


OWNER:

 NATIONAL PETROCHEMICAL CO.
 BOUALI SINA PETROCHEMICAL CO.

CONTRACTOR:

 PETROCHEMICAL INDUSTRIES
 DESIGN & ENGINEERING CO.

THIRD AROMATICS PROJECT
 DATA SHEET FOR HEAT EXCHANGER
E - 6351
 OWNER DOCUMENT NO.
 VD-A4-261-6351-2

VENDOR:


DESIGNER:

 Sabz Engineering Company
 شرکت مهندسی سبز
 DOC. NO.
SEC - PJ029-A4-02/2

General Data

Size (mm)	1124-6000	Surface Per Shell (m ²)	418	No. of Exch.	1	Type	BEU	Position	HOR.
Duty (Kw)	13067	TEMA Class	R	Service	LLP STEM CONDENSOR			Supp.on	Concrete Slab
Client Specification No.	GN-MSS-HM-286		Painting Sys.	GN-MSS-PI-409			Std. DWG No.	SDG-HM-285	
ASME Sec. VIII Div. I	Connected in			1 Parral		1 Series			

Load Data

WEIGHT (Kg)		SEISMIC LOADS @ OPERATING ON BOTH SADDLES (KN.m)		SHEAR (KN.m)		MOMENT (KN.m)	
BUNDLE	9736			75.6		75.6	
EMPTY	14099						
TEST	20938	WIND LOADS @ OPERATING ON BOTH SADDLES (KN.m)		19.2		14	
OPER.	17504						

Nozzle Data

Nozzle Mark	Size (in)	ANSI Class	SCH.	TH'K (mm)	Type	Facing	Blinded	Pad O.D (mm)	Pad TH'K (mm)	Instrument Nozzle Size (in)	Designation
I1	14	150	80		WN	RF	NO	---	---	3/4	BT (IN)
O1	3	150	80		WN	RF	NO	---	---	3/4	BT (OUT)
I2	14	150	80		WN	RF	NO	---	---	3/4	Cooling Water(IN)
O2	14	150	80		WN	RF	NO	---	---	3/4	Cooling Water(OUT)
V1	2	150	---		LWN	RF	YES	---	---	---	Vent
D1	2	150	---		LWN	RF	YES	---	---	---	Drain

Flange data

Flange No.	Type Detail	Material	A (mm)	BCD (mm)	B (mm)	G0 (mm)	G1 (mm)	H (mm)	T (mm)	No.	BD (in)
1	1	SA-105	1270	1220	1124	16	19	26	66	60	3/4"
2	1	SA-105	1270	1220	1124	13	16	26	66	60	3/4"
3											
4											
5											
6											
7											

Gasket data

Flange No.	O.D.(D) (mm)	Width (mm)	Material	TH'K (mm)	Baffle & Support Plate			Design Data		
					Baffle	Supp. Plate	Shell Side	Tube Side		
Flange 1-2	1185	13	s.s. spiral wound	3.2	TH'K (mm)	7	10	Design Press. (bar)	3.5/-1	8
Flange 3	1185	13	s.s. spiral wound	3.2	O.D. (mm)	1115	1115	Design Temp. (°C)	290	75
Flange 4					Tie Rod Hole Dia. (mm)	13.7	13.7	Test Press. (barg)	4.55	10.4
Flange 5					Tube Hole Dia. (mm)	25.7	25.7	Fluid Circulated	Steam Condense	C.W
Floating Head Flange					Type	SSEG	---	No. Of Passes	1	2

Notes :

Gasket mat. = Spiral wound For Standard Nozzles	No.	21	1	Working Press. (barg)	2.5	5.5
	Cut %	25	SEE DWG.	Working Temp. In / Out (°C)	275/48	35/45
	Dir.	VER.	VER.	Corr. Allow. (mm)	3	3

Material Data

	Mat.	Remarks			
Wear Plates	SA-285-Gr. 70				Radiography Spot Spot
Gussets / Ribs	SA-36				Joint Efficiency 0.85 0.85
Reinforce Pads	SA-36				Insulation Th'k (mm) 190 NO

Dimensional Data

	Description	Material	I.D./D (mm)	Min. TH'K (mm)	Remarks	
Nozzle Necks	SA-106-Gr. B					
Nozzle Flanges	SA-105					
Partition Plates	SA-285-Gr. 70	Shell Barrel	SA-285-Gr. C	1124	16	---
Imp. Plates	SA-285-Gr. 70	Shell Cover	SA-285-Gr. C	1124	16	ELLIP. 2:1; SF=50 mm
Sealing Plates	SA-285-Gr. 70	Shell Cover Cylinder	SA-285-Gr. C	1124	13	
Eye Bolts	Forged C.S.	Channel Barrel	SA-285-Gr. C	1124	13	
Eye Bolt Plugs	S.S. 304	Channel Cover	SA-285-Gr. C	1124	13	
Bolts	SA-193-B7	Channel Cover Cylinder				
Nuts	SA-194-2H	Floating Head				
		Tube Sheet	SA-266-Gr. 2	1270	76	SEE SHEET 2

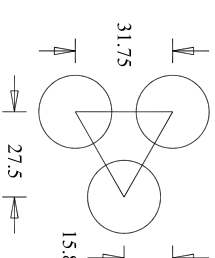
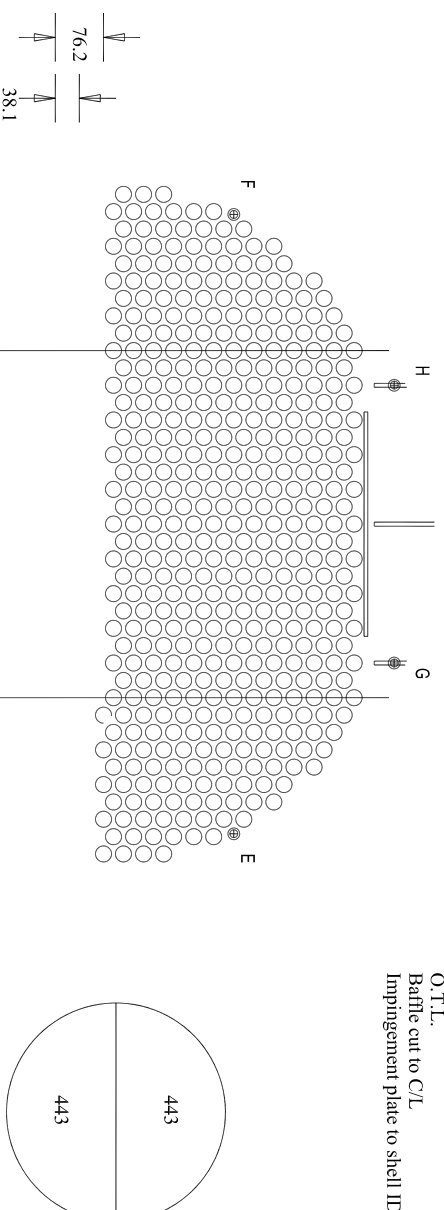
Notes :

Spacer		Tube		
O.D. (mm)	21.3	O.D. (mm)	25.4	
TH'K (mm)	2.77	TH'K (mm)	2.77	Min.
No.		L (mm)	6000	
Mat.	SA-53-Gr.B	O.T.L. (mm)	1111	
Tie Rod		Pitch (mm)	31.75	
O.D. (mm)	13	Pattern (°)	30	
No.	9	No.	443U	
Mat.	SA-36 bar	Mat.	SA-179	Sml

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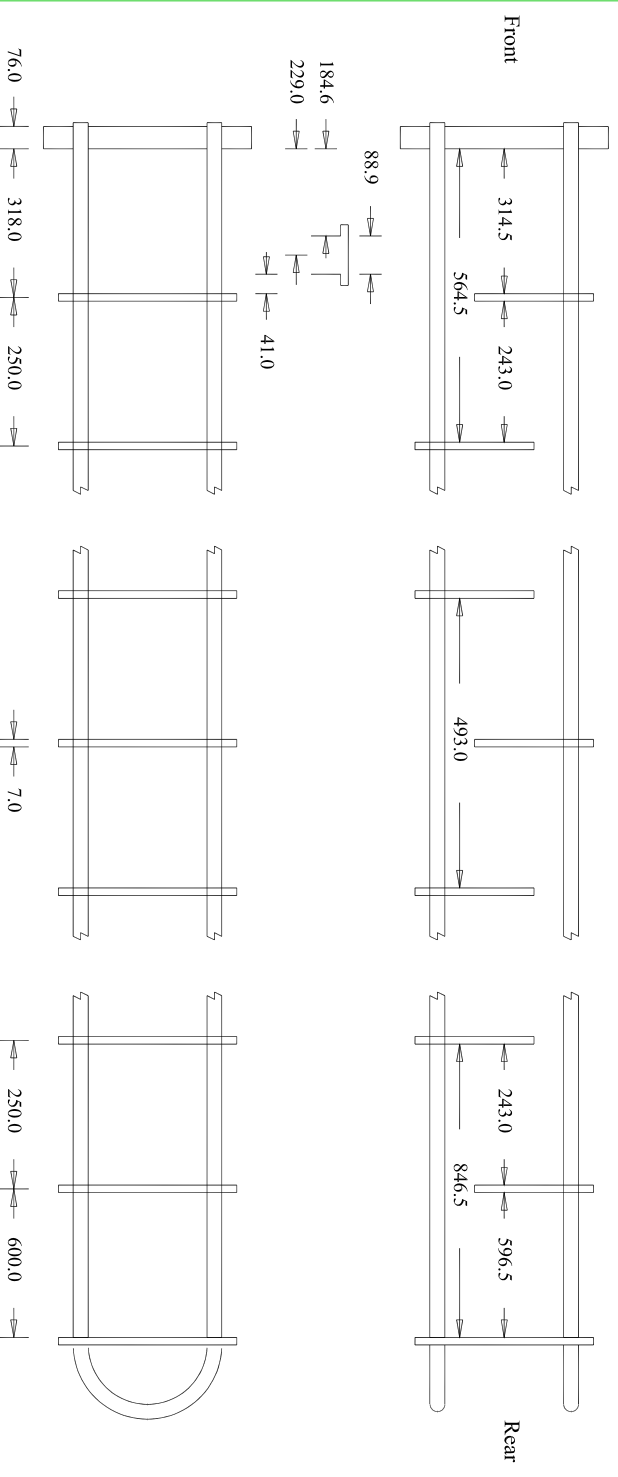
A B C D E F G H

Shell ID 1124 mm
 O.T.L. 1111 mm
 Baffle cut to C/L 275 mm
 Impingement plate to shell ID 105.3 mm

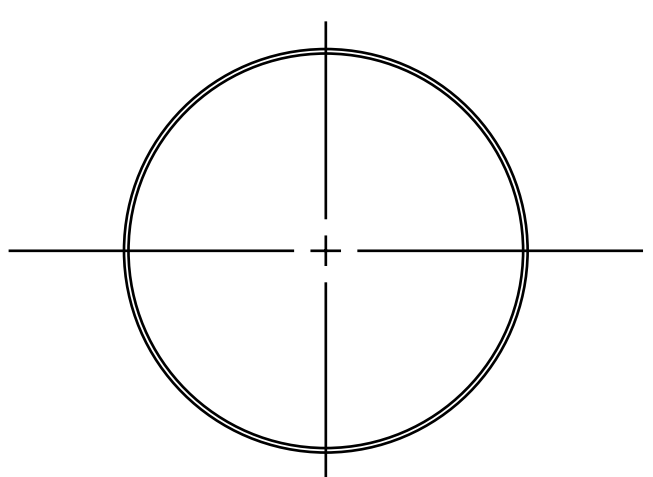


Dimensions: mm TEMA Type: E

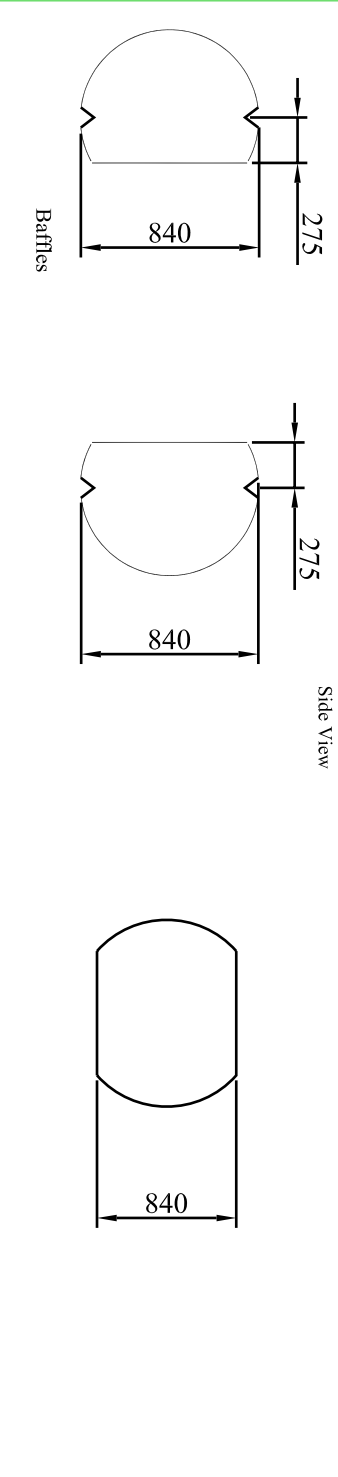
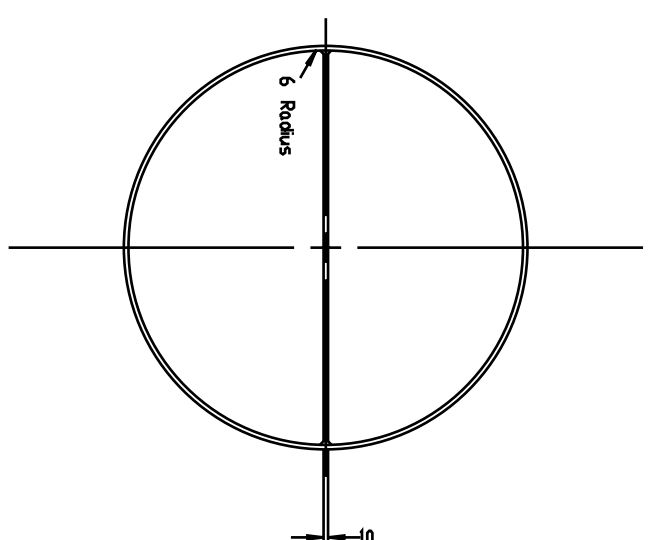
Top View



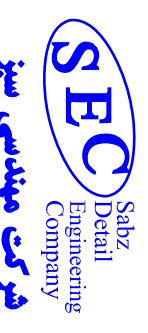
Front Shell Gasket
 3000 Tmk.



FrontHead Gaskets at Toshits
 3000 Tmk.



DESIGNED BY :



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SEC DRAWING No.
 SEC-PJ029-E-6351

SCALE : NOT	
SH	20F
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REVISION	