

GENERAL NOTES :-

- 1] ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.
- 2] ALL BOLT HOLES SHALL STRADDLE THE PRINCIPAL CENTER LINE.
- 3] ALL SHARP CORNERS SHALL BE ROUNDED OFF TO MINIMUM RADIUS.
- 4] IF BACK CHIPPING IS NOT POSSIBLE THEN ROOT RUN SHALL BE DONE BY TIG.
ALL ACCESSABLE WELDS TO BE BACK CHIPPED & WELDED FROM OTHER SIDE.
- 5] STANDOUTS FOR NOZZLES WELDED ON SHELL & CHANNEL SHALL BE MEASURED FROM THE CENTRE LINE OF THE EXCHANGER.
- 6] ALL INSIDE WELD SHALL BE GROUND SMOOTH.
- 7] ALL WELDS SHALL BE D.P. CHECKED AFTER BACK CHIPPING.
- 8] ALL FORGINGS SHALL BE ULTRASONICALLY EXAMINED AS PER ASME Sec. II, SA-388. ACCEPTANCE STANDARD SHALL BE IN ACCORDANCE WITH PARA AM 203.2 OF ASME Sec. VIII Div. 2 CODE. SCANNING SHALL BE 100%.
- 9] ALL FORGINGS SHALL BE IN NORMALISED AND TEMPERED CONDITION.
- 10] INSIDE EDGES OF TUBE HOLES IN TUBESHEET SHALL BE FREE OF BURRS TO PREVENT CUTTING OF THE TUBES.
- 11] ALL FABRICATION, INSPECTION & TESTING REQUIREMENT SHALL BE AS PER APPROVED QAP. PROJECT SPECIFICATION & ASME CODE
- 12] BAFFLE & SUPPORT PLATES DISTANCE GIVEN FROM CENTER TO CENTER.
- 13] HEMI SPHERICAL HEAD SHALL BE IN SINGLE PIECE CONSTRUCTION
- 14] HEMI. HEADS SHALL BE SUBJECTED TO DYE PENETRANT TEST (BOTH INSIDE & OUTSIDE) AFTER HEAT TREATMENT.
- 14] APPROVAL ON WPS AND PQR SHALL BE OBTAINED PRIOR TO FABRICATION.
- 15] ALL SOLID GASKETS SHALL BE MADE IN ONE CONTINUOUS PIECE ALL AROUND INCLUDING THE PASS RIBS AND THEREFORE MUST BE CUT FROM ONE SHEET.
- 16] 6.35THK SS 316L SPWD GASKET WITH GRAFOIL FILLER AND 4.5THK SS 316L INNER CENTERING RING (13 WIDE) WITH 4.5THK CS OUTER NOSE (4 WIDE) FOR GIRTH FLANGE.
- 17] 'T' DENOTES MATCH MARK FOR ASSEMBLY AND SHALL BE PUNCHED ON ALL MATING PARTS.
- 18] ALL MATERIALS SHALL BE SUPPLIED WITH MILL TEST CERTIFICATE. REFER PARA 2.1.3 OF 6-15-0001 REV.2
- 19] DELETED.
- 20] THE HEAT EXCHANGER SHALL BE PROVIDED WITH PRESSURE GAUGE TO MONITOR N₂ PRESSURE (0.25 Kg/cm²) AND 1/2" NON RETURN VALVE AS PER 6-15-0001 REV.2. PARA 9.1.
- 21] EQPT. SHALL BE DRIED & THOROUGHLY CLEANED BOTH INSIDE AND OUTSIDE AND ALL WATER, DIRT, SAND, WELD METAL, SPATTER, WELD ELECTRODES, STUB & FOREIGN MATERIALS SHALL BE REMOVED.
- 22] FOR CONSTRUCTIONAL DETAILS AND NOMENCLATURES REFER EIL STANDARDS NUMBER.
EIL PR NO. 4814-07-EE-PR-7041 REV.0 CHEVRON THERMAL DATASHEET RC-201120 REV.1A.
GENERAL SPEC. 6-15-0001 REV-2., 6-15-0003 REV-2, 6-15-0006 REV.2, 7-76-0101 REV.2.
7-15-0001 REV.1, 7-15-0002 REV.1, 7-15-0004 REV.1, 7-15-0007 REV.1,
7-15-0009 REV.1. TO 0011 REV-1, 7-15-0016 REV.1, 7-15-0017 REV.1, 7-15-0018 REV.1, 7-15-0019 REV.1
4814-07-EE-SP-0001 REV.A, 4814-30-EE-SP-1000 REV.0, EXH-EG-4764-A REV.A, EXH-MS-2583-K REV.K
PVM-EG-4749 REV.B, GC-E1048 REV.3, GD-L1264-REV.3, ANNEXURE TO JOB SPECIFICATION 4814-07-EE-SP-0001 REV.1
6-15-91 REV.0, 6-12-0018 REV.1, 6-15-0021 REV.2, RA-201231.
- 23] DELETED.
- 24] ALL OF THE REMOVABLE PARTS SHALL BE STAMPED WITH THE ITEM NUMBER.
- 25] ALL SURFACES (OTHER THAN GASKET SURFACES) OF SHELL DRUM FORGINGS, CHANNEL COVER ETC. SHALL BE MACHINED TO 8 CLA MICRONS (250 RMS) OR BETTER, AFTER FINAL HEAT TREATMENT.
- 26] SPARE PARTS :-

STUD BOLTS/NUTS	:- 20% (MIN. 4SETS)
GASKET	:- 400%
GASKET RETAINER	:- 100%
PUSH RODS	:- 100%
LAMIFLEX SEAL STRIP	:- 100%
- 27] ALL SHELL SIDE NOZZLE FLANGES & COMPANION FLANGES GASKET FACE SHALL BE 63 AARH FINISH.
- 28] DIMENSIONS OF NOZZLE FLANGES GASKET SHALL BE AS PER B 16.20-ANSI B 16.5.

29] CORROSION ALLOWANCE

TUBES	0.25mm
TUBESHEET	1mm
BAFFLES	3mm
SEALING STRIP	3mm
SHELL & SHELL COVER	3mm
CHANNEL	SEE NOTE-31
PASS PARTITION PL.	1mm
LONGITUDINAL BAFFLE	3mm
IMPACT BAR	3mm

DRAWING CERTIFIED BY
Harry R. Bishop 05/26/03
 HARRY R. BISHOP
 CHIEF DESIGN ENGINEER

- 30] ANCHOR BOLTS MATERIAL IS IS:2062. (BY OTHERS)
- 31] 5mm. SS.347 WELD OVERLAY(SEE GN-15 THROUGH GN-19) APPLIES TO CHANNEL AS PER DWG.NO.RA-201231.
- 32] CHANNEL INTERNAL WETTED SURFACE SHALL HAVE CORROSION ALLOWANCE OF 1 MM. WHEREVER THERE IS DIFFERENCE IN MOC OF SPOOL PIECE & FORGED NOZZLE SHALL PROVIDE BUTTERING OF INCONEL ON NOZZLE WELDING EDGE BEFORE WELDING OF SPOOL PIECE



REQUIRED BY BOLT TENSIONER

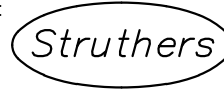
LOCATION	BOLT SIZE	NO. OF BOLT	LOAD REQD./BOLT	TORQUE
SHELL FLANGE	M-75	36	140964.69 lbf.	3127.037 lbf-ft
NOZZ. S1 & S2	1 7/8" UN8	24	52991.988 lbf.	230.366 lbf-ft

- 33] PAINTING (SHOP PRIMER) OF EXCHANGERS SHALL BE AS FOLLOWS :-
 THE EXTERNAL SURFACE SHALL BE PREPARED FOR PAINTING BY BLAST CLEANING TO NEAR WHITE FINISH AS PER SSPC-SP-10 [SA 2 1/2 SWEDISH STANDARD (SIS-05-5900)].
 THE SHOP PRIMER SHALL BE INORGANIC ZINC SILICATE @ 65-75 MICRONS DRY FILM THICKNESS.

REV.	DATE	DESCRIPTION	DRWN	CHKD	APPD
6	05/26/03	AS BUILT DIMENSIONS ARE SHOWN IN BKT (-) & OTHER REVISED AS MKD THUS	DMF	WB	HRB
5	10/10/02	DWG IS REVISED AS MKD THUS.	DMF	WB	HRB
4	07/10/02	DWG IS REVISED AS MKD THUS.	DMF	WB	HRB
3	04/17/02	DWG IS REVISED AS MKD THUS.	DMF	WB	HRB

PROJECT NAME : **CPCL REFINERY- III PROJECT**

MANUFACTURER :  **"AS BUILT DWG"**  **TEMA INDIA LTD**
Factory: Achhad Village, Dist. Thane, & Kherdi, Silvassa Gram: CODEVESEL Mumbai 88.

ENGINEERING :  **STRUTHERS INDUSTRIES, INC. GULFPORT, MISSISSIPPI**

CONSULTANT : **ENGINEERS INDIA LIMITED**

CLIENT : **CHENNAI PETROLEUM CORPORATION LIMITED**

TITLE : **GENERAL NOTES FOR RX EFFLUENT / CLPS LIQUID** **EQPT. NO. 207-E4**

JOB NO.	SII	3-02-04-41206B	P/O No.	1027/PO/2138/4814	
	TEMA	T/E/02517			
SCALE	NTS	DWG. No. or Doc No.	VP-1027-E4-02517	SHT. NO.	Rev.
				2 OF 18	3/4/5/6