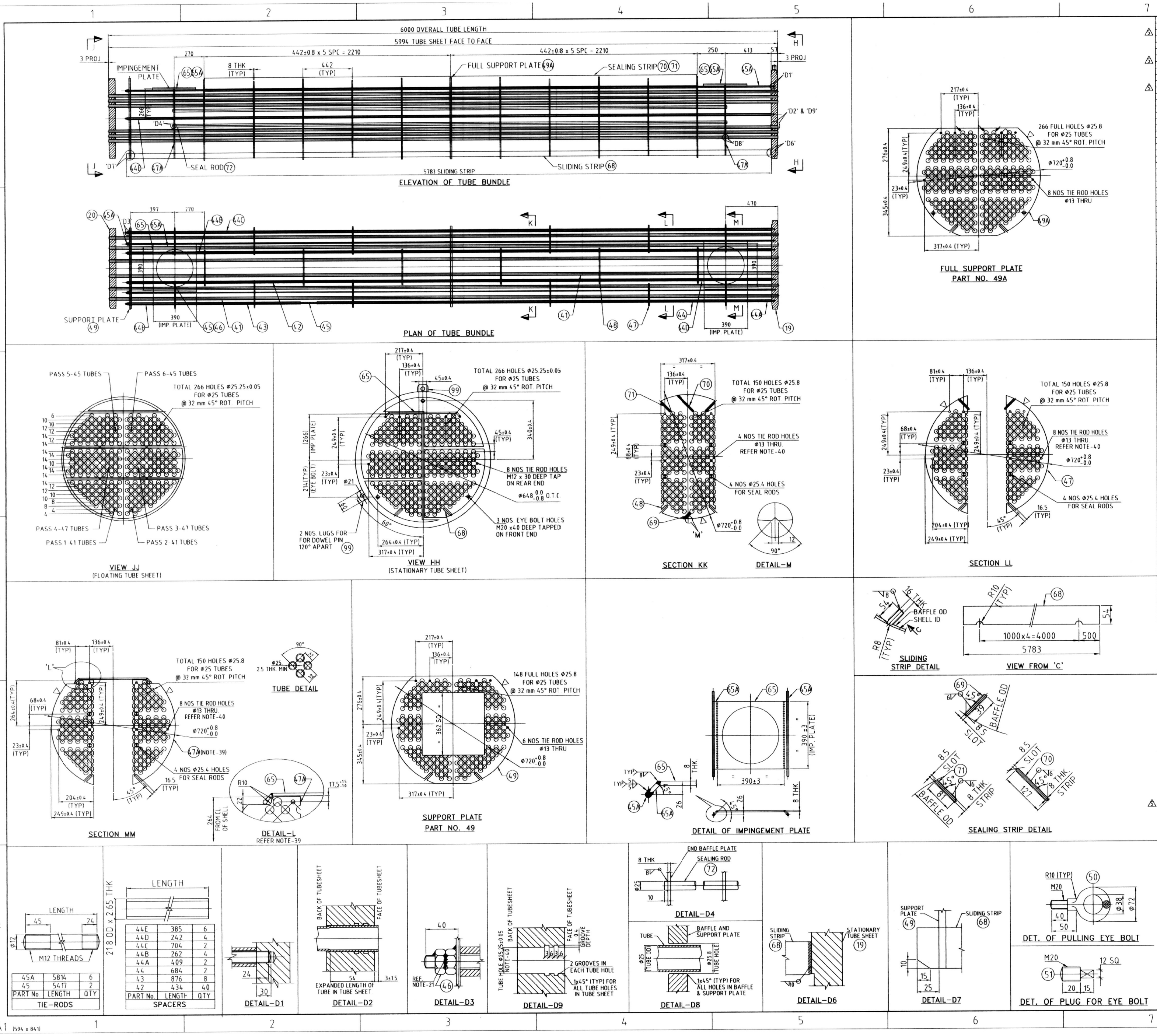

6000 OVERALL TUBE LENGTH
5994 TUBE SHEET FACE TO FACE
442±08 x 5 SPC = 2210
IMPINGEMENT PLATE
FULL SUPPORT PLATE (49A)
SEALING STRIP (70) (71)
SEAL ROD (72)
SLIDING STRIP (68)
5783 SLIDING STRIP
ELEVATION OF TUBE BUNDLE
SUPPORT PLATE (49)
(IMP. PLATE)
PLAN OF TUBE BUNDLE
FULL SUPPORT PLATE
PART NO. 49A
266 FULL HOLES ϕ25.8 FOR ϕ25 TUBES @ 32 mm 45° ROT. PITCH
8 NOS TIE ROD HOLES ϕ13 THRU
PASS 5-45 TUBES
PASS 6-45 TUBES
PASS 4-47 TUBES
PASS 3-47 TUBES
PASS 1 41 TUBES
PASS 2 41 TUBES
TOTAL 266 HOLES ϕ25.25±0.05 FOR ϕ25 TUBES @ 32 mm 45° ROT. PITCH
VIEW JJ
(FLOATING TUBE SHEET)
8 NOS TIE ROD HOLES M12 x 30 DEEP TAP ON REAR END
3 NOS EYE BOLT HOLES M20 x40 DEEP TAPPED ON FRONT END
2 NOS. LUGS FOR FOR DOWEL PIN 120° APART (99)
VIEW HH
(STATIONARY TUBE SHEET)
TOTAL 150 HOLES ϕ25.8 FOR ϕ25 TUBES @ 32 mm 45° ROT. PITCH
4 NOS TIE ROD HOLES ϕ13 THRU REFER NOTE-40
4 NOS ϕ25.4 HOLES FOR SEAL RODS
SECTION KK
DETAIL-M
8 NOS TIE ROD HOLES ϕ13 THRU REFER NOTE-40
SECTION LL
SLIDING STRIP DETAIL
BAFFLE OD
SHELL ID
1000x4=4000
5783
VIEW FROM 'C'
SECTION MM
TUBE DETAIL
DETAIL-L
REFER NOTE-39
148 FULL HOLES ϕ25.8 FOR ϕ25 TUBES @ 32 mm 45° ROT. PITCH
6 NOS TIE ROD HOLES ϕ13 THRU
SUPPORT PLATE
PART NO. 49
DETAIL OF IMPINGEMENT PLATE
SEALING STRIP DETAIL
DETAIL-D1
EXPANDED LENGTH OF TUBE IN TUBE SHEET
DETAIL-D2
DETAIL-D3
2 GROOVES IN EACH TUBE HOLE
1x45° (TYP) FOR ALL TUBE HOLES IN TUBE SHEET
DETAIL-D9
END BAFFLE PLATE
SEALING ROD (72)
DETAIL-D4
BAFFLE AND SUPPORT PLATE
1x45° (TYP) FOR ALL HOLES IN BAFFLE & SUPPORT PLATE
DETAIL-D8
SLIDING STRIP (68)
STATIONARY TUBE SHEET (19)
DETAIL-D6
SUPPORT PLATE (49)
SLIDING STRIP (68)
DETAIL-D7
DET. OF PULLING EYE BOLT
DET. OF PLUG FOR EYE BOLT
A1 (594 x 841)

PART No	LENGTH	QTY
45A	5814	6
45	5417	2

TIE-RODS

M12 THREADS

PART No	LENGTH	QTY
44E	385	6
44D	242	4
44C	704	2
44B	262	4
44A	409	2
44	684	2
43	876	8
42	434	40

SPACERS

21.8 OD x 2.65 THK

PART No	DESCRIPTION	QTY.	MATERIAL	SIZE
112	GASKET	1	CAFF	788 OD x 762 ID x 3 THK.
111	GASKET	1	IJA	788 OD x 762 ID x 3 THK.
110	TEST RING FLANGE	1	SA 516 GR. 70/IS 2062	868 OD. x REF. DET.
109	LIFTING EYE BOLT	2	SA 105	M16 x REF. DET.
108	NUTS	48	SA 194-GR.2H	M16
107	STUDS	24	SA 193-GR.B7	M16 x 275 LG.
106	TEST RING SHELL	1	IS-2062 GR. B	745 OD. x 10 THK x 70 LG.
105	TEST RING FLANGE	1	SA 516 GR. 70/IS 2062	875 OD. x REF. DET.
104	GASKET	1	IJA	892 OD x 866 ID x 3 THK.
103	GASKET	3	RUBBER	745 OD. x 717 ID. x 14ϕ
102	TEST RING SHELL	1	IS-2062 GR. B	775 OD. x 20 THK. x 160 LG. x REF. DET.
101	TEST RING FLANGE	1	IS-2062	972 OD. x REF. DET.
100	DOWEL PIN	4	IS-2062 GR. B	ϕ20 x 40 LG. x REF. DET.
99	DOWEL PIN LUG	2	SA- 516 GR. 60	60 x 40 x 32 THK.
98	JACK SCREW	4	SA 193-GR.B7	M20 x 80 LG. x REF. DET.
97	RING FOR DAVIT	1	IS-2062 GR. B	89 ID x 3 THK. x 35 LG.
96	STOPPER PLATE FOR DAVIT	1	IS-2062 GR. B	165 x 35 x 12 THK.
95	SLIDING LINK FOR DAVIT	1	IS-2062 GR. B	ϕ20 x REF. DET.
94	LIFTING LUG FOR CHANNEL COVER FLANGE	1	IS-2062 GR. B	75 x 65 x 16 THK x REF.DET.
93	END PIECE FOR DAVIT	1	IS-2062 GR. B	ϕ95 x 40 LG. x REF. DET.
92	SUPPORT PIPE FOR DAVIT ARM	1	SA 106 GR. B	2" NB x SCH. 160 x 305 LG.
91	PIPE FOR DAVIT ARM	1	SA 106 GR. B	3" NB x SCH. 160 x 1541 LG.
90	RIB PLATE	2	IS-2062 GR. B	230 x 167 x 16 THK.
89	PIPE FOR COLLAR - TOP	1	SA 106 GR. B	4" NB x SCH. 80 x 246 LG.
88	PIPE FOR COLLAR - BOTTOM	1	SA 106 GR. B	4" NB x SCH. 80 x 230 LG.
87	TOP PLATE FOR DAVIT	1	IS-2062 GR. B	327 x 164 x 16 THK
86	BOTTOM PLATE FOR DAVIT	1	IS-2062 GR. B	327 x 164 x 16 THK.
85	RING FOR DAVIT	1	IS-2062 GR. B	89 ID x 3 THK. x 35 LG.
84	STOPPER PLATE FOR DAVIT	1	IS-2062 GR. B	165 x 35 x 12 THK.
83	SLIDING LINK FOR DAVIT	1	IS-2062 GR. B	ϕ20 x REF. DET.
82	LIFTING LUG FOR SHELL COVER FLANGE	1	IS-2062 GR. B	75 x 65 x 16 THK x REF.DET.
81	END PIECE FOR DAVIT	1	IS-2062 GR. B	ϕ95 x 40 LG. x REF. DET.
80	SUPPORT PIPE FOR DAVIT ARM	1	SA 106 GR. B	2" NB x SCH. 160 x 360 LG.
79	PIPE FOR DAVIT ARM	1	SA 106 GR. B	3" NB x SCH. 160 x 2004 LG.
78	RIB PLATE	2	IS-2062 GR. B	250 x 180 x 16 THK.
77	PIPE FOR COLLAR - TOP	1	SA 106 GR. B	4" NB x SCH. 80 x 266 LG.
76	PIPE FOR COLLAR - BOTTOM	1	SA 106 GR. B	4" NB x SCH. 80 x 250 LG.
75	TOP PLATE FOR DAVIT	1	IS-2062 GR. B	338 x 164 x 16 THK.
74	BOTTOM PLATE FOR DAVIT	1	IS-2062 GR. B	338 x 164 x 16 THK.
73	CONNECTING PIECE	2	SA- 516 GR. 60	51 WIDTH x 20 THK. x REF. DET.
72	SEALING ROD	4	IS-2062 GR. B	ϕ25 x 4968 LG.
71	SEALING STRIP - TOP	2	SA- 516 GR. 60	4412 x 81 x 8 THK.
70	SEALING STRIP - TOP	1	SA- 516 GR. 60	4412 x 127 x 8 THK.
69	SEALING STRIP - BOTTOM	1	SA- 516 GR. 60	4932 x 39 x 8 THK.
68	SLIDING STRIP	2	SA- 516 GR. 60	5783 x 54 x 16 THK.
67	LIFTING LUG (FL. HEAD DISH)	1	SA- 516 GR. 60	100 x 85 x 16 THK x REF. DET.
66	EARTHING LUG	2	IS-2062 GR. B	100 x 75 x 10 THK.
65A	FIXING PLATE FOR IMPINGEMENT PLATE	4	SA- 516 GR. 60	390 x 25 x 8 THK.
65	IMPINGEMENT PLATE	2	SA- 516 GR. 60	390 x 390 x 8 THK.
64	END PLATE FOR VAPOUR BELT	2	SA- 516 GR. 60	1181 OD x 749 ID x 22 THK.
63	VAPOUR BELT	1	SA- 516 GR. 60	1181 OD x 18 THK x 800 LG.
62	NUTS FOR BOLTING ITEM 11 & 12	88	SA 194-GR.2HM	M20 HEAVY SERIES
61	STUDS FOR BOLTING ITEM 11 & 12	44	SA 193-GR.B7M	M20 x 220 LG., ASME B1.1
60	NUTS FOR BOLTING ITEM 7 & 9	88	SA 194-GR.2H	M20 HEAVY SERIES
59	STUDS FOR BOLTING ITEM 7 & 9	44	SA 193-GR.B7	M20 x 200 LG., ASME B1.1
58	NUTS FOR BOLTING ITEM 5 &8	96	SA 194-GR.2H	M20 HEAVY SERIES
57	STUDS FOR BOLTING ITEM 5 &8	48	SA 193-GR.B7	M20 x 260 LG., ASME B1.1
56	NUTS FOR BOLTING ITEM 6 & 13	64	SA 194-GR.2H	M20 HEAVY SERIES
55	STUDS FOR BOLTING ITEM 6 & 13	32	SA 193-GR.B7	M20 x 220 LG., ASME B1.1
54	RIVETS FOR NAME PLATE	4	ALUMINIUM	ϕ5 x 20 LG.
53	PASS PARTITION PLATE - FL. HEAD	3	SA- 516 GR. 60	14 THK. x REF. DET.
52	PASS PARTITION PLATE - CHANNEL	5	SA- 516 GR. 60	14 THK. x REF. DET.
51	PLUG FOR PULLING EYE BOLT	3	SA 105	M20 x REF. DET
50	PULLING EYE BOLT	3	SA 105	M20 x REF. DET
49A	FULL SUPPORT PLATE	1	IS-2062 GR. B	720.2 OD x 16 THK x REF.DET.
49	SUPPORT PLATE	1	IS-2062 GR. B	720.2 OD x 16 THK x REF.DET.
48	BAFFLE PLATE	6	IS-2062 GR. B	720.2 OD x 8 THK x REF.DET.
47A	BAFFLE PLATE	2	IS-2062 GR. B	720.2 OD x 8 THK x REF.DET.
47	BAFFLE PLATE	4	IS-2062 GR. B	720.2 OD x 8 THK x REF.DET.
46	TIE ROD NUTS	12	SA 194-GR.2H	TO SUIT TIE ROD M12
45A	TIE ROD	6	IS-2062 GR. B	ϕ12 x 5814 LG.
45	TIE ROD	2	IS-2062 GR. B	ϕ12 x 5417 LG.
44E	SPACER	6	IS-1239	21.8 OD x 2.65 THK. x 385 LG.
44D	SPACER	4	IS-1239	21.8 OD x 2.65 THK. x 242 LG.
44C	SPACER	2	IS-1239	21.8 OD x 2.65 THK. x 704 LG.
44B	SPACER	4	IS-1239	21.8 OD x 2.65 THK. x 262 LG.
44A	SPACER	2	IS-1239	21.8 OD x 2.65 THK. x 409 LG.
44	SPACER	2	IS-1239	21.8 OD x 2.65 THK. x 684 LG.
43	SPACER	8	IS-1239	21.8 OD x 2.65 THK. x 876 LG.
42	SPACER	40	IS-1239	21.8 OD x 2.65 THK. x 434 LG.
41	TUBES	266	SA 179	25.0 OD x 2.5 THK. MIN. x 6000 LG.
40	NAME PLATE	1	SA-240TP 316L	150 x 110 x 2 THK.
39	NAME PLATE BRACKET	1	SA- 516 GR. 60	280 x 170 x 6 THK.
38	LIFTING LUG (SHELL & CHANNEL)	6	IS-2062 GR. B	75 x 65 x 16 THK x REF.DET.
37	RF PAD FOR LIFTING LUG (SHELL & CHANNEL)	6	SA- 516 GR. 60	105 x 50 x 10 THK x REF.DET.
36	BASE PLATE	2	IS-2062 GR. B	530 x 150 x 16 THK.
35	WEB PLATE	2	IS-2062 GR. B	134 X 80 x 12 THK
34	WEB PLATE	4	IS-2062 GR. B	134 X 120 x 12 THK
33	SUPPORT PLATE	2	IS-2062 GR. B	510 x 176 x 12 THK
32	WEAR PLATE	2	SA- 516 GR. 60	150 x 608 x 12 Thk
31C	NUTS FOR N5 TO N11	56	SA 194-GR.2H	M14 HEAVY SERIES
31B	STUDS FOR N5 TO N11	28	SA 193-GR.B7	M14 x 70 LG., ASME B1.1
31A	GASKET FOR N5 TO N11	7	SS 316 SP. WND. WITH GRAFIL FILLER & 3.2 THK. CS OUTER RING	1½" x 150 # x 4.5 THK. AS PER ASME B 16.20.
31	BLIND FLANGE FOR N5 TO N11	7	SA 105	1½" x 150 # BLRF
30	NOZZLE NECK FOR N10 & N11	2	SA 106 GR. B	1½" NB x SCH. 160 x 150 Lg
29	NOZZLE NECK FOR N7, N8 & N9	3	SA 106 GR. B	1½" NB x SCH. 160 x 100 Lg
28	NOZZLE FLANGE FOR N5 TO N11	7	SA 105	1½" x 150 # WNRF x SCH. 160
27	NOZZLE NECK FOR N5 & N6	2	SA 106 GR. B	1½" NB x SCH. 160 x 135 Lg.
26	NOZZLE FLANGE FOR N3 & N4	2	SA 105	4" x 150 # WNRF
25A	RF PAD FOR N3 & N4	2	SA- 516 GR. 60	197 OD x 10 THK.
25	NOZZLE NECK FOR N3 & N4	2	SA 106 GR. B	4" NB x 120 SCH. x 195 Lg.
24	NOZZLE FLANGE FOR N2	1	SA 105	20" x 150 # SELF REINFORCED WNRF, REF. DET.
23	NOZZLE FOR N2	1	SA 105	20" x SELF REINFORCED, REF. DET.
22	NOZZLE FLANGE FOR N1A & N1B	2	SA 105	14" x 150 # WNRF, SCH. XS
21A	RF PAD FOR N1A & N1B	2	SA- 516 GR. 60	478 OD x 10 THK.
21	NOZZLE NECK FOR N1A & N1B	2	SA 106 GR. B	14" NB x SCH. XS x 235 Lg.
20	FLOATING TUBE SHEET	1	SA- 516 GR. 60	ϕ717 x 57 THK.
19	STATIONARY TUBE SHEET	1	SA- 516 GR. 60	ϕ788 x 57 THK.
18	GASKET FOR FLOATING TUBE SHEET	1	IJA	717 OD x 691 ID x 3 THK.
17	GASKET FOR SHELL FLANGE (LHS)	1	IJA	892 OD x 866 ID x 3 THK.
16	GASKET FOR SHELL FLANGE (RHS)	1	IJA	788 OD x 762 ID x 3 THK.
15	GASKET FOR CHANNEL FLANGE (LHS)	1	IJA	3.0 THK. REF. DET.
14	GASKET FOR COVER FLANGE	1	IJA	3.0 THK. REF. DET.
13	SHELL COVER FLANGE	1	SA- 266 CL4	972 OD. x REF. DET.
12	BACKING RING	1	SA- 266 CL4	796 OD. x 74 THK.
11	FLOATING HEAD FLANGE	1	SA- 266 CL4	796 OD. x 78 THK.
10	FLOATING HEAD DISH	1	SA- 516 GR. 60	18 THK. NOM./15 THK. MIN. x REF. DET.
9	CHANNEL COVER FLANGE	1	SA- 516 GR. 60	868 OD. x 70 THK.
8	GIRTH FLANGE(CHANNEL LHS)	1	SA- 266 CL4	868 OD. x REF. DET.
7	GIRTH FLANGE(CHANNEL RHS)	1	SA- 266 CL4	868 OD. x REF. DET.
6	GIRTH FLANGE(SHELL LHS)	1	SA- 266 CL4	972 OD. x REF. DET.
5	GIRTH FLANGE(SHELL RHS)	1	SA- 266 CL4	868 OD. x REF. DET.
4	DISHED END - TORISPHERICAL	1	SA- 516 GR. 60	850 OD. x 12 THK. NOM./10 THK. MIN.
3	CHANNEL SHELL(LHS)	1	SA- 516 GR. 60	850 OD. x 12 THK x 342 LG.
2	CHANNEL SHELL(RHS)	1	SA- 516 GR. 60	745 OD. x 10 THK x ~~358~~ (348) LG.
1	SHELL	1	SA- 516 GR. 60	745 OD. x 10 THK x 5570 LG.

BILL OF MATERIAL

REV	DATE	DESCRIPTION	BY	CHKD	APPD
5	17.06.2011	ASBUILT DIMENSIONS INCORPORATED AND REISSUED FOR APPROVAL	BS	HNM	HVR
4	08.02.2011	EIL COMMENTS INCORPORATED AND REISSUED FOR APPROVAL	BPS	HNM	HVR
3	23.12.2010	EIL COMMENTS INCORPORATED IN SHT. 2 OF 3 AND REISSUED FOR APPROVAL	TPR	AKK	HVR
2	03.12.2010	EIL COMMENTS INCORPORATED AND REISSUED FOR APPROVAL	BPS	TPR/AKK	HVR
1	19.10.2010	EIL COMMENTS INCORPORATED AND REISSUED FOR APPROVAL	BPS	TPR/AKK	HVR
0	15.09.2010	ISSUED FOR APPROVAL	USG/BPS	TPR/AKK	HVR

REVISION LIST

CICB - Chemicon Pvt. Ltd.
BANGALORE

DRN	USG/BPS
DATE	15.09.2010
CHKD	TPR/AKK
DATE	15.09.2010
APPD	HVR
DATE	15.09.2010
SCALE	-

CLIENT : M/s. BRAHMAPUTRA CRACKER & POLYMER LIMITED.
CONSULTANT : M/s. ENGINEERS INDIA LTD.
END USER : -
TITLE : AS-BUILT DRAWING
FABRICATION DETAIL OF CHARGE GAS COMPRESSOR 4TH STAGE SUCTION COOLER

THIS DWG. IS THE PROPERTY OF CICB ALL USE WITHOUT WRITTEN CONSENT FORBIDDEN.

DWG. No. CICB-P378-302 | SHEET NO. 2 OF 3 | REV. No. 5
PROJECT BPCP/BPCL. UNIT-ECU | EQPT. No. -
CICB-CHEMICON JOB No. P378-10-008
TAG No. 113-EE-210
CLIENT'S P.O. No. FOA. NO. 6907-113-EE-PO-6565/0063/0147 DATED 19.06.2010

MASTER INDEX NO: 10-296

CADDFILE M:/P378-10-008/DESIGN/DRAWINGS/FABRICATION/CURRENT/CICB-P378-302-R5

CICB-Chemicon Pvt. Ltd
D.C. P378-33-41 -20/6/11