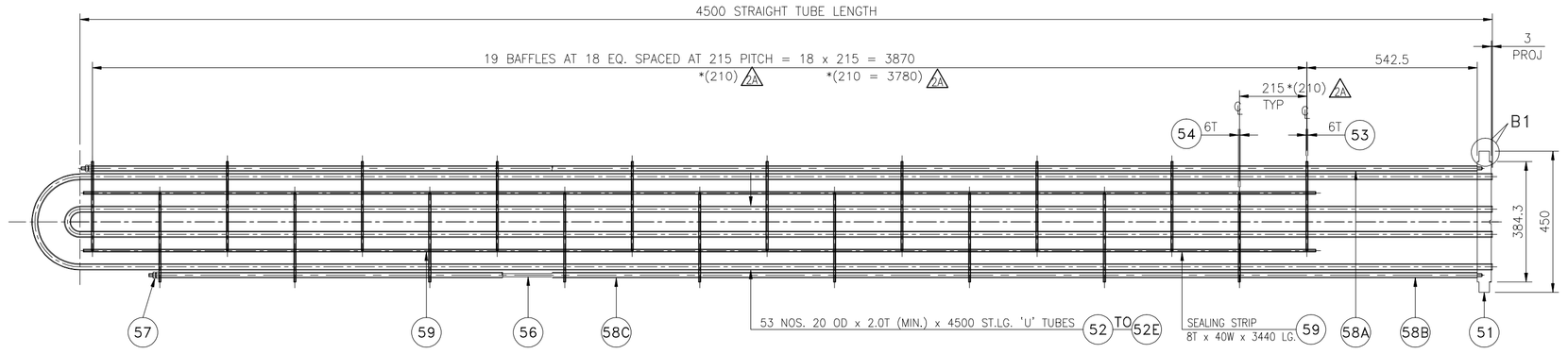
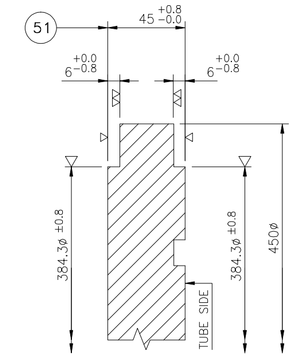
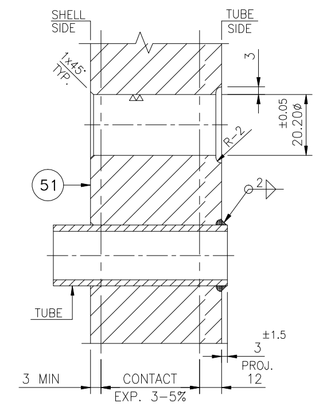
AERO ENGINEERS



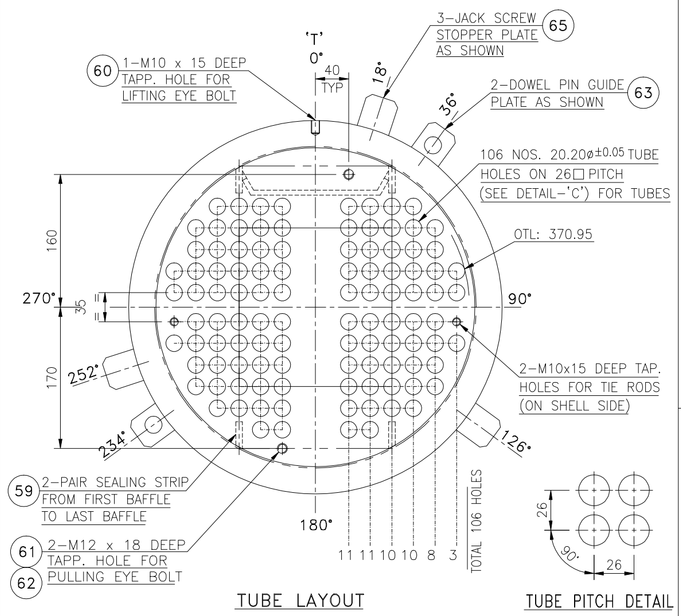
TUBE BUNDLE ASSEMBLY (SCALE- 1:12.5)



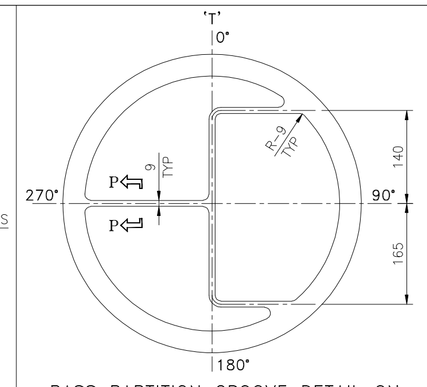
DETAIL: B1
DET. OF STATIONARY
TUBE SHEET



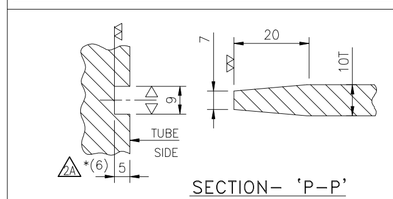
TUBE TO TUBE SHEET JOINT
AND TUBE HOLE DETAIL
1A (REFER NOTES)



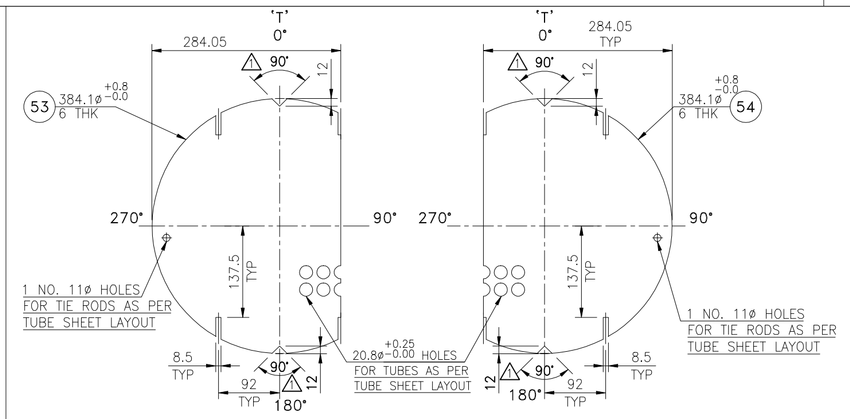
TUBE LAYOUT TUBE PITCH DETAIL



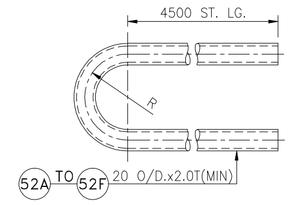
PASS PARTITION GROOVE DETAIL ON
TUBE SIDE FOR STATIONARY TUBE SHEET



SECTION- 'P-P'
DETAIL OF PARTITION GROOVE

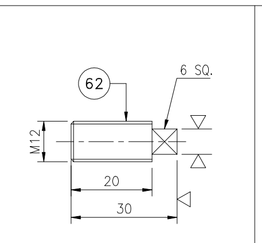


DETAIL OF BAFFLE PLATE DETAIL OF BAFFLE PLATE

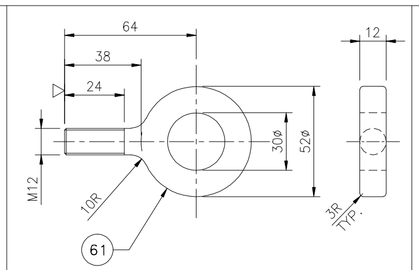


P.NO.	QTY.	'R'	DEV. LG.
52A	11	40	9126
52B	11	66	9208
52C	10	92	9289
52D	10	118	9371
52E	8	144	9453
52F	3	170	9534

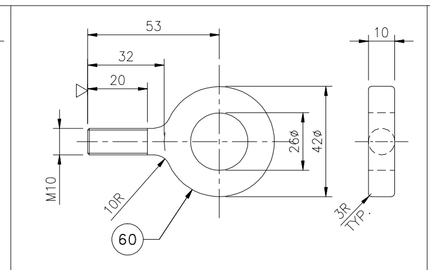
DETAIL OF 'U' TUBES



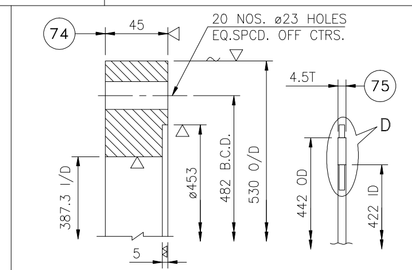
DET. OF PLUG



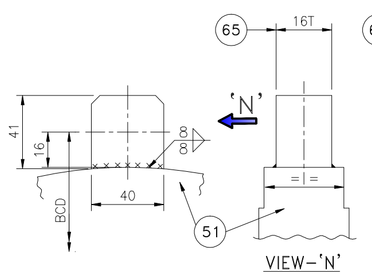
DET. OF PULLING EYE BOLT



DET. OF LIFTING EYE BOLT

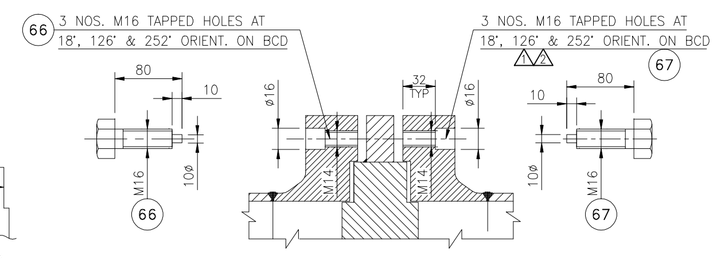


DETAIL OF TEST FLG.

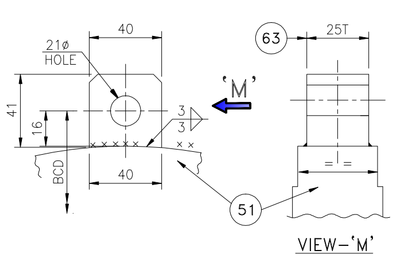


VIEW-'N'

DET. OF JACK
SCREW STOPPER PL.

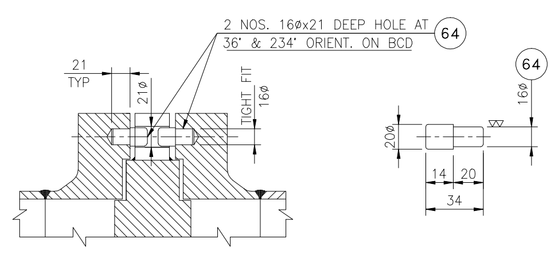


FIXING DETAIL OF JACK SCREW
(AT ST. TUBE SHEET)

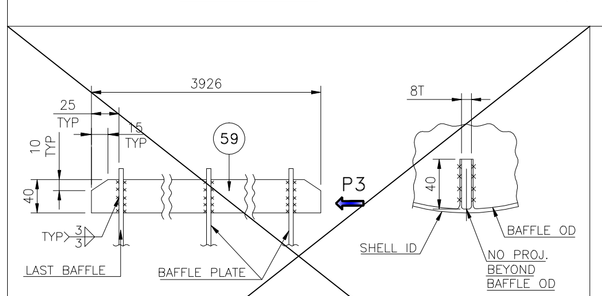


VIEW-'M'

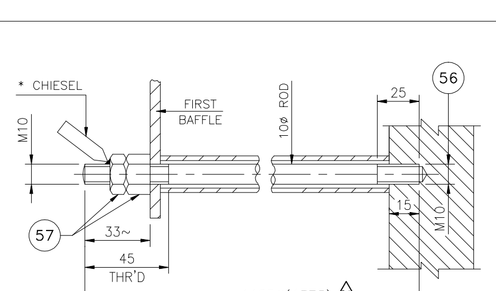
DET. OF DOWEL
PIN GUIDE PL.



FIXING DETAIL OF DOWEL PIN
(AT ST. TUBE SHEET)

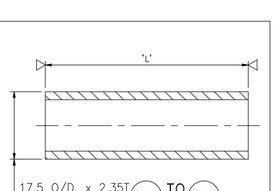


1A TYP. DET. OF SEALING STRIP 1A VIEW-'P3'



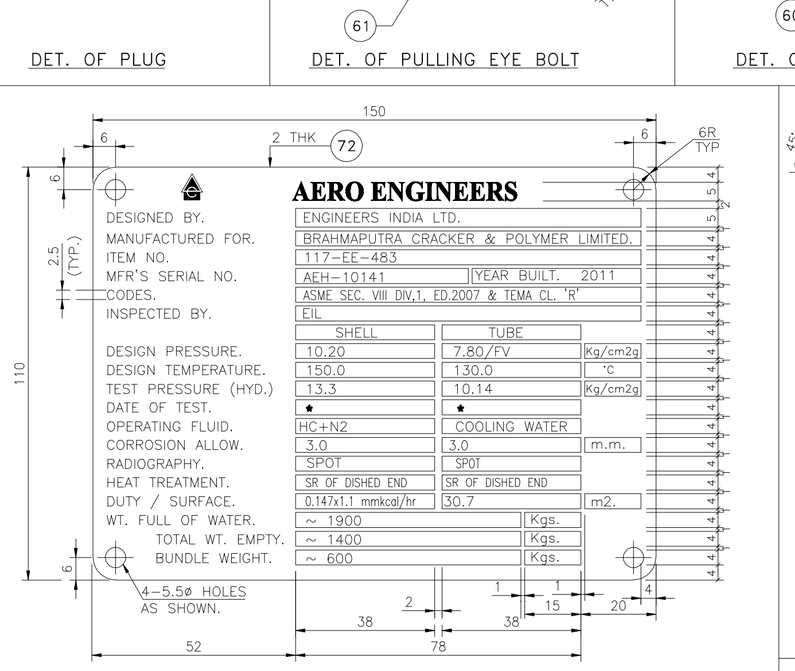
* BREAK THREAD OF TIE ROD IN TWO PLACES NEAR LAST NUT
WITH BLUNT CHISEL TO LOCK TIE ROD NUTS IN PLACE.

DETAIL OF TIE ROD ASSLY.



P.NO.	QTY./ UNIT	LENGTH 'L'
58A	1	539.5
58B	1	754.5*(749.5) 1A
58C	17	424*(414) 1A

DETAIL OF SPACER



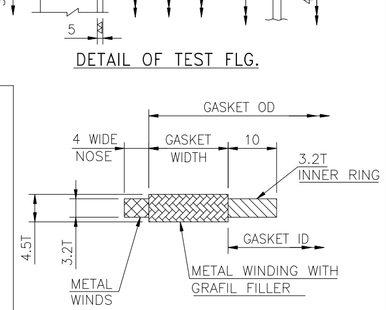
NOTES :

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.
2. ALL LETTERS, BLOCKS AND BORDERS SHALL BE RAISED POLISHED FACE.
3. BACK GROUND SHALL BE BLACK.
4. MATERIAL : S.S. 304

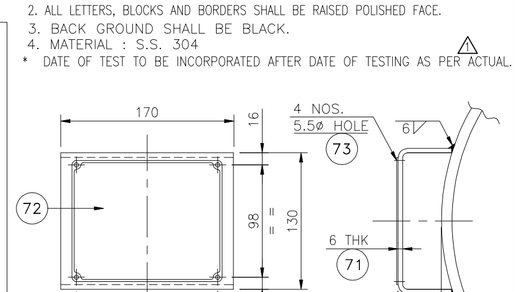
* DATE OF TEST TO BE INCORPORATED AFTER DATE OF TESTING AS PER ACTUAL. 1A

DETAIL OF IMPINGEMENT PLATE

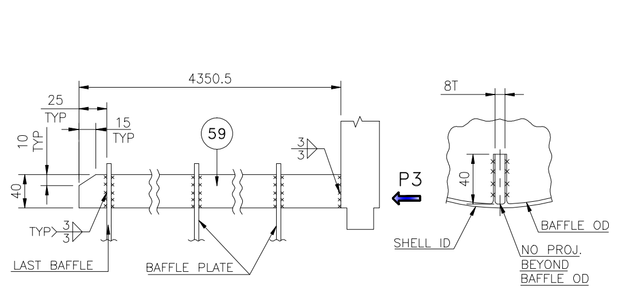
VIEW – U



DETAIL– D



DETAIL OF
NAME PLATE BRACKET



1A *(TYP. DET. OF SEALING STRIP) 1A *(VIEW-'P3')

*(SEALING STRIP TO BE EXTENDED UP TO STATIONARY TUBESHEET AND WELD WITHTUBE SHEET)
*(REF. EIL E-mail DTD. 08.11.2011)

REVISION

NO. REV.	DATE	DESCRIPTION	BY REV.	BY APPD.
1A	27.05.11	REVISED AS PER CLIENT'S COMMENTS AS MK'D. 1A	K.M.P.	S.J.P.
2A	28.06.11	REVISED AS PER CLIENT'S COMMENTS AS MK'D. 2A	K.M.P.	S.J.P.
3A	12.12.11	SHOWN "AS BUILT" DRAWING AS MK'D. 3A	K.M.P.	C.R.G.

1A NOTES :–

1) WELDED TUBE TO TUBESHEET JOINT SHALL BE COMPLIED WITH ALL REQUIREMENTS OF 6-15-0003, REV.3.
2) TUBE TO TUBESHEET JOINT SHALL BE SUBJECTED TO AIR SOAP SOLUTION TEST AFTER FIRST WELD PASS WITH AIR AT 1.25 Kg/cm2 g.
3) TUBESHEET FACES SHALL BE FLAT WITHIN +1.5 mm (CAMBER)
4) TUBE HOLES SHALL HAVE SURFACE FINISH TO 63 AARH.

2A FINAL "AS BUILT" DRAWING.
DETAIL OF SEALING STRIP/DIMENSIONS SHOWN AS *() ARE "AS BUILT".

1A AERO ENGINEERS REF. DRAWINGS

SR. No.	DRG. No.	SHEET No.	DESCRIPTION
1	AEH-10141	1 OF 2	ASSEMBLY AND PART DETAIL
2	AEH-10141	2 OF 2	ASSL'Y. AND DETAIL OF TUBE BUNDLE AND TEST FLANGE

** 4.5T SS316 SPWD GASKET WITH GRAFIL FILLER AND 3.2T SS316 INNER CENTERING RING.

75	GASKET	1	**	4.5 THK (AS PER DET.)	
74	TEST FLANGE	1	IS 2062 GR B	45T x 530 OD x 387.3 ID	
73	RIVET	4	SS 304	5ø x 20 Lg.	
72	NAME PLATE	1	SS 304	2T X 110W X 150 L	
71	NAME PLATE BRACKET	1	SA 516 GR 60	6T x 170W x 310 DEV. LG	
68	IMP. PLATE	1	SA 516 GR 60	6 THK x 200W x 196 DEV. LG.	
1A 67	JACK SCREW	3	S.S. 304	M16 x 80 LG.	
1A 66	JACK SCREW	3	S.S. 304	M16 x 80 LG.	
65	JACK SCREW STOPPER PL.	3	SA 516 GR 60	16 THK x 40W x 41 LG.	
64	DOWEL PIN	4	SA 105	20ø x 34 LG	
63	DOWEL PIN GUIDE PL.	2	SA 516 GR 60	25 THK x 40W x 41 LG.	
62	PLUG FOR PULLING EYE BOLT	2	SS 304	M12 x AS PER DRAWING	
61	PULLING EYE BOLT	2	SA 105	M12 STD. x AS PER DRAWING	
60	LIFTING EYE BOLT	1	SA 105	M10 STD. x AS PER DRAWING	
1A 59	SEALING STRIP	4	SA 516 GR 60	8 THK x 40W x 3926 LG. *(4350.5 LG.)	
58	SPACERS	SEE TABLE	IS 1239	17.5 O/D. x 2.35T x SEE TABLE	
57	HEX NUT FOR TIE ROD	4	IS 1367 CL.4.0	M10 x STD.	
1A 56	TIE RODS	2	IS 2062 GR. B	10ø x 4465 LG. *(4375 LG.)	
~~55~~	~~SUPPORT PLATE~~	~~1~~	~~IS 2062 GR. B~~	~~10 THK x 384.1ø x AS PER DRAWING~~	
54	BAFFLE PLATE	9	IS 2062 GR. B	6 THK x 384.1ø x AS PER DRAWING	
53	BAFFLE PLATE	10	IS 2062 GR. B	6 THK x 384.1ø x AS PER DRAWING	
52	TUBES	SEE TABLE	SA 179	20 OD x 2.0 THK (MIN.) x SEE TABLE	
51	STATIONARY TUBE SHEET	1	SA 516 GR 60	45 THK x 450ø	
PART NO.	DESCRIPTION	QTY.	MATERIAL	SIZE	REMARKS

BILL OF MATERIAL

AERO ENGINEERS
3419, GIDC PH IV VATVA AHMEDABAD. 382445 TEL–25841295, 25840720 FAX NO: 0091-79-25841041

TITLE: ASSEMBLY & DET. OF TUBE BUNDLE & TEST FLANGE

1A P.R.NO.	6907-117-EE-PR-6096/0414, REV.0	DRN BY	T.S.P.	13.03.11	SCALE
PROJECT	BPCP, LEPETKATA, ASSAM,	CHD BY	S.J.P.	13.03.11	AS NOTED
ITEM NO.	117-EE-483	APPD BY	U.P.S.	13.03.11	
1A PURCHASER:	BRAHMAPUTRA CRACKER & POLYMER LIMITED. UNIT : LLDPE/HDPE PMC : EIL	JOB NO.:	AEH-10141		
P.O.NO.	FOA NO. 6907-117-EE-PO-6096/0122/0414 DT. 02/03/2011	DRG. NO.:	AEH-10141	SHEET NO.	2 OF 2
1A REF.DRG.NO.	6907-117-16-46-DS-4483, REV.0	QTY.:	1 NO.	REV	2A

AERO ENGINEERS