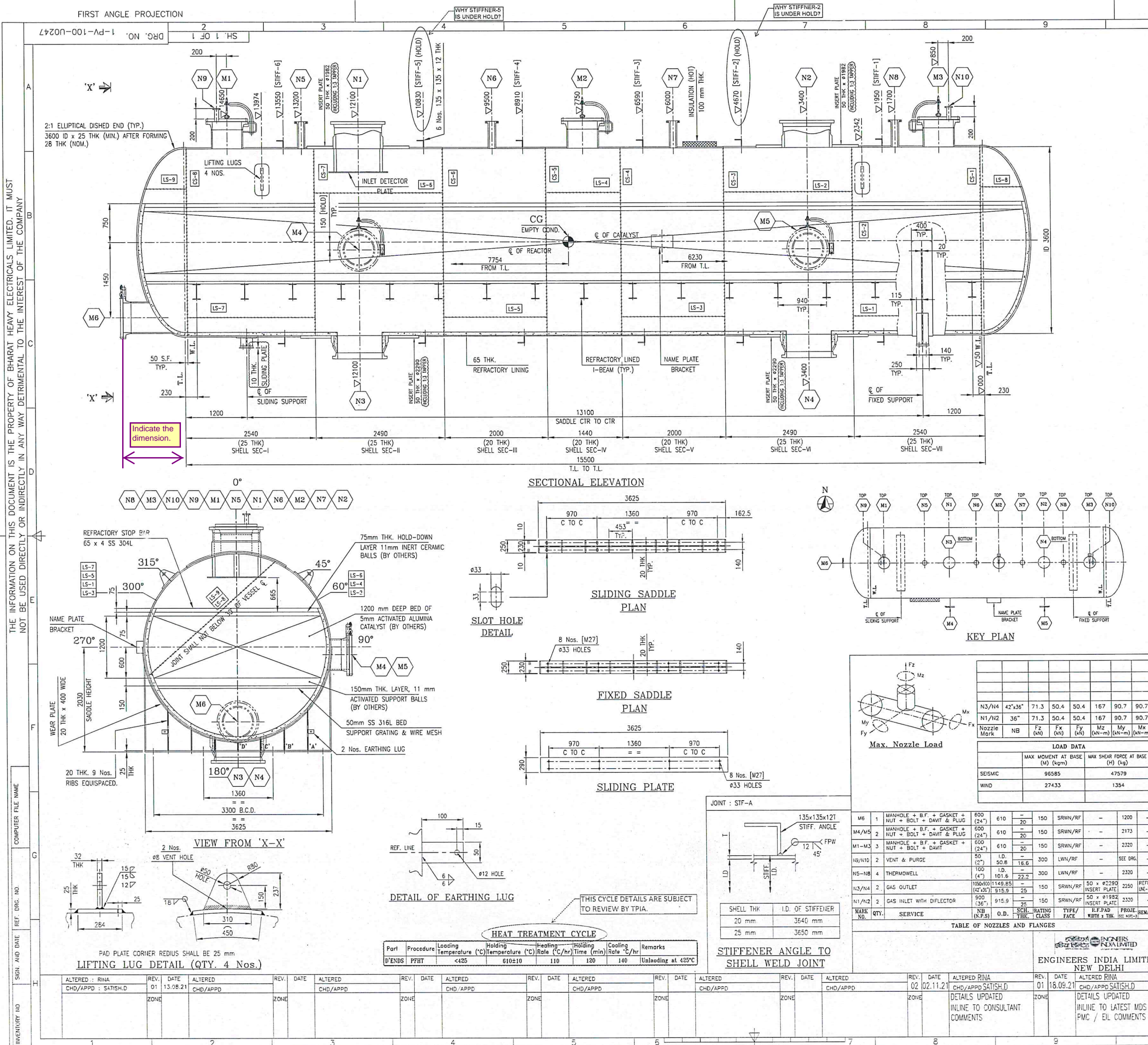


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DESIGN DATA		ASME SEC. VII DIV.1 (ED-2019)	
SERVICE		ACID GAS	
DESIGN PRESSURE (INTERNAL) kg/cm ² (g)		3.8 AT HIGHEST POINT	
DESIGN PRESSURE (EXTERNAL) kg/cm ² (g)		FV - 1.055	
MAXIMUM ALLOWABLE WORKING PRESSURE kg/cm ² (g)		3.8	
DESIGN TEMPERATURE (INT./EXT.) (°C)		343 / 175	
OPERATING PRESSURE kg/cm ² (g)		0.5	
OPERATING TEMPERATURE (°C) (INLET/OUTLET)		287 / 237	
STEAM OUT CONDITION kg/cm ² (g)		APPLICABLE (3.0/F.V. @ 175 °C)	
HYDROTEST PRESSURE kg/cm ² (g)		4.94 (AT TOP)	
CORROSION ALLOWANCE mm		3 mm (INTERNAL)	
CAPACITY (m ³)		164	
RADIOGRAPHY		SHELL: SPOT / HEAD: FULL	
JOINT EFFICIENCY		SHELL: 0.85 / HEAD: 0.85	
IMPACT TESTING = EXEMPTED (REFER NOTE-M10)		OPERATION WEIGHT (Kg.) : ~ 54400	
INSULATION THICKNESS / TYPE		HYDROTEST FIELD WEIGHT (Kg.) : ~ 218,400	
INSULATION TYPE		HYDROTEST SHIP WEIGHT (Kg.) : ~ 241,000	
FIRE PROOFING THICKNESS		NO	
SPECIFIC GRAVITY OF FLUID		0.0016	
POST WELD HEAT TREATMENT		YES (REFER TABLE)	
MINIMUM REQUIRED WALL THICKNESS		11.3	
CODE		□ YES □ NO	
NB		□ YES □ NO	
ASME		NA	
NOZZLE LOAD DATA		INSPECTION: AUTHORISED	
WIND SPECIFICATION IS 875, PART-3-2015		STAGE WISE & THIRD PARTY INSPECTION: YES	
WIND SPEED: 65 m/sec		NATIONAL BOARD REGISTRATION	
RISK FACTOR: 1		NOT REQUIRED	
EARTHQUAKE SPECIFICATION: IS 1893 (PART 4)-2015 & SITE SPECTRA		1	
EQUIPMENT CATEGORY: 1		YES (NORMALISATION OF D'ENDS)	
POST FORMING HEAT TREATMENT		M/S IOCL, PARADIP, ODISHA, INDIA	
LOCATION OF INSTALLATION		2017	
MATERIAL OF CONSTRUCTION			
SL.NO.	DESCRIPTION	MATERIAL REFERENCE	MATERIAL SPECIFICATION
1.	SHELL, D'END, R.F.PAD, INSERT PLATE	BO PLATE CS	SA 516 GR.70 N
2.	FLANGES	FORGED STEEL	SA 105 N
3.	SADDLE WRAPPER PL.	BO PLATE (CS)	SA 516 GR.70 N
4.	SADDLE SUPPORT	CS	SA 516 GR.70 N
5.	PAD FOR EXTERNAL ATTACHMENT	BO PLATE (CS)	SA 516 GR.70 N
6.	GASKET	SPIRAL WOUND GASKET WITH SS 316 METAL WINDING & GRAPHITE	AS PER ASME B16.20
7.	EXTERNAL BOLTS/NUTS	ALLOY STEEL	SA193 GR.87M/SA194 GR.2HM
8.	INTERNAL BOLTS/NUTS	STAINLESS STEEL	SS 304L
9.	PIPE FITTINGS	CS	SA 234 GR.WPB (SEAMLESS)
10.	EXTERNAL ATTACHMENT PADS	BO PLATE (CS)	SA 516 GR.70 N
11.	NOZZLES NECK UP TO 300NB	CS	SA 106 GR.B
12.	NOZZLES NECK ABOVE TO 300NB	BO PLATE (CS)	SA 516 GR.70 N
13.	SUPPORT / SUPPORT BASE	BO PLATE (CS)	SA 516 GR.70 N
14.	SLIDING PLATE	STAINLESS STEEL	SS 304 (WITH TEFLON EMBEDDED COATING)
15.	INTERNAL PARTS (WELDED)	BO PLATE (CS)	SA 516 GR.70 N
16.	INTERNAL PARTS (BOLTED)	STAINLESS STEEL	SS 304L
17.	WRAPPER PLATE	BO PLATE (CS)	SA 516 GR.70 N
18.	WIRE MESH	STAINLESS STEEL	SS 316L
19.	INTERNAL LINING	-	AS PER SPEC.
20.	VACUUM STIFFENER	BO PLATE (CS)	SA 516 GR.70 N
21.	LIFTING LUG	BO PLATE (CS)	SA 516 GR.70 N
22.	CATALYST SUPPORT GRID/RING/BELM/BEAM SEAT	STAINLESS STEEL	SS 304L
23.	ANCHORS FOR LINING	STAINLESS STEEL	SS
REFERENCE DRAWING LIST			
BHEL DOCUMENT NUMBER	CLIENT DOCUMENT NO.	DRAWING / DOCUMENT TITLE	
1-PV-100-U0247	080557C-26899033-PVE-A2001-007	GENERAL ASSEMBLY OF 1ST CONVERTER	
1-PV-100-U0249	080557C-26899033-PVE-A1103-079	ASSEMBLY DETAIL OF 1ST CONVERTER	
1-PV-100-U0251	080557C-26899033-PVE-A1103-080	EXTERNAL CLEAT DETAILS OF 1ST CONVERTER	
1-PV-100-U0252	080557C-26899033-PVE-A1103-081	INSULATION CLEAT DETAILS OF 1ST CONVERTER	
3-PV-100-U0326	080557C-26899033-PVE-A1103-082	MH DAVIT DETAILS OF 1ST CONVERTER	
1-PV-100-U0223	080557C-26899033-PVE-A1103-083	SHELL DEVELOPMENT OF 1ST CONVERTER	
1-PV-100-U0224	080557C-26899033-PVE-A1103-084	DAVIT DEVELOPMENT OF 1ST CONVERTER	
3-PV-100-U0330	080557C-26899033-PVE-A1103-085	DETAILS OF TRANSPORTATION OF 1ST CONVERTER	
1-PV-100-U0225	080557C-26899033-PVE-A1103-086	DESIGN CALCULATIONS OF 1ST CONVERTER	
3-PV-100-U0332	080557C-26899033-PVE-A1103-087	DETAILS OF PLATFORMS FOR 1ST CONVERTER	
1-PV-100-U0228	080557C-26899033-PVE-A1103-088	FOUNDATION TEMPLATE FOR 1ST CONVERTER	
3-PV-100-U0333	080557C-26899033-PVE-A1103-089	ANCHOR BOLTS FOR 1ST CONVERTER	
4-PV-100-U0075	080557C-26899033-PVE-A0121-013	DETAILS OF TRANSPORTATION OF 1ST CONVERTER	
1-PV-100-U0228	080557C-26899033-PVE-A1103-089	DETAILS OF TRANSPORTATION OF 1ST CONVERTER	
3-PV-100-U0229	080557C-26899033-PVE-A1103-090	DETAILS OF TRANSPORTATION OF 1ST CONVERTER	
1-PV-100-U0336	080557C-26899033-PVE-A1103-091	DETAILS OF TRANSPORTATION OF 1ST CONVERTER	
3-PV-100-U0337	080557C-26899033-PVE-A1103-092	DETAILS OF TRANSPORTATION OF 1ST CONVERTER	
EIL PR NO. B366-088-RA-MR-6110-0001-REV-0			
DOCUMENT CATEGORY (USE "X" MARK)		DOCUMENT REVIEW STATUS (BY CLIENT)	
<input type="checkbox"/> APPROVAL		CODE-2	
<input checked="" type="checkbox"/> REVIEW			
<input type="checkbox"/> INFORMATION			
CLIENT	INDIAN OIL CORPORATION LIMITED PARADIP REFINERY PROJECT PARADIP, ORISSA		
CONSULTANT	TECHNIP INDIA LIMITED		
PROJECT	525 TPD STANDBY SRU PROJECT IOCL PARADIP REFINERY, ODISHA, INDIA		
DRN.	NAME	SIGN.	DATE
CHD.	RIHA		13.08.21
APPD.	SATISH.D		13.08.21
BHEL DRG NO.		1-PV-100-U0247	
CUST DRG NO.		080557C-26899033-PVE-A2001-007	
SHT. NO. 1		NO. OF SHEET - 1	
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**Project –ENGINEERING SERVICES FOR VARIOUS VESSELS,
REACTORS & COLUMNS OF SRU PACKAGE - IOCL PARADIP**



Job No-

Document Title : COMMENTS RESOLUTION SHEET

Document Number:	080557C-26899053-PVE-A2001-007-R2		Consultant CS	
Document Title:	GENERAL ASSEMBLY OF 1ST CONVERTER 088-R-001		No	
		Rev		

NOTED. BUT VENDOR SHALL
SUBMIT THE DESIGN
CALCULATION OF LIFTING LUG
SEPARATELY WITH DIFFERENT
DRAWING NUMBER, BECAUSE
THESE TWO DOCUMENTS ARE OF
DIFFERENT REVIEW CATEGORY.

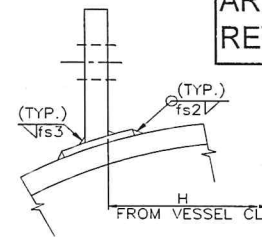
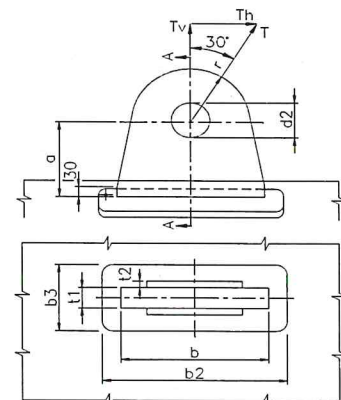
Sr. No.	Consultant Comments	BHEL's Comment		
1.	VENDOR SHALL FURNISH THE DESIGN CALCULATION FOR LIFTING LUG AS PER "SCOPE OF WORK AND SUPPLY " CL NO 1.8 FOR EIL REVIEW.	Noted. Respective supporting calculations provided at the end of file.		
2.	VENDOR SHALL FURNISH THE DESIGN CALCULATION OF SUPPORT BEAM AND IT'S ARRANGEMENT FOR EIL REVIEW AS PER NOTE NO 16 OF EIL MDS.	Noted. We are yet to get details from internal supplier as these items in tendering stage.	[NOTED]	
3.	VENDOR SHALL PROVIDE COMMENT RESOLUTION SHEET IN A TABULAR FORM FOR THE COMMENTS PROVIDED ON PREVIOUS REVISION DRAWING.	Noted.	[NOTED]	
4.	RADIOGRAPHY: SHELL: SPOT HEAD: FULL	Noted and details updated.	[NOTED]	
5.	TEFLON EMBEDDED SS 304 SLIDING PLATES SHALL BE PROVIDED BELOW SLIDING SADDLE.	Noted. Suitable detail added at sliding saddle.	[NOTED]	
6.	VENDOR SHALL SUBMIT THE BALANCE DRAWING FOR EIL REVIEW.	The balance drg. will be submitted after receipt of Code 1 / 2 / R on GAD.	WHY IS IT SO? YOU CAN SUBMIT ALL THE BALANCE DRAWING AT THE EARLIEST.	
7.	NO PIPE CLIP WILL BE WELDED FORM THIS EQUIPMENT.	Noted and suitable care will be taken.	[NOTED]	
8.	LADDER AND PLATFORM DRAWING SHALL BE PROVIDED AS SOON AS POSSIBLE.	Noted. The same is received vide mail dt: 16-09-2021	[NOTED]	

	Project –ENGINEERING SERVICES FOR VARIOUS VESSELS, REACTORS & COLUMNS OF SRU PACKAGE - IOCL PARADIP		 IndianOil
Job No-	Document Title : COMMENTS RESOLUTION SHEET		

Sr. No.	Consultant Comments	BHEL's Comment	Consultant comment	Status
9.	TRAY SUPPORT & BOLTING BAR IS NOT APPLICABLE FOR THIS EQUIPMENT	Noted.	NOTED	
10.	VENDOR SHALL DESIGN THE CATALYST PACKING SUPPORT AS PER EIL MDS.	Noted. We are yet to get details from internal supplier as these items in tendering stage. Same will be submitted soon.	NOTED	
11.	VENDOR SHALL PROVIDE INSERT PLATE INCLUDING 1:3 TAPER LENGTH.	Noted. As per MDS, the dia. of insert plate is including 1:3 taper. Suitable note is provided at respective nozzle.	NOTED	
12.	THIS CYCLE DETAILS ARE SUBJECT TO REVIEW BY TPPIA	Noted.	NOTED	

DESIGN OF LIFTING LUG

W.O.NO. : 2443 01 ITEM NO. : 088-R-001/002



VENDOR SHALL SUBMIT THE DESIGN CALCULATION OF LIFTING LUG SEPARATELY WITH DIFFERENT DRAWING NUMBER ,BECAUSE THESE TWO DOUMENTS ARE OF DIFFERENT REVIEW CATEGORY.

ERECTION WEIGHT OF VESSEL, W (CONSERVATIVE SIDE)	=	75000.0 KG
SHOCK FACTOR, K _s	=	2.0
NO. OF LUGS, n	=	4
ANGLE OF INCLINATION,	=	30°
THICKNESS OF LUG, t ₁	=	3.20 CM
WIDTH OF LUG, b	=	31.0 CM
HEIGHT OF LUG, b ₁	=	23.7 CM
RADIUS OF LIFTING LUG, r	=	8.0 CM
DIA OF HOLE IN LUG, d ₂	=	5.0 CM
DIAMETER OF SIDE COVER, d ₁	=	0.0 CM
THICKNESS OF SIDE COVER, t ₁	=	0.0 CM
YEILD STRESS OF LUG/PAD MATL., f _y	=	2651.26 KG/CM ²
DISTANCE BETWEEN AXIS OF LUG AND PAD, a	=	15.0 CM
LOAD SHARED BY EACH LUG, W ₁ = W / n	=	18750.0 KG
LOAD SHARED BY EACH LUG INCL. DYNAMIC IMPACT, W ₂ = W ₁ * K _s	=	37500.0 KG
VERTICAL COMPONENT OF LOAD, T _v = W ₂	=	37500.0 KG
HORIZONTAL COMPONENT OF LOAD, T _H = T _v * TAN 30°	=	21650.64 KG

- 1)
 - a) ALONG 'A-A' TENSILE STRESS DUE TO HORIZONTAL COMPONENT OF LOAD (T_H) = T_H / A_s = 361.81 KG/CM²
 AREA OF C.S. AT A-A, A_s (bxt₁+d₁Xt₂X2-d₂X(t₁+2t₂)) = 59.84 CM²
 PERMISSIBLE TENSILE STRESS AS PER CL.4.1.1. OF IS-800,1984 (0.6 x f_y) = 1590.7572 KG/CM²
HENCE SAFE
 - b) SHEAR STRESS DUE TO HORIZONTAL COMPONENT, f_s = T_H/(b x t₁) = 218.25 KG/CM²
 PERMISSIBLE SHEAR STRESS AS PER CL.6.4.1. OF IS-800,1984 (0.45 x f_y) = 1193.07 KG/CM²
HENCE SAFE

DESIGNED BY: SATISH.D

CHECKED BY:Y.P.K

APPROVED BY:Y.P.K

W.O.NO. : 2443 01 ITEM NO. : 088-R-001/002

REV. NO. A

$$\text{SEC. MODULUS OF LUG, } Z = t_1 \times b^2 / 6 = 512.53 \text{ KG/CM}^2$$

HENCE SAFE

HENCE SAFE

$$\text{TOTAL WELD AREA} = 2 \times 0.7071 \times b \times e2 = 65.76 \text{ CM}^2$$
$$\text{SECTION MODULUS, } Z_1 = 2 [(0.7071 \times e_2) b^2 / 6] = 339.76 \text{ CM}^2$$

ALLOWABLE STRESS FOR WELD, f_a = 1100.00 KG/CM²

HENCE SAFE

APPROVED BY:Y.P.K

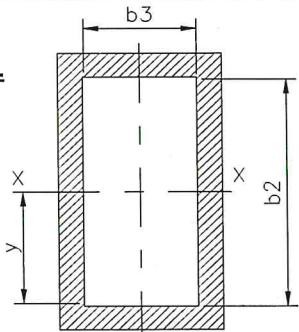
DESIGN OF LIFTING LUG

SHEET 3 OF 3

W.O.NO. : 2443 01 ITEM NO. : 088-R-001/002

REV. NO. A

3) CHECK FOR WELD SIZE BETWEEN LUG PAD AND SHELL



WIDTH OF PAD, b_3 = 28.40 CM

LENGTH OF PAD, b_2 = 45.00 CM

THICKNESS OF PAD, T_p = 2.5 CM

FILLET SIZE, e_1 = 1.8 CM

TOTAL WELD AREA = $(b_3 + b_2) \times 2 \times 0.707 \times e_1$ = 186.84 CM²

$b_1 = e_1 \times 0.707$ = 1.27 CM

a) BENDING STRESS IN THE WELD (f_b) = $(T_H \times a) / Z_3$ = 130.9 KG/CM²

SECTION MODULUS $Z_3 = I_{xx} / Y$ = 2480.28 CM³

MOMENT OF INERTIA ABOUT SECTION XX, = 58038.49 CM⁴

$$I_{xx} = \frac{2xb_1xb_2^3}{12} + \frac{2xb_3b_1^3}{12} + 2xb_3b_1(b_2/2 + b_1/2)^2$$

DISTANCE FROM NEUTRAL AXIS, Y = 23.4 CM

b) SHEAR STRESS DUE TO HORIZONTAL COMP. OF LOAD = 115.88 KG/CM²

$$f_t = T_H / \text{TOTAL WELD AREA}$$

d) COMBINED BENDING & SHEAR $f_e = \text{SQRT}(f_t^2 + f_b^2)$ = 203.26 KG/CM²

ALLOWABLE STRESS FOR WELD, f_a = 1100.00 KG/CM²

HENCE SAFE

DESIGNED BY: SATISH.D

CHECKED BY:Y.P.K

APPROVED BY:Y.P.K

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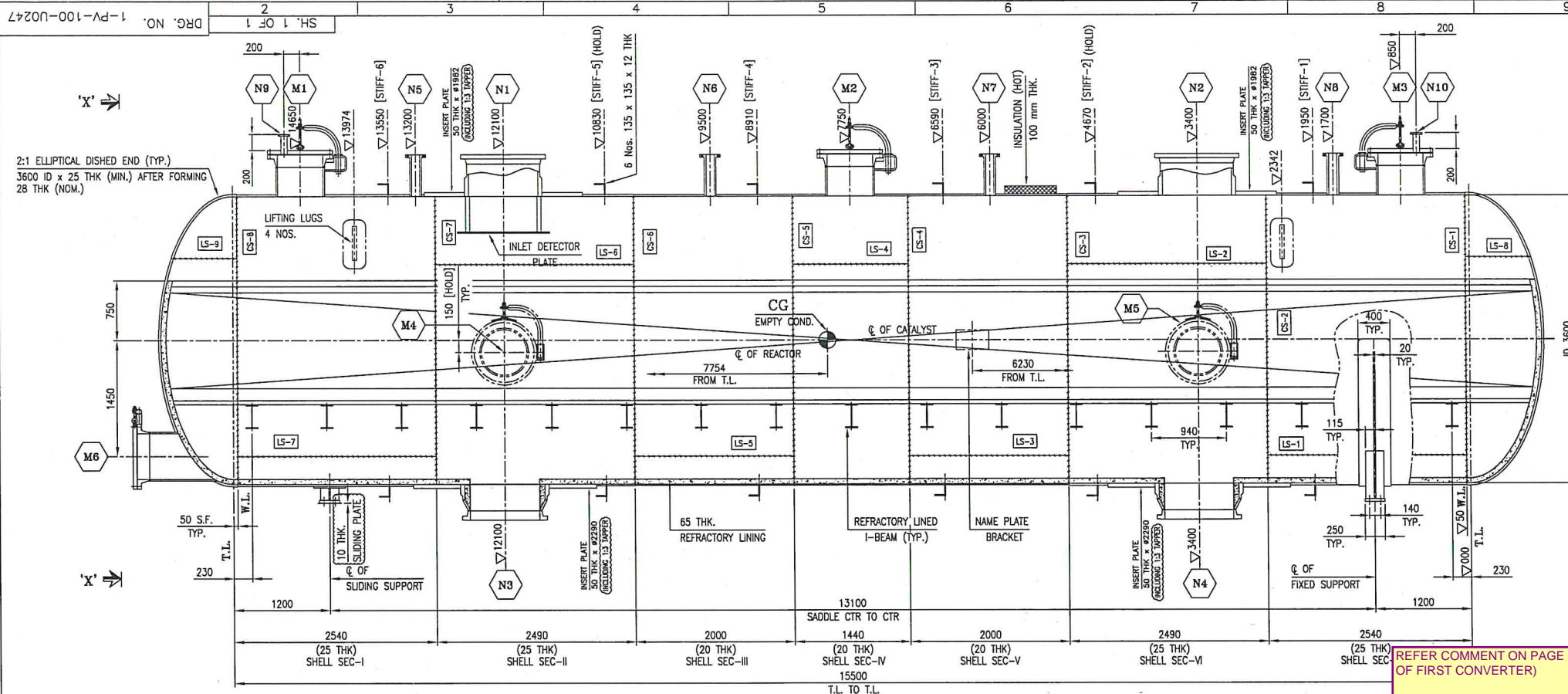
COMPUTER FILE NAME
SIGN. AND DATE
REF. DRG. NO.

INVENTORY NO

FIRST ANGLE PROJECTION

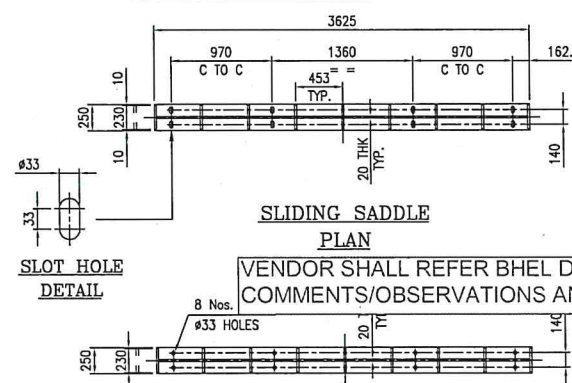
(ALL DIMENSIONS ARE IN mm)

ESP-001-11A



REFER COMMENT ON PAGE NO.1 (GA DRAWING OF FIRST CONVERTER)

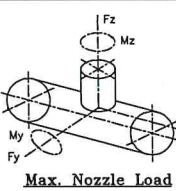
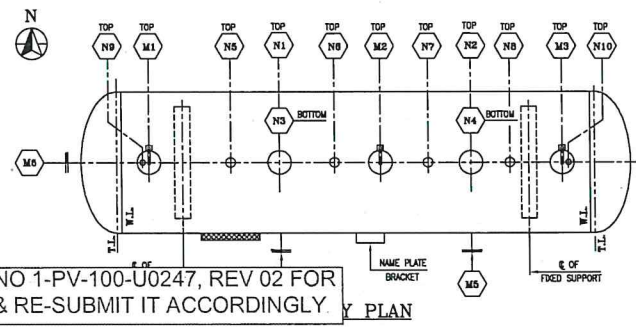
SECTIONAL ELEVATION



SLIDING SADDLE PLAN

FIXED SADDLE PLAN

SLIDING PLATE



LOAD DATA		MAX. MOMENT AT BASE (N) (kgm)		MAX. SHEAR FORCE AT BASE (H) (kg)	
SEISMIC	96585				47579
WIND	27433				1354

M6	1	MANHOLE + B.F. + GASKET + NUT + BOLT + DAVIT & PLUG	600 (24")	610	20	150	SRWN/RF	—	1200	—
M4/M5	2	MANHOLE + B.F. + GASKET + NUT + BOLT + DAVIT & PLUG	600 (24")	610	20	150	SRWN/RF	—	2173	—
M1-M3	3	MANHOLE + B.F. + GASKET + NUT + BOLT + DAVIT	600 (24")	610	20	150	SRWN/RF	—	2320	—
M9/M10	2	VENT & PURGE	50 (2")	50.8	16.6	300	LWN/RF	—	SEE DRG.	—
N5-N8	4	THERMOWELL	100 (4")	101.6	22.2	300	LWN/RF	—	2320	—
N3/N4	2	GAS OUTLET	1000 (40")	1143.85	25	150	SRWN/RF	50 x #2290 INSERT PLATE	2250	REFRACT. LINING 7mm
N1/N2	2	GAS INLET WITH DEFLECTOR	900 (36")	915.9	25	150	SRWN/RF	50 x #1820 INSERT PLATE	2320	—
MARK NO.	QTY.	SERVICE	NB (N.P.S.)	O.D.	THK. SCH.	RATING CLASS.	TYPE / FACE	R.F.P.D. VENTURE + TAD.	PROB. SEE NOTE-3	REMARKS

STIFFENER ANGLE TO SHELL WELD JOINT

SHELL THK	I.D. OF STIFFENER
20 mm	3640 mm
25 mm	3650 mm

HEAT TREATMENT CYCLE

Part	Procedure	Leading Temperature (°C)	Holding Temperature (°C)	Heating Rate (°C/hr)	Holding Time (min)	Cooling Rate (°C/hr)	Remarks
VESSEL	PHWT	<425	610±10	110	120	140	Unloading at 425°C

DESIGN DATA	
CODE	ASME SEC. VIII DIV.1 (ED-2019)
SERVICE	ACID GAS
DESIGN PRESSURE (INTERNAL) kg/cm ² (g)	3.8 AT HIGHEST POINT
DESIGN PRESSURE (EXTERNAL) kg/cm ² (g)	0.105
MAXIMUM ALLOWABLE WORKING PRESSURE kg/cm ² (g)	3.8
DESIGN TEMPERATURE (INT./EXT.) (°C)	343 / 175
OPERATING PRESSURE kg/cm ² (g)	0.5
OPERATING TEMPERATURE (°C) (INLET/OUTLET)	287 / 237
STEAM OUT CONDITION kg/cm ² (g)	APPLICABLE (3.0/F.V. @ 175 °C)
HYDROTEST PRESSURE kg/cm ² (g)	4.94 (AT TOP)
CORROSION ALLOWANCE mm	3 mm (INTERNAL)
CAPACITY (m ³)	154
WEIGHT (kg)	CLAD (mm) : -
	SHELL SPOT HEAD: FULL FABRICATED WEIGHT (kg) : ~ 54400
	SHELL: 0.85 HEAD/NOZZLE: 1.5 WEIGHT (kg) : ~ 54400
	HYDROTEST FIELD WEIGHT (kg) : ~ 218,400
	HYDROTEST SHOP WEIGHT (kg) : ~ 241,000
INSULATION THICKNESS / TYPE	100 mm / R
INSULATION TYPE	HOT
FIRE PROOFING THICKNESS	NO
SPECIFIC GRAVITY OF FLUID	0.0016
POST WELD HEAT TREATMENT	YES (REFER TABLE)
MINIMUM DESIGN METAL TEMPERATURE °C	113
CODE STAMP REQUIRED	CS YES NO NO CONSIGNMENT SIZE : DOC/ASME/ASME
NS CODE STAMP REQUIRED	CS YES NO NO POSITION OF VESSEL : HORIZONTAL
ASME CERTIFICATION MARK	NA
INSPECTION: AUTHORIZED	INSPECTION: AUTHORIZED
STAGE WISE & THIRD PARTY INSPECTION: YES	STAGE WISE & THIRD PARTY INSPECTION: YES
NATIONAL BOARD REGISTRATION	NATIONAL BOARD REGISTRATION
NOT REQUIRED	NOT REQUIRED





MATERIAL OF CONSTRUCTION	
SL.NO.	DESCRIPTION
1.	SHELL, D'END, R.F.PAD, INSERT PLATE
2.	FLANGES
3.	SADDLE WRAPPER PL.
4.	SADDLE SUPPORT
5.	PAD FOR EXTERNAL ATTACHMENT
6.	GASKET
7.	EXTERNAL BOLTS/NUTS
8.	INTERNAL BOLTS/NUTS
9.	PIPE FITTINGS
10.	EXTERNAL ATTACHMENT PADS
11.	NOZZLES NECK UP TO 300NB
12.	NOZZLES NECK ABOVE TO 300NB
13.	SUPPORT / SUPPORT BASE
14.	SLIDING PLATE
15.	INTERNAL PARTS (WELDED)
16.	INTERNAL PARTS (BOLTED)
17.	WRAPPER PLATE
18.	WIRE MESH
19.	INTERNAL LINING
20.	VACUUM STIFFENER
21.	LIFTING LUG
22.	CATALYST SUPPORT GRID/RING/BEAM/SEAT
23.	ANCHORS FOR LINING

REFERENCE DRAWING LIST	
DRG. NO.	DESCRIPTION
1-PV-100-U0247	GENERAL ASSEMBLY OF 1ST CONVERTER
1-PV-100-U0249	ASSEMBLY DETAIL OF 1ST CONVERTER
1-PV-100-U0251	EXTERNAL CLEAT DETAILS OF 1ST CONVERTER
1-PV-100-U0252	INSULATION CLEAT DETAILS OF 1ST CONVERTER
1-PV-100-U0253	MAN DAVIT DETAILS OF 1ST CONVERTER
1-PV-100-U0223	SHELL DEVELOPMENT OF 1ST CONVERTER
1-PV-100-U0224	GENERAL NOTES OF 1ST CONVERTER
1-PV-100-U0230	DETAILS OF NAME PLATE OF 1ST CONVERTER
1-PV-100-U0225	DETAILS OF INTERNALS OF 1ST CONVERTER
1-PV-100-U0332	LIST OF SPARES OF 1ST CONVERTER
1-PV-100-U0333	DETAILS OF TRANSPORTATION OF 1ST CONVERTER
1-PV-100-U0075	DESIGN CALCULATIONS OF 1ST CONVERTER
1-PV-100-U0228	DETAILS OF PLATFORMS FOR 1ST CONVERTER
1-PV-100-U0229	GRATING DETAILS FOR 1ST CONVERTER
1-PV-100-U0336	DETAILS OF FOUNDATION TEMPLATE FOR 1ST CONVERTER
1-PV-100-U0337	DETAILS OF ANCHOR BOLTS FOR 1ST CONVERTER

LIST OF HOLDS AS ON DATE	
01. PACKING SUPPORT	

EIL PR NO. B366-088-RA-MR-6110-0001-REV-0	DOCUMENT CATEGORY (USE "X" MARK)	DOCUMENT REVIEW STATUS (BY CLIENT)
	<input type="checkbox"/> APPROVAL <input checked="" type="checkbox"/> REVIEW <input type="checkbox"/> INFORMATION	CODE-2

CLIENT	INDIAN OIL CORPORATION LIMITED PARADIP REFINERY PROJECT PARADIP, ORISSA
CONSULTANT	TECHNIP INDIA LIMITED
PROJECT	525 TPD STANDBY SRU PROJECT IOCL PARADIP REFINERY, ODISHA, INDIA

TUCIL PARADIP REFINERY, ODISHA, INDIA									
TESTED		BHARAT HEAVY ELECTRICALS LTD. VISAKHAPATNAM			DRN.	NAME RINA	SIGN.	DATE 13.08.21	NO. OF VAR.
					CHD.	SATISH.D		13.08.21	
					APPD.	SATISH.D		13.08.21	
	DEPT. HVPV CODE	UNTO. DIMS. GR. C/M/F		SCALE 1:10	WEIGHT (KG) -N.A.-	REF. TO ASSY. DRG. -N.A.-		ITEM NO. 088-R-002	NO. OF ITEMS 1
OS & S	TITLE GENERAL ASSEMBLY OF 2ND CONVERTER (088-R-002)					CARD CODE N.A.	BHEL DRG NO. 1-PV-100-U0232 CUST DRG NO. 080557C-28899053-PVE-A2001-008		
	10			11			12		
							SHT. No 1	NO. OF SHT. 1	

ESP-001-11A