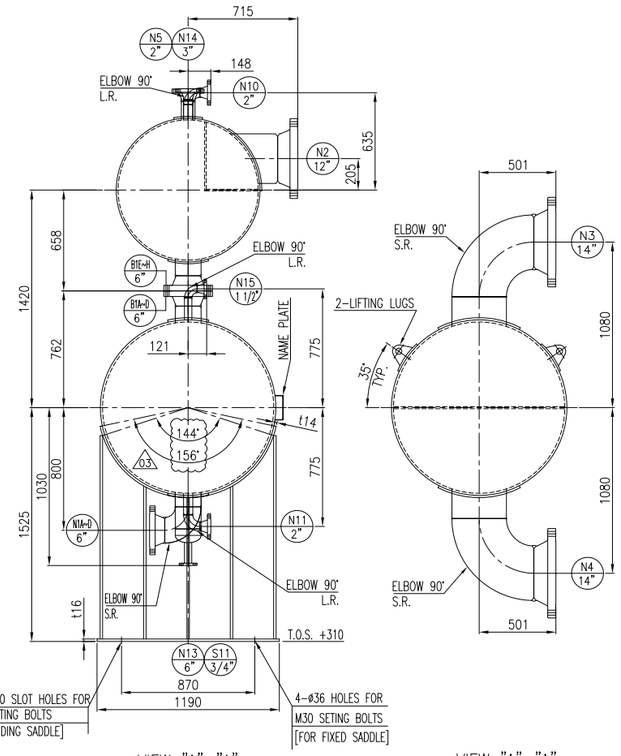
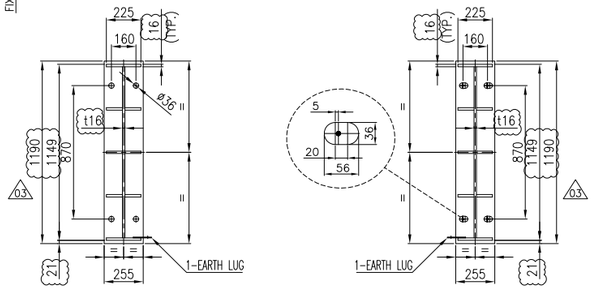
Page	Rev00	Rev. 01	Rev. 02	Rev. 03	Rev. 04





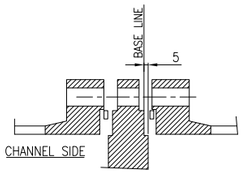
VIEW "A"–"A"
(FOR SHELL SIDE ONLY)

VIEW "A"–"A"
(FOR CHANNEL SIDE ONLY)



FIXED SIDE

SLIDING SADDLE



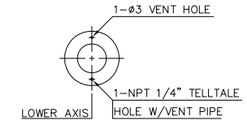
BASE LINE DETAIL

NOZZLE LOAD								
NOZZLE	SIZE	RATING	FORCE (KN)			MOMENT (KN-m)		
			FX	FZ	FY	MX	MZ	MY
N3/N4	14"	300#	18.96	18.96	18.96	18	18	18
N2	12"	300#	15.72	15.72	15.72	13.44	13.44	13.44
N1A~D B1A~D	6"	300#	6.84	6.84	6.84	3.48	3.48	3.48
N14	3"	300#	3.48	3.48	3.48	0.84	0.84	0.84

03

NOTE

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. UNLESS OTHERWISE NOTED OUTSIDE PROJECTION OF NOZZLES ARE MEASURED FROM C.L. OF EXCHANGER TO THE EXTREME FACE OF NOZZLE .
3. ALL WELDS CONTINUOUS EXCEPT NOTED .
4. BOLT HOLES FOR FLANGES SHALL BE STRADDLED TO EQUIPMENT MAIN AXIS .
5. ALL R.F. FLANGES SHALL HAVE SMOOTH FINISH FACING WITH RA= 3.2 µm TO RA= 6.3 µm
6. BASE LINE (B.L.) INDICATES THE GASKET CONTACT SURFACE OF TUBE SHEET .
7. REINFORCING PADS FOR NOZZLES SHALL BE TAPPED WITH AT LEAST ONE (1) TELL TALE HOLE NPT 1/4" WITH VENT PIPE.



8. DIMENSIONS REFER TO BAFFLES ARE MEASURED FROM C.L.OF EACH PLATE.
9. GASKET MATERIAL FOR ASME B16.20: SPIRAL WOUND (t4.5)
   –FILLER: GRAPHITE
   –INNER RING: 304 S.S.
   –HOOP: 304 S.S.
   –OUTER RING: 304 S.S.
10. GASKET MATERIAL: SPIRAL WOUND (t4.5)
   –FILLER: GRAPHITE
   –INNER RING: 304 S.S.
   –HOOP: 304 S.S.
   –OUTER RING: 304 S.S.
11. SPARE PART

	CONSTRUCTION & COMMISSIONING
GASKETS	100%
STUD BOLTS & NUTS	5% (MIN. 2SETS)

12. ALL EXPOSED SURFACE SHALL BE PAINTED AS FOLLOWS: EXPOSED SURFACE FOR EXTERNAL PARTS: VD–GPIC–MA–3029–3029–0063
    EXPOSED SURFACE OF INTERNAL: NOT PARTS REQUIRED
13. 1/1.4 FACTOR FOR LOAD COMBINATIONATION HAS BEEN APPLIED
14. TUBES SHALL BE SEAMLESS
15. GASKET CONTACT SURFACE OF TUBE SHEET & GIRTH FLANGE: RA= 3.2 to 6.3 µm (125 to 250 µin. AARH)

REFERENCE DOCUMENTS	DOC. NO.
FOUNDATION LOADING DATA	VD–GPIC–MA–3029–3029–0071
GENERAL ARRANGEMENT DRAWING	VD–GPIC–MA–3029–3029–0062

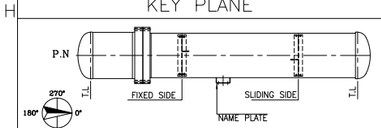
TABLE FOR FOUNDATION LOAD DATA (CHILLER)

SEISMIC (NOTE 13)	
SHEAR (kgf)	MOMENT (kgf–m)
5085	7755
WIND	
SHEAR (kgf)	MOMENT (kgf–m)
964	1470
BUNDLE PULLING LOAD	17250 kgf

LEGEND

- B.L. = BASE LINE
- C.L. = CENTER LINE
- C.O.G. =CENTER OF GRAVITY
- EL. = ELEVATION
- M.A.W.P. = MAXIMUM ALLOWABLE WORKING PRESSURE
- M.D.M.T. = MINIMUM DESIGN METAL TEMP.
- P.W.H.T. = POST WELD HEAT TREATMENT
- R.F. = RAISED FACE
- PFHT = POST FORMING HEAT TREATMENT
- S.F. = STRAIGHT FLANGE
- T.L. = TANGENT LINE
- T.O.S. = TOP OF STRUCTURE
- W.L. = WELD LINE
- W.N. = WELDING NECK
- L.W.N. = LONG WELDING NECK

KEY PLANE



M A T E R I A L S

SHELL		GENERAL	
BARREL	SA–516 70N	SLIDING BAR/ROD	SA–516 70N/SA–36
FLANGES	SA350–LF2 CL.1N	SEALING STRIP	–
NOZZLE FROM PIPE	SA333–6	DUMMY TUBE/SEAL ROD	–
NOZZLE FROM PLATE	–	BLINDED NOZZLE BOLT/NUT	SA320 L7/SA194–4
NOZZLE FLANGES/FORGED NOZZLE	SA350–LF2 CL.1N	BLINDED NOZZLE GASKET	(NOTE 9)
COUPLINGS & PLUGS	–	TEST RING	–
NOZZLE REINF. PAD	SA–516 70N	GASKETS	
EXCHANGERS SUPPORTS	SA–516 70N	SHELL/COVER	–
SUPPORT WEAR PLATE	SA–516 70N	SHELL/TUBESHEET	(NOTE 10)
STIFFENING RINGS	–	CHANNEL/TUBESHEET	(NOTE 10)
EXPANSION JOINT	–	CHANNEL/COVER	–
LINING	–	FLOATING HEAD	–
SHELL COVER		FLOATING HEAD	
BARREL	–	COVER	–
COVER	SA–516 70N	FLANGES	–
FLANGES	–	SPLIT RING	–
CHANNEL		BOLTS & NUTS	
BARREL	SA–516 70N	SHELL/COVER	–
FLANGES	SA350–LF2 CL.1N	SHELL/CHANNEL	SA320–L7/SA194–4
COVER	SA–516 70N	CHANNEL/COVER	–
FLAT COVER	–	FLOATING HEAD	–
NOZZLE FROM PIPE	SA333–6	SETTING BOLTS/NUTS	SA193 B7 / SA194 2H
NOZZLE FROM PLATE	SA–516 70N	TUBE BUNDLE	
NOZZLE FLANGES/FORGED NOZZLE	SA350–LF2 CL.1N	TUBES	SA334–6
COUPLINGS & PLUGS	–	TUBESHEETS	SA350–LF2 CL1
NOZZLE REINF. PAD	SA–516 70N	BAFFLES/SUPPORTS/IMP. PLATE	SA 516–70N
PARTITION PLATES	SA–516 70N	TIE RODS & SPACERS	SA 36/SA334–6

D E S I G N D A T A

CODE	ASME SEC. VIII DIV.1 (2021 ED.)		TYPE	BXU/HORIZONTAL	
TEMA CLASS	TEMA 10TH ED. (CLASS "R")		CODE STAMP	NO	
LOCAL REGULATION	NO		WIND / SEISMIC CODE	ASCE 7–2016	
FLUID	PROPYLENE	HEXANE	DESIGN CATEGORY/SITE CLASS	D/C	
DESIGN (INT./EXT.) PRESS. barg	25/F.V.	25/F.V.	WIND EXPOSURE / VELOCITY (km/h)	C / 202	
DESIGN (INT./EXT.) TEMP. (°C)	125	125	Fa/Fv/Ss/S1/Sds/Sd1	1.09/1.25/1.11/0.4/0.81/0.33	
DESIGN (INT./EXT.) STEAM OUT CONDITION	–	–	SEISMIC IMPORTANCE FACTOR/RESPONSE FACTOR	1.25 / 3	
OPER. (IN/OUT) PRESS. barg	1.617	6	INSULATION (TYP/THK. mm)	COLD/50	COLD/50
OPER. (IN/OUT) TEMP. (°C)	-24.43/-24.05	-16/-20.5	INSULATION DENSITY Kg/m³	230	230
CORROSION ALLOWANCE (mm)	3	3	FIRE PROOFING THK./DENSITY	–	Kg/m³
JOINT EFFICIENCY (S/H)	1.0/1.0	1.0/1.0	PAINTING	NOTE 12	
RADIOGRAPHY (S/H)	FULL/FULL	FULL/FULL	TUBE TO TUBESHEET JOINT	HEAVY EXPANDED WITH 2 GROOVES WITH SEAL WELD	
HYDRO. TEST PRESS. (SHOP/FIELD) barg	32.5/32.5	32.5/32.5	NO. OF PASS	1(ONE)	2(TWO)
HYDRO. TEST TYPE	UG–99b (footnote 35)	UG–99b (footnote 35)	WEIGHT BUNDLE (KG)	11500	
PNEUM. TEST PRESS. barg	–	–	WEIGHT ERECTION (KG)	17400 (EXCHANGER)	
M.D.M.T(REQUIRED/CALCULATED) (°C)	-45/-46	-45/-46		2950 (PIPE HEADER)	
M.A.W.P (HOT & CORRODED) barg	25	25	WEIGHT FABR. (KG)	16300 (EXCHANGER)	
M.A.P (NEW & COLD) barg	25	25		2800 (PIPE HEADER)	
P.W.H.T	NO	NO	WEIGHT OPER. (KG)	24700	
IMPACT TEST	NO	NO	WEIGHT SHOP TEST (KG)	25650	
PFHT (FOR HEAD) 03	YES	YES	WEIGHT FIELD TEST (KG)	25400	
	SHELL SIDE	TUBE SIDE	SURFACE AREA/SHELL (M²)	624.6	
			VOLUME (M³)	4.8	3.3
			FLUID DENSITY (kg/m³)	579.45	698.16
			MEAN METAL TEMP. (°C)	–	–
				SHELL SIDE	TUBE SIDE

NOZZLES TABLE

ITEM	SERVICE	QTY.	SIZE	CONNECTION TYPE	CONNECTION RATING	CONNECTION FACING (NOTE 5)	NECK SCH.	NECK THK.	REINF. PAD DIA.	REINF. PAD THK.	PROJ. (NOTE 2)	REMARKS
N1A~D	PROPYLENE INLET	4	6"	W.N.	300#	R.F.	80	–	270	14	SEE DWG.	
B1A~D	PROPYLENE INTERMEDIATE	4	6"	W.N.	300#	R.F.	80	–	270	14	762	
B1E~H	PROPYLENE INTERMEDIATE	4	6"	W.N.	300#	R.F.	80	–	270	12	658	
N2	PROPYLENE OUTLET	1	12"	W.N.	300#	R.F.	80	–	480	12	SEE DWG.	
N3	PROCESS INLET	1	14"	W.N.	300#	R.F.	–	14	560	14	SEE DWG.	
N4	PROCESS OUTLET	1	14"	W.N.	300#	R.F.	–	14	560	14	SEE DWG.	
N5	PROPYLENE VENT	1	2"	W.N.	300#	R.F.	160	–	–	–	660	
N6	PROPYLENE DRAIN	1	2"	W.N.	300#	R.F.	160	–	–	–	SEE DWG.	
N10	LEVEL TRANSMITTER	1	2"	W.N.	300#	R.F.	160	–	–	–	SEE DWG.	
N11	LEVEL TRANSMITTER	1	2"	W.N.	300#	R.F.	160	–	–	–	SEE DWG.	
N13	OIL RECOVERY BOOT	1	6"	–	–	–	80	–	270	14	SEE DWG.	
N14	RELIEF VALVE	1	3"	W.N.	300#	R.F.	160	–	190	12	660	
N15	SPARE PURGE	1	1 1/2"	W.N.	300#	R.F.	160	–	–	–	SEE DWG.	
S–11	OIL RECOVERY BOOT	1	3/4"	L.W.N.	300#	R.F.	–	14.25	–	–	SEE DWG.	

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The above checking result by EIED shall in no way relieve Vendor of any liability, obligation and responsibility out of the purchase order and the mutual agreement in writing.					
EIED	DATE : DEPT: Signature :				
CV	PI	EL	IN	ME	MA
ST	EU	PR	DA	HY	TL

REV.	DATE (DD.MMM.YY)	Purpose of Issue	Prepared	Checked	Approved
03	18.Nov.25	IFR	D.SH	F.T	A.M
02	25.Oct.25	IFR	D.SH	F.T	A.M
01	07.Oct.25	IFR	D.SH	F.T	A.M
00	26.Aug.25	IFR	D.SH	F.T	A.M

Gachsaran Polymer Industries Company

Gachsaran Polymer Industries Company
HDPE Plant
CONTRACT NO.: GPI–CON–99–008

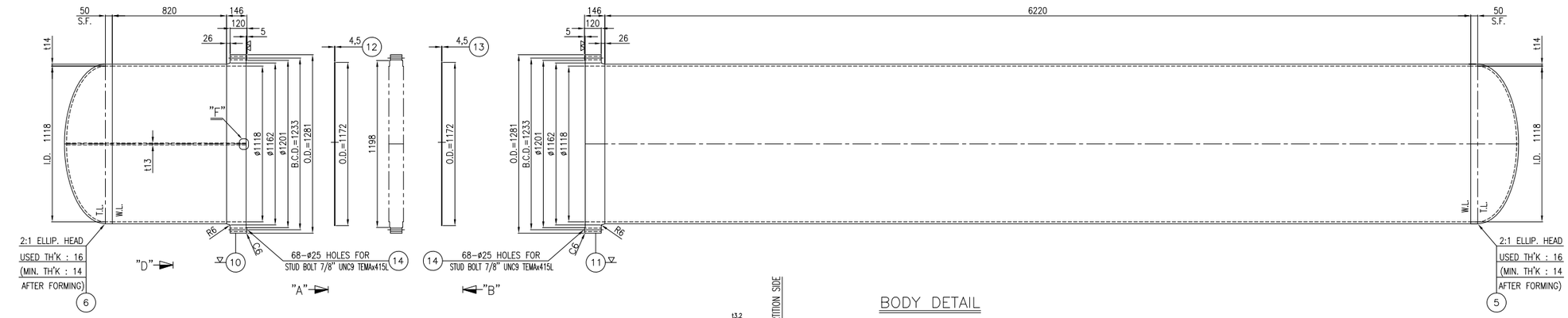
EIED

PO No.: GPIC–PT–MA–PO–000–3029 | SCALE: 1:1

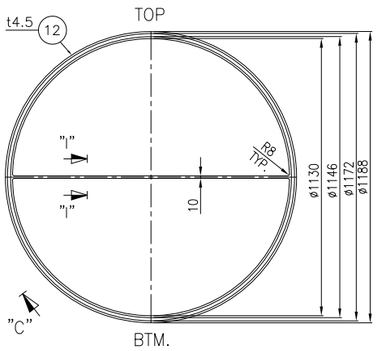
DRAWING TITLE:

EVAPORATOR (CHILLER) DRAWING (E–6101)
(GENERAL ARRANGEMENT)

DRAWING NO.	REV.	SHEET NO.	SIZE
VD–GPIC–MA–3029–3029–0089	03	1 OF 8	A3



BODY DETAIL



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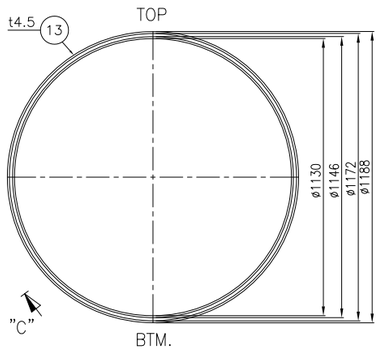

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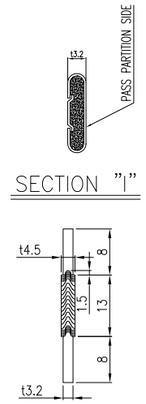
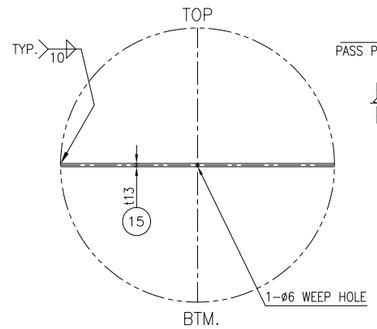


SECTION "I"

SECTION "C"



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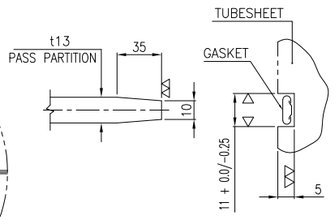
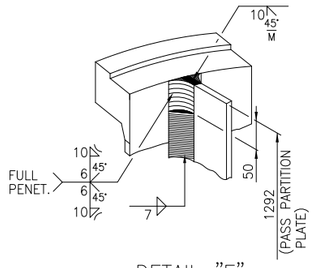


GASKET SEATING



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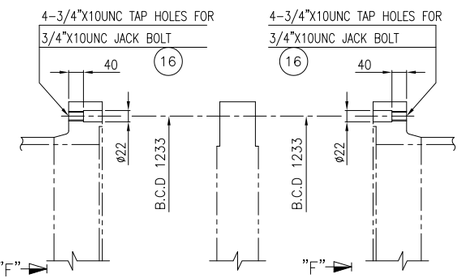
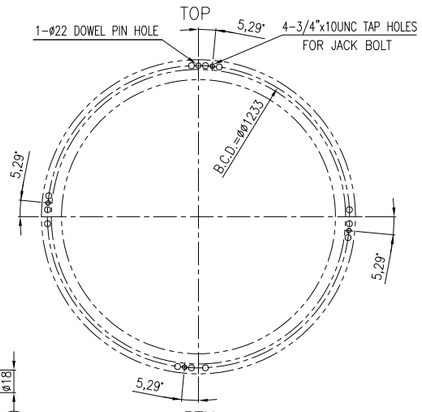


JACK BOLT HOLE DETAIL



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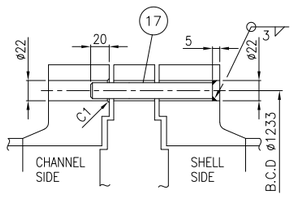
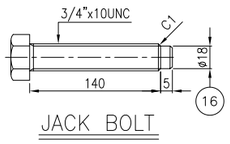
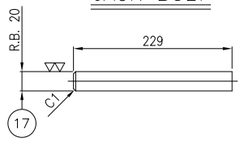
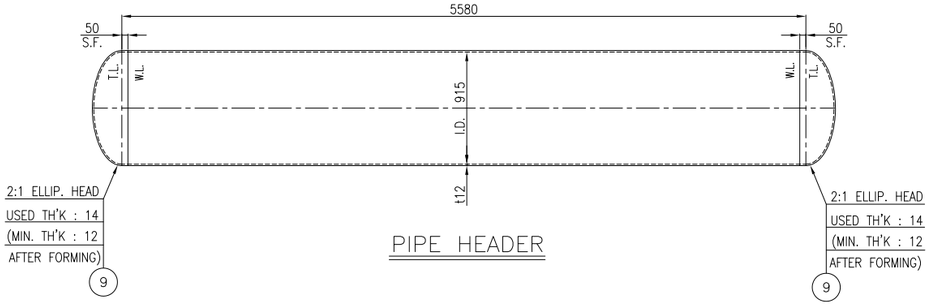


DOWEL PIN ASSEMBLY
(AT : TOP)

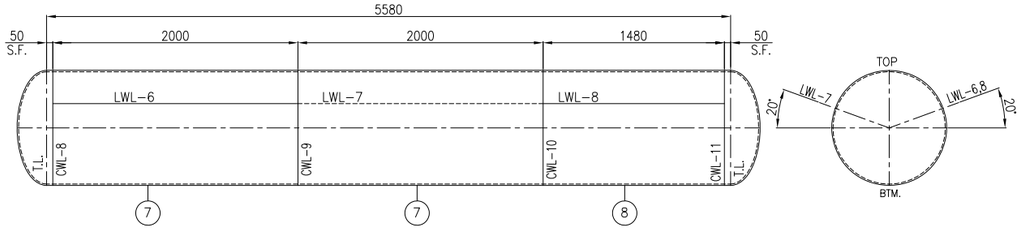


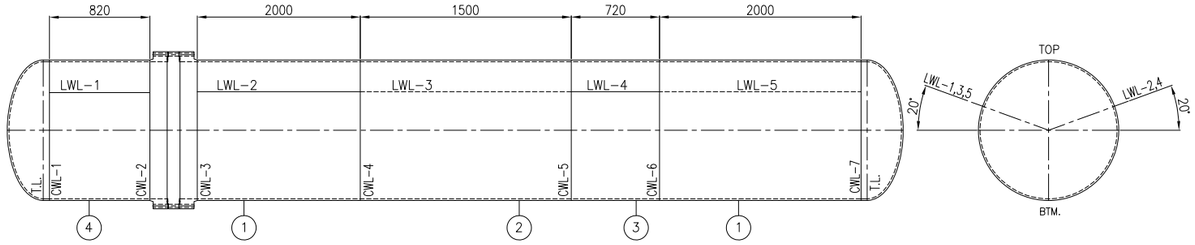
JACK BOLT

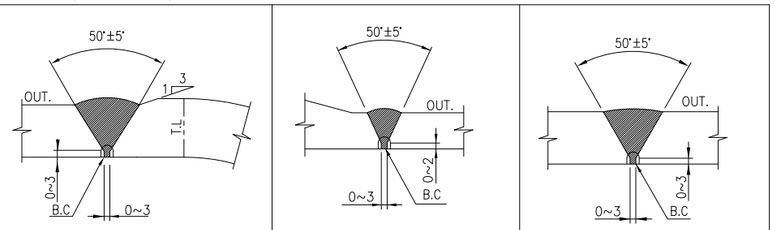




PIPE HEADER







CWL-1,7,8,11 | CWL-2,3 | CWL-4,5,6,9,10 LWL-1~8

NOTE

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. GASKET MATERIAL FOR : SPIRAL WOUND (t4.5)
   -FILLER : GRAPHITE
   -HOOP : S.S. 316L
   -INNER RING : S.S. 316L m=3, y=68.95N/mm^2.
   -OUTER RING: 304 S.S.
3. ALL GIRTH FLANGE AND TUBE SHEET SHALL BE ULTRASONIC TESTED IN ACCORDANCE WITH ASME CODE SECTION V, AND SA-388 OR EQUALENT BEFORE ANY MACHINING. IN THIS REGARD, THE REQUIRED SURFACE PREPARATION SHALL BE PER FORMED.
4. PASS PARTITION GASKET: DOUBLE METAL JACKETED AISI 304/GRAPHITE FILLER

* FOR ONE SET

PART NO.	PART NAME	MATERIAL	REGULAR QUANTITY	SPARE QUANTITY	SPECIFICATION	REMARK
17	DOWEL PIN	304 S.S	1		R.B20 x L229	
16	JACK BOLT	304 S.S	8		3/4"x10UNC x L140	
15	PASS PARTITION PLATE	SA516-70N	1		t13 x 1180 x 1292	
14	STUD B/2HEAVY NUTS	SA320-L7/SA194-4	68SETS	4SETS	7/8" UNC9, L415 (TEMA)	H.D.G
13	GASKET	SEE NOTE "2"	1	2	t4.5 (SEE DWG.)	
12	GASKET	SEE NOTE "2"	1	2	t4.5 (SEE DWG.)	
11	SHELL FLANGE	SA350-LF2 CL.1N	1		t146 x I.D 1118 x O.D 1281	
10	CHANNEL FLANGE	SA350-LF2 CL.1N	1		t146 x I.D 1118 x O.D 1281	
9	PIPE HEADER HEAD	SA-516 70N	2		USED THK.14 (2:1 ELLIP.)	
8	PIPE HEADER SHELL	SA-516 70N	1		t12 x 1480 x 3022	
7	PIPE HEADER SHELL	SA-516 70N	2		t12 x 2000 x 3022	
6	CHANNEL HEAD	SA-516 70N	2		USED THK.16 (2:1 ELLIP.)	
5	SHELL HEAD	SA-516 70N	1		USED THK.16 (2:1 ELLIP.)	
4	CHANNEL SHELL	SA-516 70N	1		t14 x 820 x 3556	
3	SHELL	SA-516 70N	1		t14 x 720 x 3556	
2	SHELL	SA-516 70N	1		t14 x 1500 x 3556	
1	SHELL	SA-516 70N	2		t14 x 2000 x 3556	

BILL OF MATERIAL

Code1 ☐ No Comment/ Approved (Applicable Only for "FOR REVIEW" and "For Approval" Documents) No comment and the document are released for Manufacturing

Code2 ☐ No Comment/ Approved with Note(s) Vendor/Sub-Contractor shall correct, revise and resubmit the document. The document is released for Manufacturing if changes incorporated.

Code3 ☐ Commented Vendor/Sub-Contractor shall correct, revise and resubmit the document by the date specified. The document shall be noted under the Status of "R. Revised Issue". All corrected documents shall be resubmitted before starting the Manufacturing Process

Code4 ☐ Not Accepted (Rejected) Vendor/Sub-Contractor shall re-work/re-design/re-specify the contents of the document according to the comment(s)/ reason for rejection/all corrected documents shall be resubmitted for review and approval. Vendor/Sub-Contractor shall not proceed with subsequent works of Material Supply or Manufacturing until receiving Code1/Code2 or No Code from PURCHASER. Vendor/Sub-Contractor shall resubmit the document with the same revision within 6 working days after receiving comments

No Code ☐ No Code (Only for "For Information" Documents and "As Built (WBJ)" Document has been submitted for PURCHASER's Information (FI). Correctness, completeness and correctness of document content is in Vendor/Sub-Contractor's responsibility.

The above checking result by EIED shall in no way relieve Vendor of any liability, obligation and responsibility out of the purchase order and the mutual agreement in writing.

EIED DATE : DEPT: Signature :

CV	PI	EL	IN	ME	MA
ST	BO	PR	DA	HY	TL

REV.	DATE (DD.MMM.YY)	Purpose of Issue	Prepared	Checked	Approved
03	18.Nov.25	IFR	D.SH	F.T	A.M
02	25.Oct.25	IFR	D.SH	F.T	A.M
01	07.Oct.25	IFR	D.SH	F.T	A.M
00	26.Aug.25	IFR	D.SH	F.T	A.M

Gachsaran Polymer Industries Company

Gachsaran Polymer Industries Company
HDPE Plant
CONTRACT NO.: GPI-CON-99-008

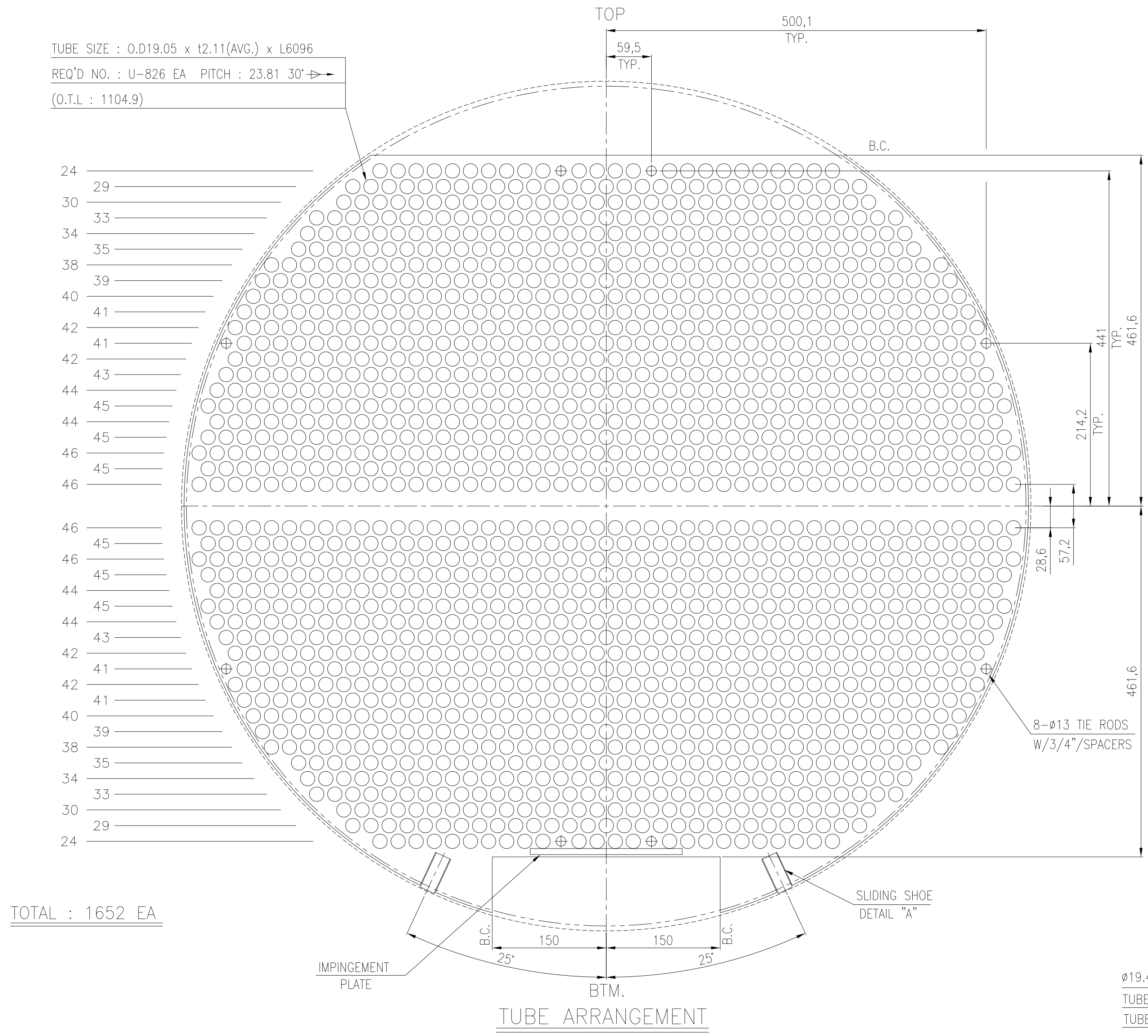
EIED

PO No.: GPIC-PT-MA-PO-000-3029 | SCALE: 1:1

DRAWING TITLE:

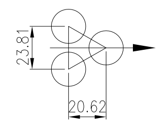
EVAPORATOR (CHILLER) DRAWING (E-6101)
(BODY DETAIL)

DRAWING NO.	REV.	SHEET NO.	SIZE
VD-GPIC-MA-3029-3029-0089	03	2 OF 8	A3

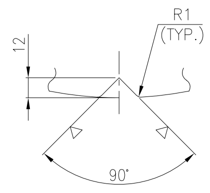


TOTAL : 1652 EA

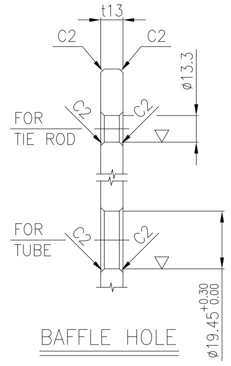
TUBE ARRANGEMENT



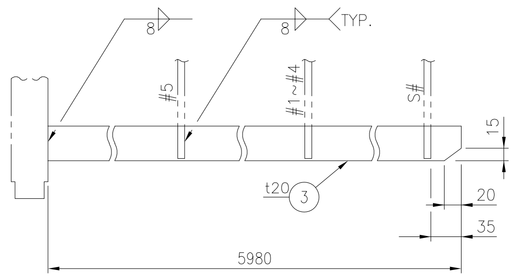
TUBE PITCH



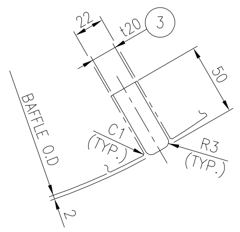
BAFFLE NOTCH
(TOP & BTM.)



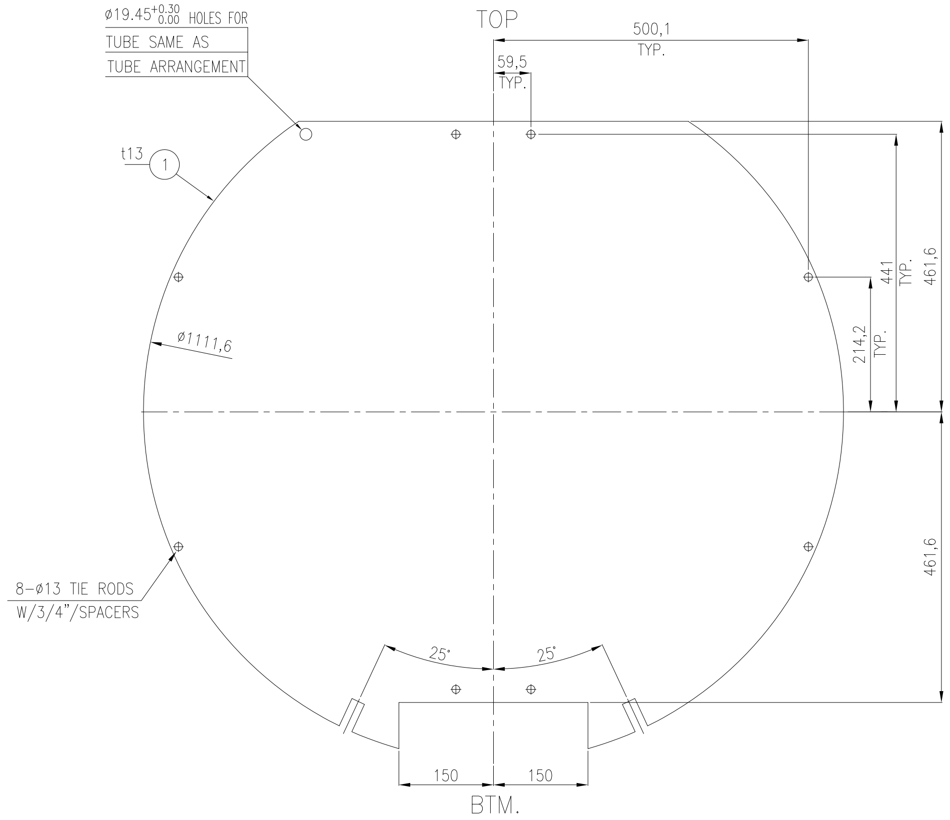
BAFFLE HOLE



SLIDING SHOES



DETAIL "A"



FULL SUPPORT BAFFLE

NOTE

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

* FOR ONE SET

PART NO.	PART NAME	MATERIAL	QUANTITY REGULAR	QUANTITY SPARE	SPECIFICATION	REMARK
2	SLIDING SHOE	SA-516 70N	2		t20 x 50 x 5980	
1	FULL SUPPORT BAFFLE	SA 516-70N	6		t13 x ø1111.6	

B I L L O F M A T E R I A L

Code1	☐ No Comment/ Approved (Applicable Only for "FOR REVIEW" and "For Approval" Documents) No comment and the document are released for Manufacturing
Code2	☐ No Comment/ Approved with Note(s) Vendor/Sub-Contractor shall correct, revise and resubmit the document. The document is released for Manufacturing if changes incorporated.
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No Code	☐ No Code (Only for "For Information" Documents and "As Built DWGs") Document has been submitted for PURCHASER's Information (FI). Consistency, completeness and correctness of document content is in Vendor/Sub-Contractor's responsibility.

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EIED

DATE :

DEPT:

Signature :

CV	PI	EL	IN	ME	MA
ST	BU	PR	SA	HV	TL

REV.	DATE (DD.MMM.YY)	Purpose of Issue	Prepared	Checked	Approved
03	18.Nov.25	IFR	D.SH	F.T	A.M
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00	26.Aug.25	IFR	D.SH	F.T	A.M

Gachsaran Polymer Industries Company

Gachsaran Polymer Industries Company
HDPE Plant

CONTRACT NO.: GPI-CON-99-008

EIED

RHINE

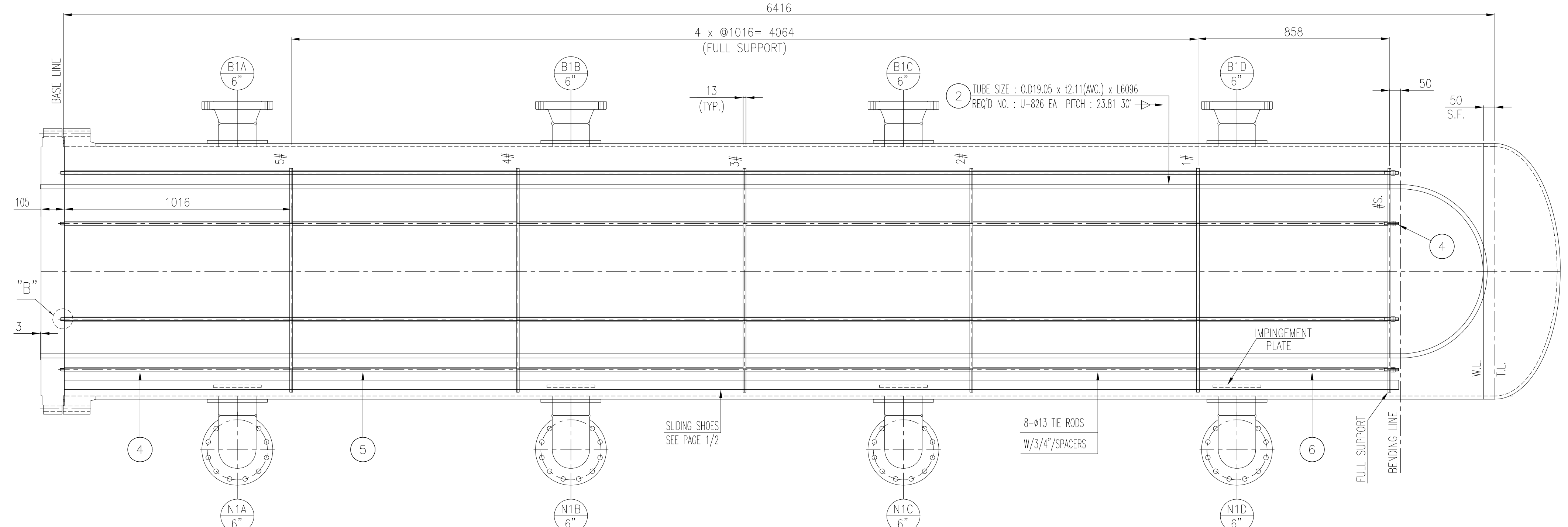
PO No.: GPIC-PT-MA-PO-000-3029

SCALE: 1:1

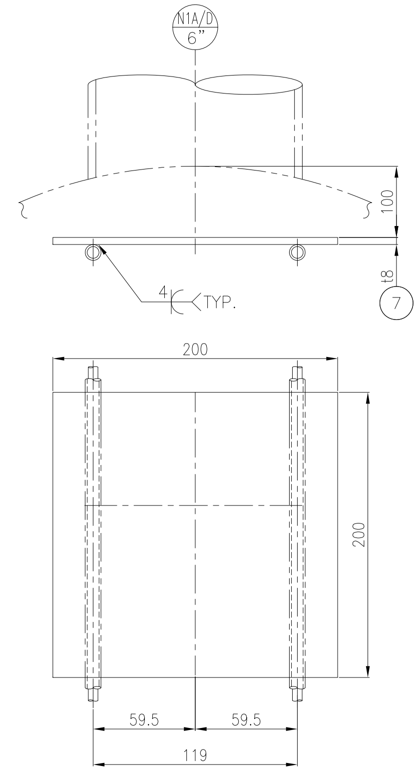
DRAWING TITLE:

EVAPORATOR (CHILLER) DRAWING (E-6101)
(BUNDLE DETAIL 1/2)

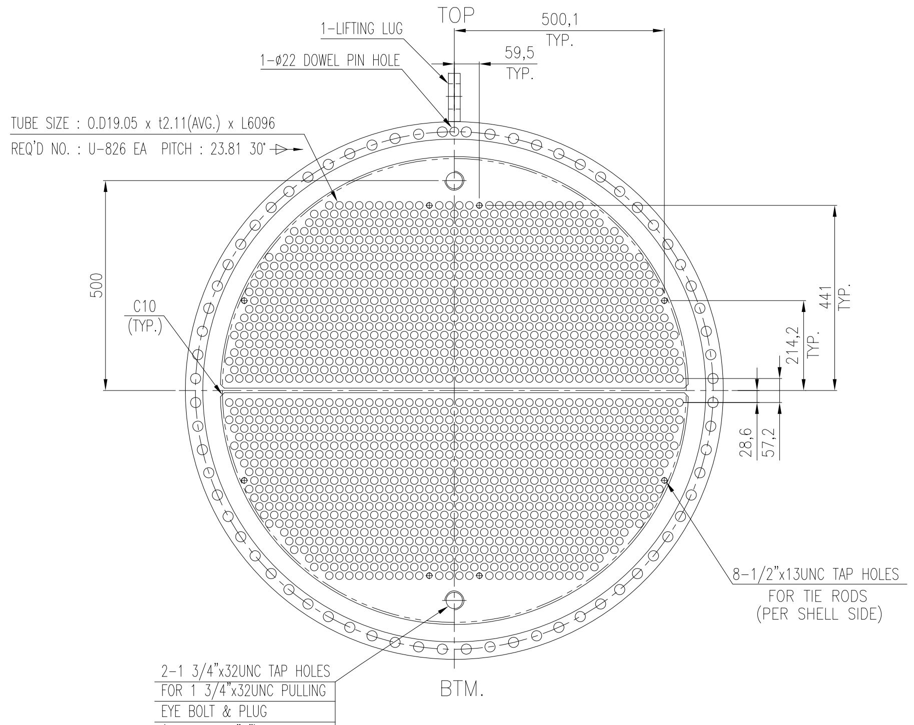
DRAWING NO.	REV.	SHEET NO.	SIZE
VD-GPIC-MA-3029-3029-0089	03	3 OF 8	A3



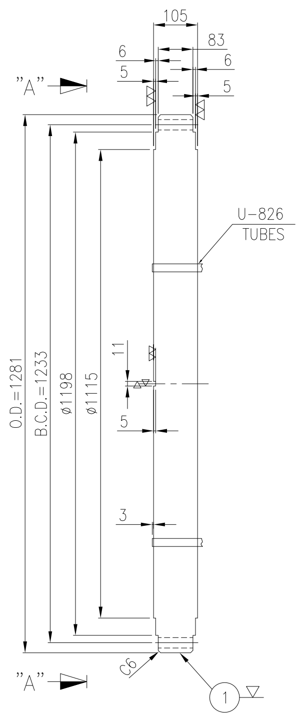
ELEVATION VIEW



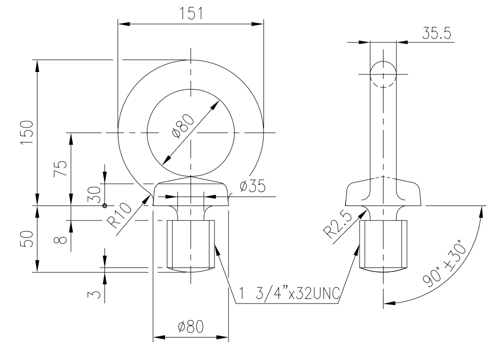
IMPINGEMENT PLATE



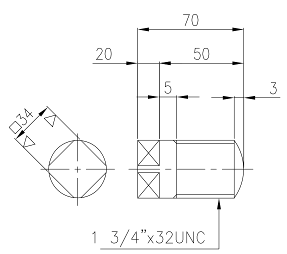
VIEW "A"-"A"



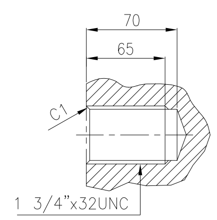
TUBESHEET DETAIL



8 PULLING & LIFTING EYE BOLT



9 PLUG



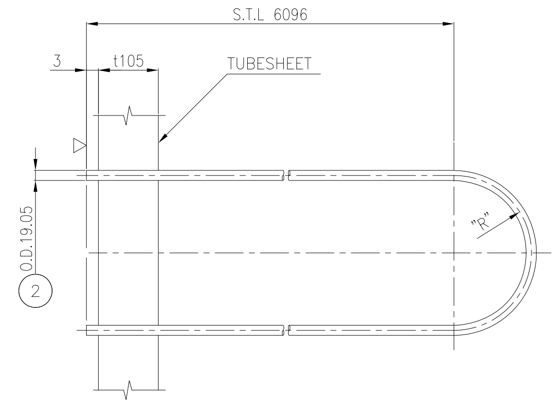
DETAIL "C"

NOTE

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

* FOR ONE SET						
10	LIFTING LUG	SA283-C	1		SEE DWG.	
9	PLUG	304 S.S	2		1 3/4"x32UNC	
8	EYE BOLT	SA-36	2		1 3/4"x32UNC	H.D.G.
7	IMPINGEMENT PLATE	SA516-70	1		t8 x 200 x 200	
6	SPACER	SA334-6	8		0.D19.05 x t2.11 x L845	
5	SPACER	SA334-6	32		0.D19.05 x t2.11 x L1003	
4	SPACER	SA334-6	8		0.D19.05 x t2.11 x L1010	
3	TIE ROD & 2NUTS	SA36/SA194-2H	8		1/2"x13UNC (R.B13) x L5994	
2	TUBE (SEAMLESS)	SA334-6	U-826		0.D19.05 x t2.11(Avg.) x S.T.L6096	
1	TUBESHEET	SA350-LF2 CL1N	1		t105x Ø1281	
PART NO.	PART NAME	MATERIAL	REGULAR (QUANTITY)	SPARE (QUANTITY)	SPECIFICATION	REMARK

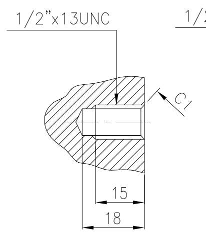
BILL OF MATERIAL



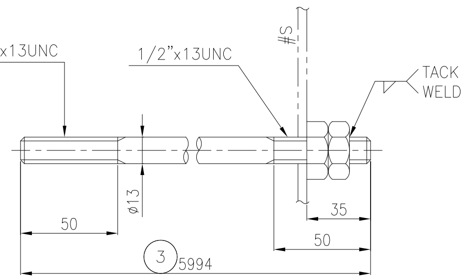
U-TUBE

NO.	"R"	"L"	Q'TY
1	28.575	12281.8	46
2	49.2	12346.6	45
3	69.8	12411.3	46
4	90.4	12476.1	45
5	111.1	12540.9	44
6	131.7	12605.7	45
7	152.3	12670.5	44
8	172.9	12735.3	43
9	193.6	12800.1	42
10	214.2	12864.9	41
11	234.8	12929.6	42
12	255.4	12994.4	41
13	276.0	13059.2	40
14	296.7	13124.0	39
15	317.3	13188.8	38
16	337.9	13253.6	35
17	358.5	13318.4	34
18	379.2	13383.1	33
19	399.8	13447.9	30
20	420.4	13512.7	29
21	441.0	13577.5	24

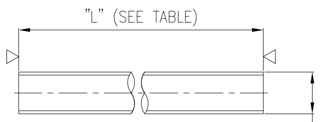
U-TUBE DIMENSION



DETAIL "C"

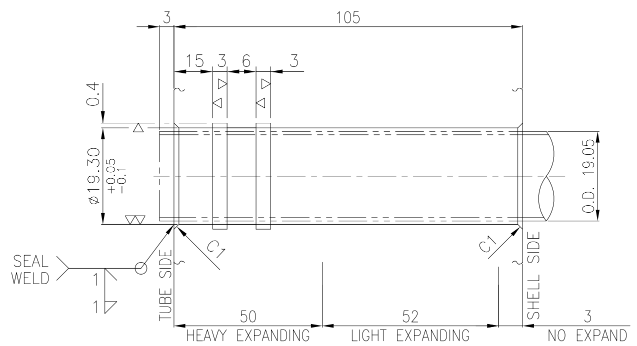


TIE ROD & 2 NUTS

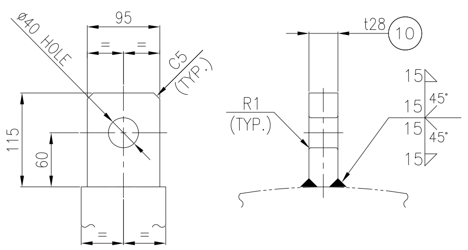


PART NO.	QT'Y	"L"
4	8	1010
5	32	1003
6	8	845

SPACER



TUBE TO TUBESHEET JOINT



LIFTING LUG

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DATE :
DEPT:
Signature :

CV	PI	EL	IN	ME	MA
ST	BU	PR	SA	HV	TL

REV.	DATE (DD.MMM.YY)	Purpose of Issue	Prepared	Checked	Approved
03	18.Nov.25	IFR	D.SH	F.T	A.M
02	25.Oct.25	IFR	D.SH	F.T	A.M
01	07.Oct.25	IFR	D.SH	F.T	A.M
00	26.Aug.25	IFR	D.SH	F.T	A.M

Gachsaran Polymer Industries Company
HDPE Plant

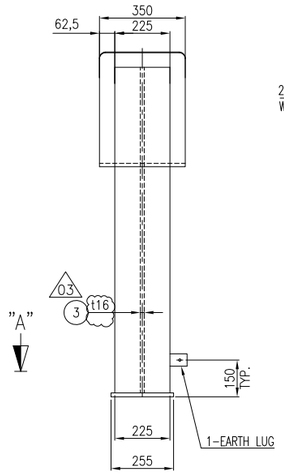
CONTRACT NO.: GPI-CON-99-008

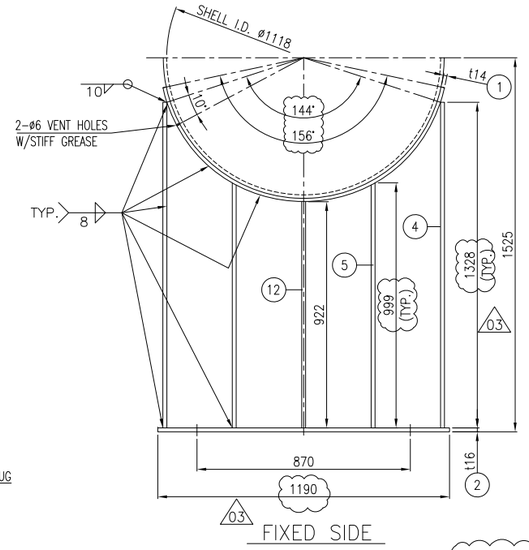
PO No.: GPIC-PT-MA-PO-000-3029 | SCALE: 1:1

DRAWING TITLE:

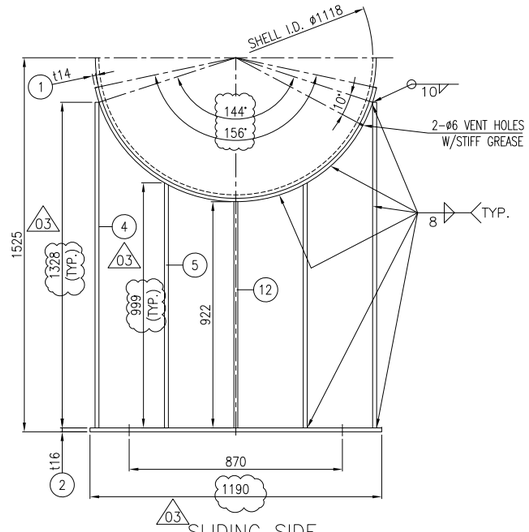
EVAPORATOR (CHILLER) DRAWING (E-6101)
(BUNDLE DETAIL 2/2)

DRAWING NO.	REV.	SHEET NO.	SIZE
VD-GPIC-MA-3029-3029-0089	03	4 OF 8	A3

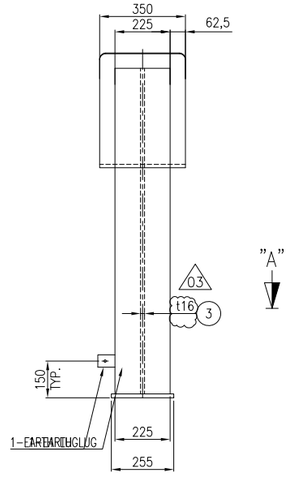


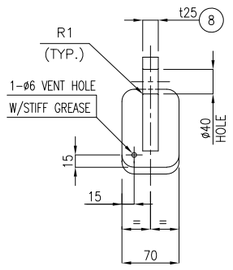


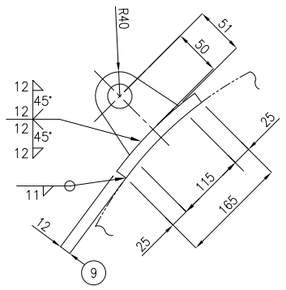
FIXED SIDE

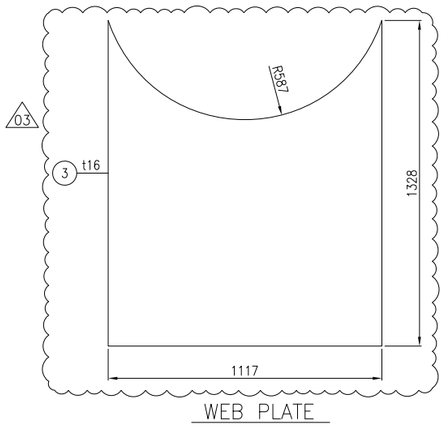


SLIDING SIDE

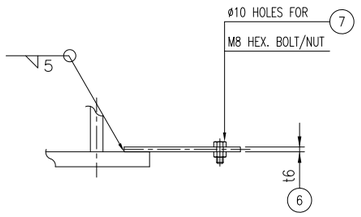


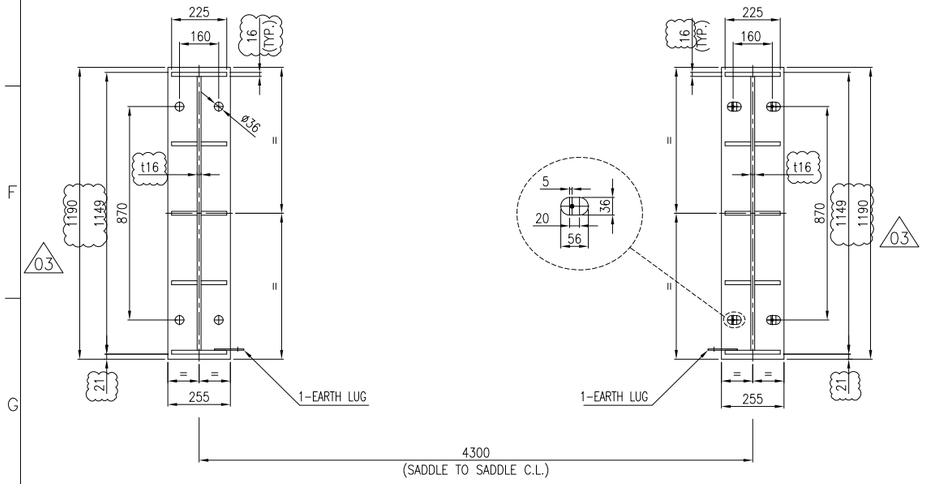




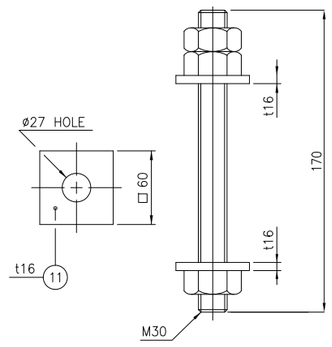


WEB PLATE

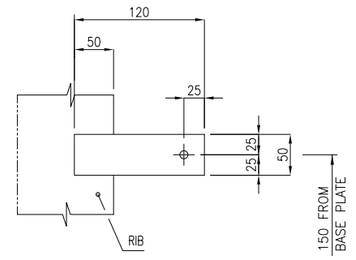




SECTION "A"–"A"



⑩ SETTING B/2NS/2W



EARTH LUG

NOTE

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

03

* FOR ONE SET

12	SUPPORT RIB	SA516–70N	4		t16 x 104.5 x 922	
11	WASHER	SA283–C	16		t16 x □60	(H.D.G.)
10	SETTING BOLT/2NUTS	SA193–B7/SA194–2H	8SETS		M30 x L190	(H.D.G.)
9	REINF. PAD	SA516–70N	3		t12 x 70 x 165	
8	LIFTING LUG	SA283–C	3		SEE DWG.	
7	HEX. BOLT/NUT	S.S. 304	2SETS		M8 x L25	
6	EARTH LUG	S.S. 304	2		t6 x 50 x 120	
5	SUPPORT RIB	SA516–70N	8		t16 x 104.5 x 999	
4	SUPPORT RIB	SA516–70N	4		t16 x 225 x 1328	
3	WEB PLATE	SA516–70N	2		t16 x SEE DWG.	
2	BASE PLATE	SA516–70N	2		t16 x 255 x 1190	
1	WEAR PLATE	SA516–70N	2		t14 x 350 x 1336	
PART NO.	PART NAME	MATERIAL	QUANTITY REGULAR	QUANTITY SPARE	SPECIFICATION	REMARK

BILL OF MATERIAL

03	18.Nov.25	IFR	D.SH	F.T	A.M
02	25.Oct.25	IFR	D.SH	F.T	A.M
01	07.Oct.25	IFR	D.SH	F.T	A.M
00	26.Aug.25	IFR	D.SH	F.T	A.M
REV.	DATE (DD.MMM.YY)	Purpose of Issue	Prepared	Checked	Approved

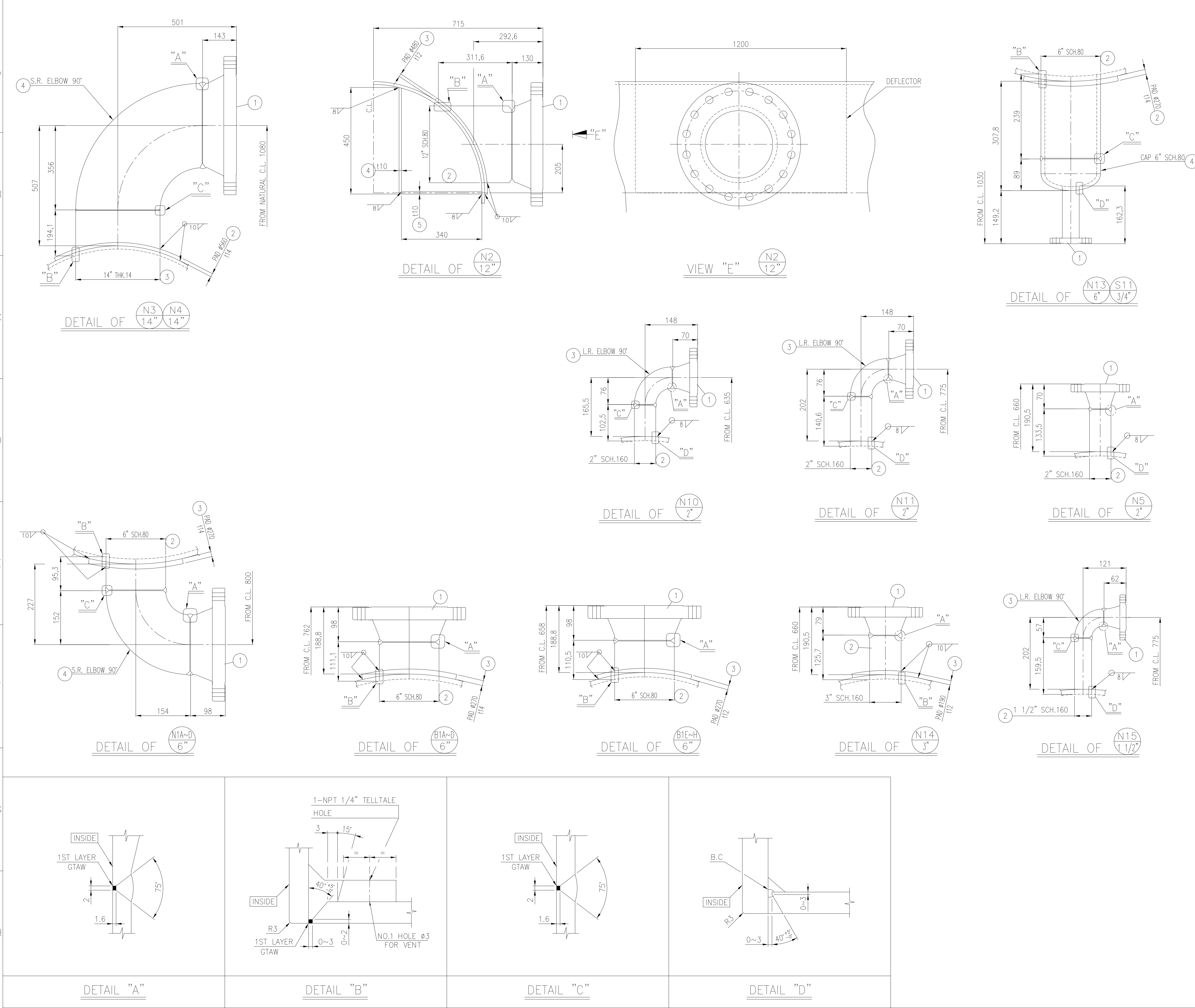
Gachsaran Polymer Industries Company
HDPE Plant
CONTRACT NO.: GPI–CON–99–008

PO No.: GPIC–PT–MA–PO–000–3029 SCALE: 1:1

DRAWING TITLE:

EVAPORATOR (CHILLER) DRAWING (E–6101)
(SADDLE DETAIL)

DRAWING NO.	REV.	SHEET NO.	SIZE
VD–GPIC–MA–3029–3029–0089	03	5 OF 8	A3



NOTE

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. FOR THE TEST VENT HOLES ø3 WILL BE OUTURED BY WELDING.
3. GASKET MATERIAL FOR ASME B16.20: SPIRAL WOUND (t4.5)
   - FILLER: GRAPHITE
   - INNER RING: 304 S.S.
   - HOOP: 304 S.S.
   - OUTER RING: 304 S.S.

* FOR ONE SET

NOZZLE NO.	PART NO.	PART NAME	MATERIAL	QUANTITY REGULAR	QUANTITY SPARE	SPECIFICATION	REMARK
N13 S11	4	CAP	SA420-WPL6	1		6" SCH. 80	
	3	REINF. PAD	SA516-70N	1		t14 x ø270	
	2	NOZZLE NECK	SA333-6	1		6" SCH.80 x L239	
	1	FLANGE (THK.14.25)	SA350-LF2 CL.1N	1		3/4" ASME 300# LWN.RF	
N5	2	NOZZLE NECK	SA333-6	1		2" SCH. 160 x L133.5	
	1	FLANGE (SCH.160)	SA350-LF2 CL.1N	1		2" ASME 300# WN.RF	
N11	3	ELBOW	SA420-WPL6	1		2" SCH. 160 , L.R	
	2	NOZZLE NECK	SA333-6	1		2" SCH. 160 x L140.6	
	1	FLANGE (SCH.160)	SA350-LF2 CL.1N	1		2" ASME 300# WN.RF	
N10	3	ELBOW	SA420-WPL6	1		2" SCH. 160 , L.R	
	2	NOZZLE NECK	SA333-6	1		2" SCH. 160 x L102.5	
	1	FLANGE (SCH.160)	SA350-LF2 CL.1N	1		2" ASME 300# WN.RF	
N15	3	ELBOW	SA420-WPL6	1		1 1/2" SCH. 160 , L.R	
	2	NOZZLE NECK	SA333-6	1		1 1/2" SCH. 160 x L159.5	
	1	FLANGE (SCH.160)	SA350-LF2 CL.1N	1		1 1/2" ASME 300# WN.RF	
N14	3	REINF. PAD	SA516-70N	1		t12 x ø190	
	2	NOZZLE NECK	SA333-6	1		3" SCH.160 x L125.7	
	1	FLANGE (SCH.160)	SA350-LF2 CL.1N	1		3" ASME 300# WN.RF	
B1E~H	3	REINF. PAD	SA516-70N	4		t12 x ø270	
	2	NOZZLE NECK	SA333-6	4		6" SCH.80 x L110.5	
	1	FLANGE (SCH.80)	SA350-LF2 CL.1N	4		6" ASME 300# WN.RF	
B1A~D	3	REINF. PAD	SA516-70N	4		t14 x ø270	
	2	NOZZLE NECK	SA333-6	4		6" SCH.80 x L111.1	
	1	FLANGE (SCH.80)	SA350-LF2 CL.1N	4		6" ASME 300# WN.RF	
N1A~D	4	ELBOW	SA420-WPL6	4		6" SCH. 80 , S.R	
	3	REINF. PAD	SA516-70N	4		t14 x ø270	
	2	NOZZLE NECK	SA333-6	4		6" SCH.80 x L95.3	
	1	FLANGE (SCH.80)	SA350-LF2 CL.1N	4		6" ASME 300# WN.RF	
N2	5	DEFLECTOR	SA516-70N	1		t10 x 340 x 1200	
	4	DEFLECTOR	SA516-70N	1		t10 x 450 x 1200	
	3	REINF. PAD	SA516-70N	1		t12 x ø480	
	2	NOZZLE NECK	SA333-6	1		12" SCH.80 x L311.6	
	1	FLANGE (SCH.80)	SA350-LF2 CL.1N	1		12" ASME 300# WN.RF	
N4 N3	4	ELBOW	SA420-WPL6	2		14" THK.14 , S.R	
	3	REINF. PAD	SA516-70N	2		t14 x ø560	
	2	NOZZLE NECK	SA516-70N	2		14" THK.14 x L194.1	
	1	FLANGE (THK.14)	SA350-LF2 CL.1N	2		14" ASME 300# WN.RF	

BILL OF MATERIAL

Code1	☐ No Comment/ Approved (Applicable Only for "FOR REVIEW" and "For Approval" Documents) No comment and the document are released for Manufacturing
Code2	☐ No Comment/ Approved with Note(s) Vendor/Sub-Contractor shall correct, revise and resubmit the document. The document is released for Manufacturing if changes incorporated.
Code3	☐ Commented Vendor/Sub-Contractor shall correct, revise and resubmit the document by the date specified. The document shall be revised under the Status of "R: Revised Issue". All corrected documents shall be resubmitted before starting the Manufacturing Process
Code4	☐ Not Accepted (Rejected) Vendor/Sub-Contractor shall re-work/re-design/re-specify the contents of the document according to the comments/ reasons for rejection.All corrected documents shall be resubmitted before starting the manufacturing.Vendor Sub-Contractor shall not proceed with subsequent works of Material Supply or Manufacturing until receiving Code1/Code2 or No Code from PURCHASER. Vendor/Sub-Contractor shall resubmit the document with the same revision within 6 working days after receiving comments
No Code	☐ No Code (Only for "For Information" Documents and "As Built DWGs") Document has been submitted for PURCHASER's Information (FI). Consistency, completeness and correctness of document content is in Vendor/Sub-Contractor's responsibility.

The above checking result by EIED shall in no way relieve Vendor of any liability, obligation and responsibility out of the purchase order and the mutual agreement in writing

EIED

DATE :

DEPT:

Signature :

CV	PI	EL	IN	ME	MA
ST	BU	PR	SA	HV	TL

REV.	DATE (DD.MMM.YY)	Purpose of Issue	Prepared	Checked	Approved
03	18.Nov.25	IFR	D.SH	F.T	A.M
02	25.Oct.25	IFR	D.SH	F.T	A.M
01	07.Oct.25	IFR	D.SH	F.T	A.M
00	26.Aug.25	IFR	D.SH	F.T	A.M

Gachsaran Polymer Industries Company

Gachsaran Polymer Industries Company

HDPE Plant

CONTRACT NO.: GPI-CON-99-008

EIED

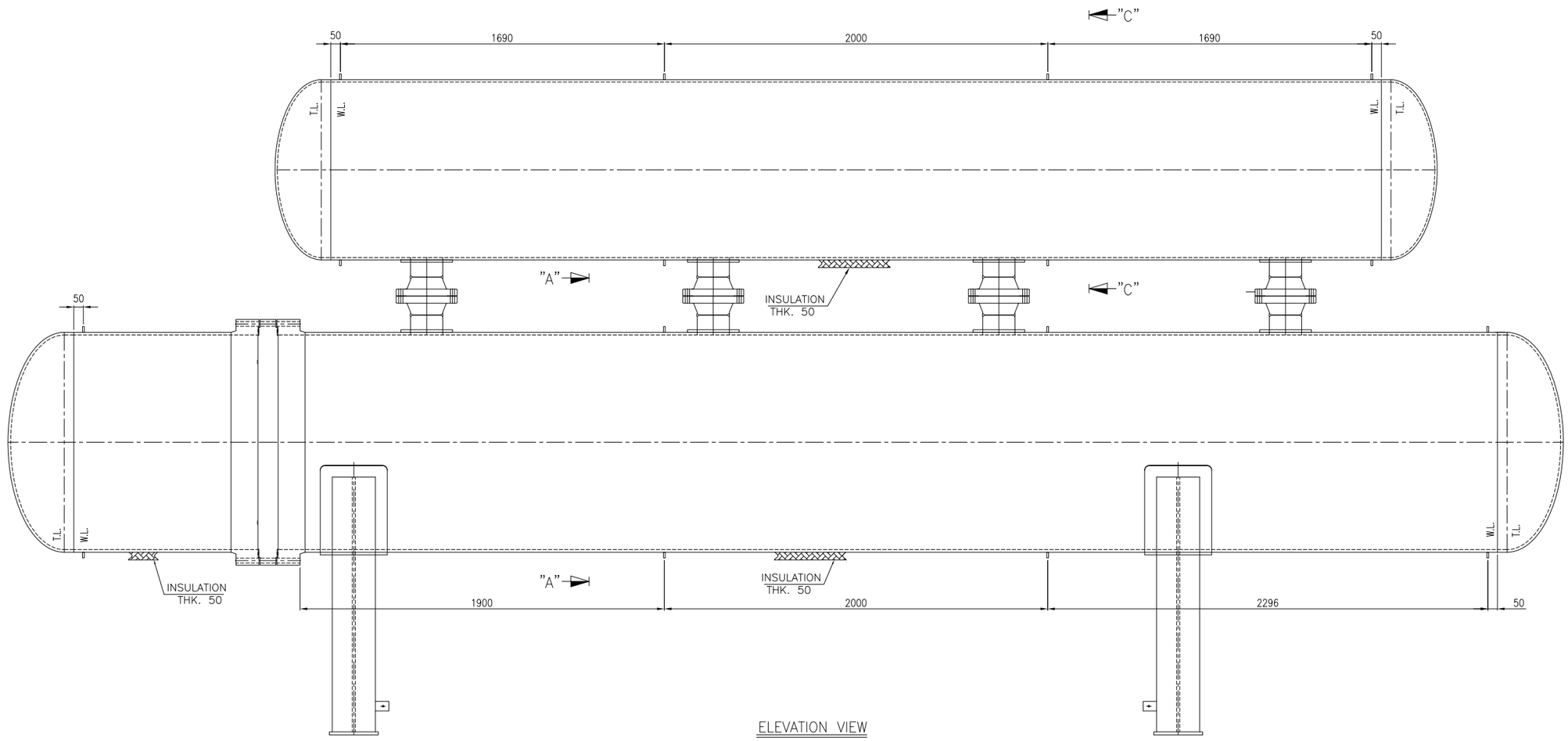
PO No.: GPIC-PT-MA-PO-000-3029

SCALE: 1:1

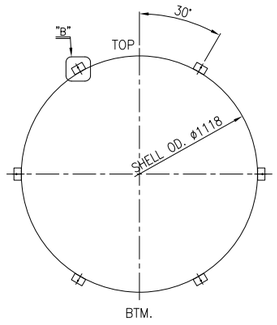
DRAWING TITLE:

EVAPORATOR (CHILLER) DRAWING (E-6101)
(NOZZLE DETAIL)

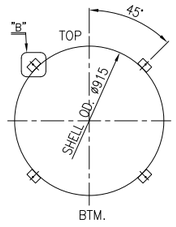
DRAWING NO.	REV.	SHEET NO.	SIZE
VD-GPIC-MA-3029-3029-0089	03	6 OF 8	A3



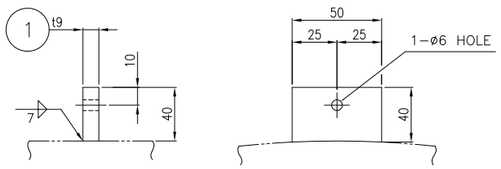
ELEVATION VIEW



VIEW "A"–"A"



VIEW "C"–"C"



DETAIL "B"

NOTE

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.

* FOR ONE SET

PART NO.	PART NAME	MATERIAL	QUANTITY REGULAR	QUANTITY SPARE	SPECIFICATION	REMARK
1	INSUL. SUP'T CLIP	SA516-70	40		t9 x 40 x 50	

BILL OF MATERIAL

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03	18.Nov.25	IFR	D.SH	F.T	A.M
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01	07.Oct.25	IFR	D.SH	F.T	A.M
00	26.Aug.25	IFR	D.SH	F.T	A.M

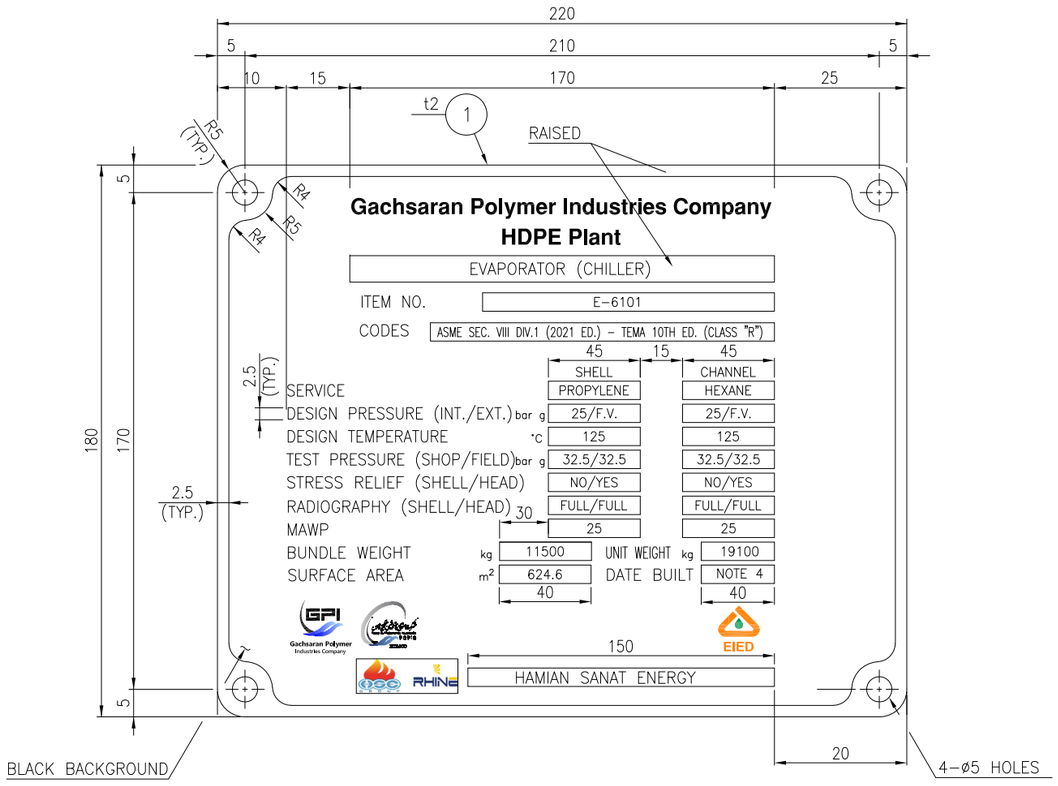
Gachsaran Polymer Industries Company
HDPE Plant
CONTRACT NO.: GPI-CON-99-008

PO No.: GPIC-PT-MA-PO-000-3029 | SCALE: 1:1

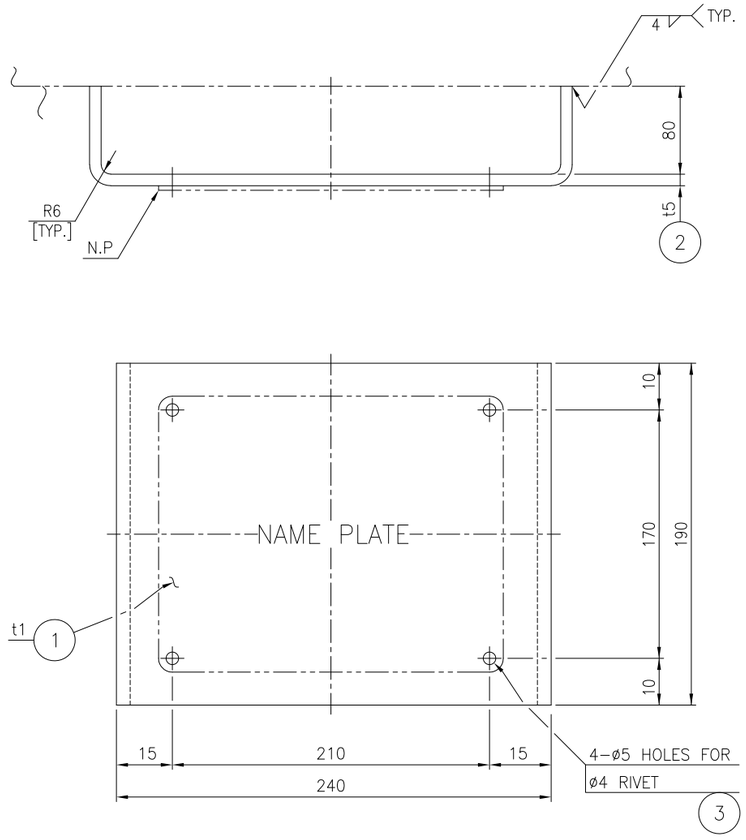
DRAWING TITLE:

EVAPORATOR (CHILLER) DRAWING (E-6101)
(INSULATION DETAIL)

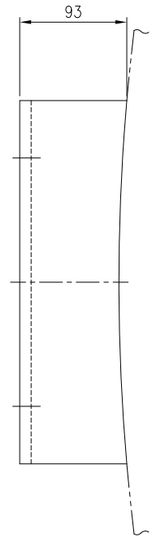
DRAWING NO.	REV.	SHEET NO.	SIZE
VD-GPIC-MA-3029-3029-0089	03	7 OF 8	A3



NAME PLATE



NAME PLATE BRACKET



NOTE

1. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LETTERS, BLOCKS, AS WELL AS EDGES, SHALL HAVE RAISED POLISHED FACE–RELIEF 0.5MM APPROX.
3. LETTERS TO BE GOTHIC TYPE
4. YEAR BUILT AND DATE OF TEST STAMPED AT SHOP AFTER HYDROSTATIC TEST COMPLETION.

* FOR ONE SET

PART NO.	PART NAME	MATERIAL	REGULAR QUANTITY	SPARE QUANTITY	SPECIFICATION	REMARK
3	RIVET	304 S.S	4		ø4	
2	NAME PLATE BRACKET	SA516-70N	2		t5 x 450 x 190	
1	NAME PLATE	304 S.S	1		t1 x 180 x 220	

BILL OF MATERIAL

REV.	DATE (DD.MMM.YY)	Purpose of Issue	Prepared	Checked	Approved
03	18.Nov.25	IFR	D.SH	F.T	A.M
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01	07.Oct.25	IFR	D.SH	F.T	A.M
00	26.Aug.25	IFR	D.SH	F.T	A.M

Gachsaran Polymer Industries Company
HDPE Plant
CONTRACT NO.: GPI-CON-99-008

PO No.: GPIC-PT-MA-PO-000-3029 SCALE: 1:1

DRAWING TITLE:

EVAPORATOR (CHILLER) DRAWING (E-6101)
(NAME PLATE DETAIL)

DRAWING NO.	REV.	SHEET NO.	SIZE
VD-GPIC-MA-3029-3029-0089	03	8 OF 8	A3