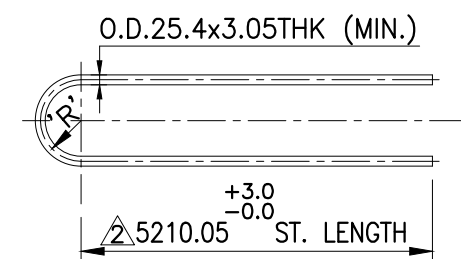


DETAIL OF TUBE BUNDLE SCALE = 1:26



ROW NO.	NO. REQ'D.	RADIUS 'R'	'U' TUBE STRAIGHT LENGTH
1	39	R1= 38.10	10540
2	40	R2= 69.85	10640
3	40	R3= 101.60	10740
4	40	R4= 133.35	10839
5	40	R5= 165.10	10939
6	40	R6= 196.85	11039
7	38	R7= 228.60	11138
8	38	R8= 260.35	11238
9	34	R9= 292.10	11338
10	36	R10= 323.85	11438
11	34	R11= 355.60	11537
12	32	R12= 387.35	11637
13	32	R13= 419.10	11737
14	29	R14= 450.85	11837
15	28	R15= 482.60	11936
16	26	R16= 514.35	12036
17	6	R17= 546.10	12136

SCALE = NTS DETAIL OF 'U' TUBE

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

"AS BUILT DWG"

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

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

MANUFACTURER : **TEMA INDIA LTD**  
Factory: Achhad Village, Dist. Thane, & Kherdi, Silvassa Gram: COOBESEI, Mumbai 88.

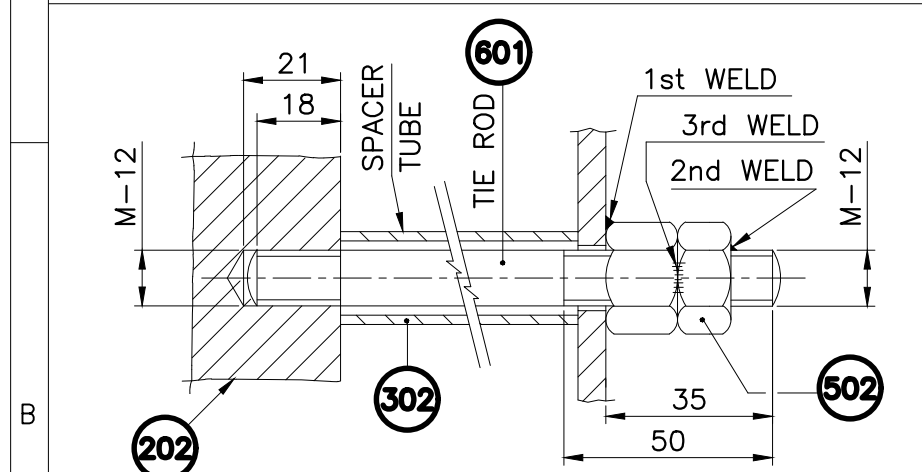
ENGINEERING : **Struthers STRUTHERS INDUSTRIES, INC. GULFPORT, MISSISSIPPI**

CONSULTANT : **ENGINEERS INDIA LIMITED**

CLIENT : **CHENNAI PETROLEUM CORPORATION LIMITED**

TITLE : **DETAIL OF TUBE BUNDLE 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	AS SHOWN	DWG. No. or Doc No.	VP-1027-E4-02517	SHT. NO. 5 OF 18
				Rev. 2/3/4/5

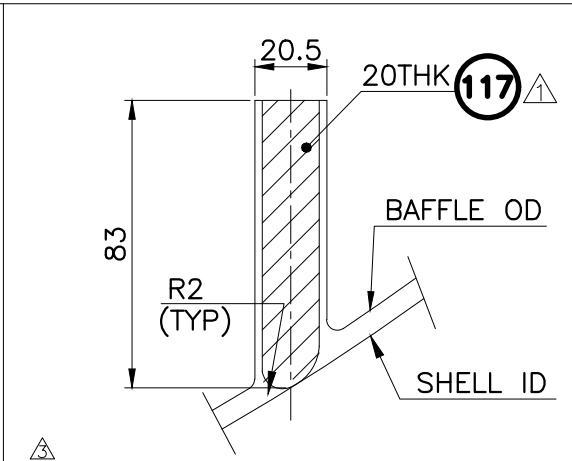


DETAIL OF TIE ROD ARRANGEMENT SCALE = NTS

OD21.7x2.65THK

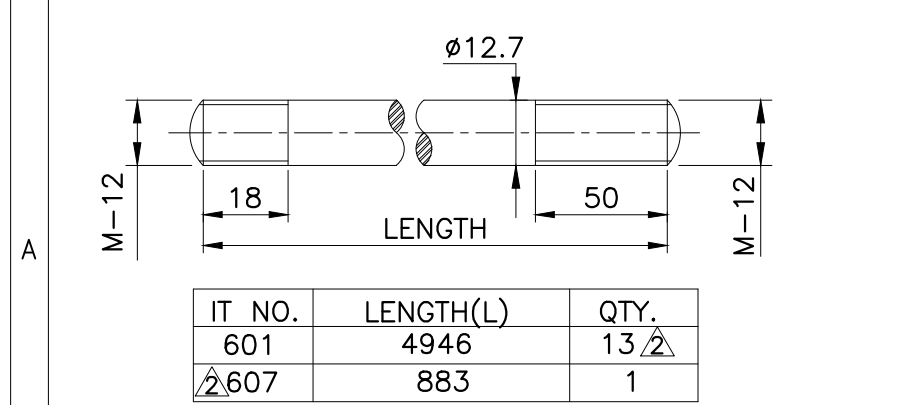
IT NO.	LENGTH ('L')	QTY.
302A	378.35	7
302B	517.40	54
302C	1050.80	10
302D	998.0	5
302E	168.65	6
302F	419.00	7
302G	1531.4	2
302H	662.6	11
302J	1196.0	2

DETAIL OF SPACER TUBE SCALE = NTS



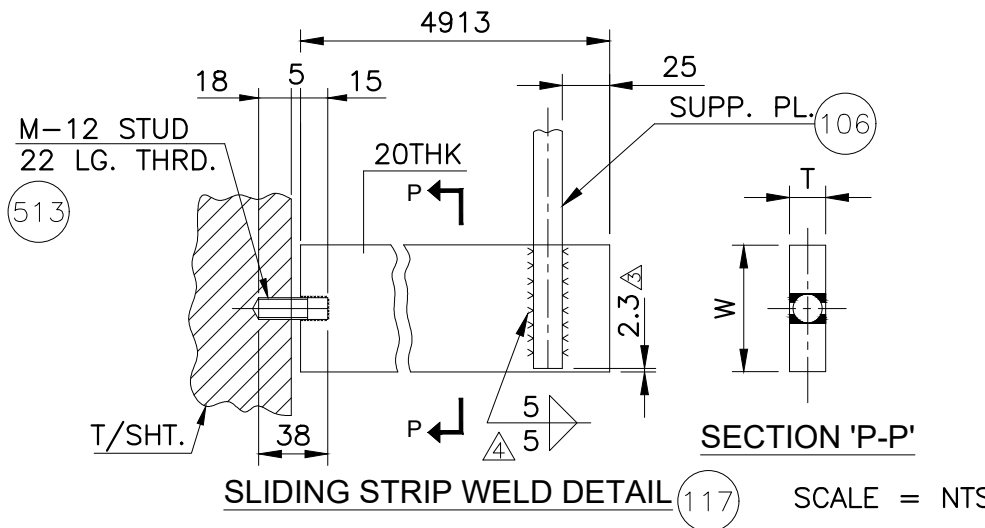
SECTION "P-P" SCALE = NTS

NOTE :- MAXIMUM OF 0.8mm CLEARANCE BETWEEN THE SHELL ID & SLIDING STRIP



DETAIL OF TIE ROD SCALE = NTS

IT NO.	LENGTH(L)	QTY.
601	4946	13
607	883	1



SLIDING STRIP WELD DETAIL SCALE = NTS