NOZZLE SCHEDULE

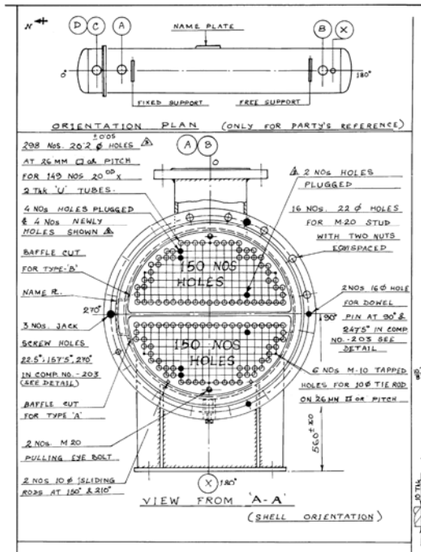
NOZZLE MARK	DESCRIPTION	QNTY	SIZE N.B.	PIPE SCH.	F.C.I. STD. PDS.	RATING kg/cm² g	FACING	REMARK.
A	SHELL INLET	1	250	80	F-233	10	R.F.	WITH COMPENION FLANGE
B	SHELL OUTLET	1	250	80	F-233	10	R.F.	-do-
C	TUBE INLET	1	250	80	F-233	10	R.F	-do-
D		1	250	80	F-233	10	R.F.	-do-
X		1	½" ϕ		RE-105	SOCKET WITH PLUG AS PER STD		

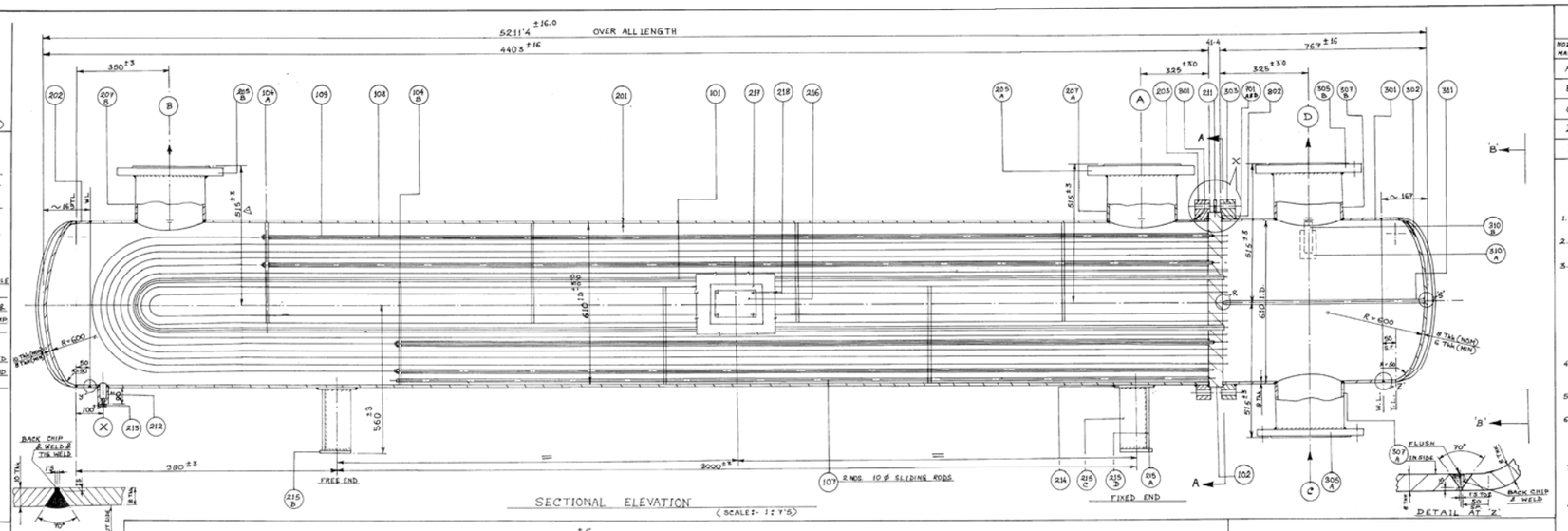
GENERAL NOTES

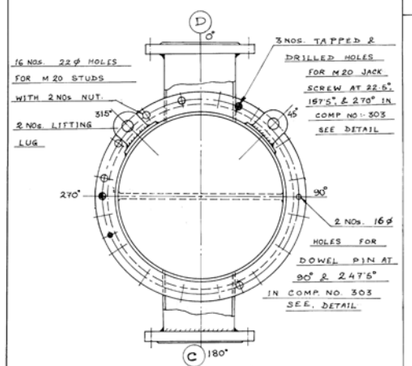
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE INDICATED
2. ALL DIMENSION AS INDICATED ARE FINISHED DIMENSIONS EXCEPT SPECIFIED
3. WELDING ELECTRODS :-
   i. M.S. TO M.S. FOR PRESSURE PARTS :- AWS-E-7018 SUPERATHERME SUPERATHERME SPECIAL D & H SCHERON, SUPER 2170 (ADVANI) PHILIPS 36 H.
   ii. M.S. TO M.S. FOR NONPRESSURE PARTS :- AWS 0601 MEDIO OR EXBOL (D & H SCHERON) OVER CORD - 'S' OR 'SS' (ADVANI) & PHILIPS 28 (PHILIPS)
   iii. FILLER WIRE FOR TIG-WELDING MODI TIG WIRE MS-1 FOR MS TO M.S.
4. WELDING WILL BE DONE BY MANUAL ELECTRIC ARC PROCESS TIG WELDING.
5. ALL WELDS TO BE FULL PENETRATION CONTINIOUS WELDS UNLESS OTHER WISE SPECIFIED.
6. FOR ALL WELDS ACCESSIBLE FROM SECOND SIDE BACK CHIPPING WILL BE DONE TO SOUND METAL TO ALL WELDS & THEN WELDED OTHERWISE SINGLE SIDE WELD JOINT SHELL BE GIVEN ROOT RUN BY TIG WELD WITH INERT GAS PURGING.
7. ALL BOLTS / STUDS HOLES IN MAIN FLANGES & NOZZLE FLANGES WILL BE PROVIDED TO STRADDLE CENTRE LINES EXCEPT SPECIFIED.
8. ALL S.O.R.F. NOZZLE FLANGES DIMENSION ARE AS PER F.P.D.I.L. STD. PDS. F-233 AS SPECIFIED IN THE NOZZLE SCHEDULE.
9. DESIGN DATA :-
   DESIGN CODE ASME :- SEC. VIII DIV.1 & TEMA CLASS 'B'

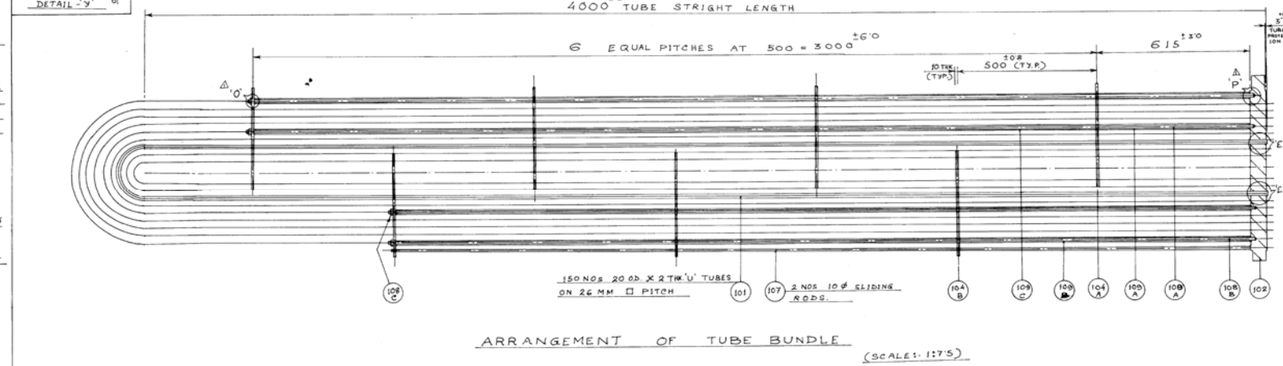
DESCRIPTION		SHELL SIDE	TUBE SIDE
FLUID HANDLED		COOLING WATER	CONDENSATE
TEMPERATURE IN/OUT	°C	35°5/43	105/75
DESIGN TEMPERATURE	°C	55	105
WORKING PRESSURE	kg/cm²g.	3·5	4·0
DESIGN PRESSURE	kg/cm²g.	10	6·0
CORROSION ALLOWANCE	mm	1·5	1·5
NO. OF PASSES		1	2
HYDRAULIC TEST PRESSURE	kg/cm²g.	15·0	9·0
WELDING EFFICIENCY		0·7	0·7
RADIOGRAPHY		NIL	NIL
POST WELD HEAT TREATMENT		NIL	NIL
INSULATION (NOT SCL. SUPPLY)		NIL	65 MM THK.

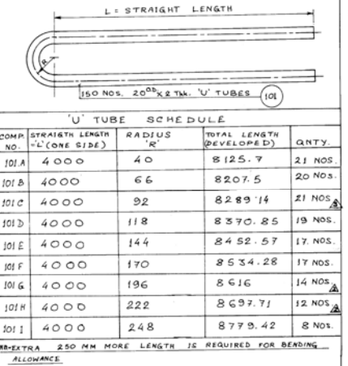
10. TUBE WILL BE ROLLER EXPANDED IN THE GROOVE TUBESHEET & SEAL WELDED TO IT.
11. TOLERANCE TO BE AS PER F.P.D.I.L. STD. DRAWING OTHERWISE AS PER TEMA IF NOT SPECIFIED THEREIN.
12. ALL MS. EXTERNAL SURFACES WILL BE WIRE BRUSHED AND APPLIED ONE PRIMER COAT OF RED LEAD.
13. EQUIPMENT WILL BE THOROUGHLY DRIED AFTER HYDRAULIC TESTING.
14. INSIDE CORNERS OF NOZZLE PIPE AT SHELL / CHANNEL SHELL I.D. SHALL BE SLIGHT ROUNDED OFF.
15. ALL NOZZLE REINFORCING PAD PLATE SHALL BE PNUEMATICALLY TESTED AT 2·5 kg/cm²g. WITH SOAP SOLUTION ON WELDS.
16. ALL GASKET SEATING SURFACES OF MAIN RING FLANGES AND TUBESHEET WILL BE SMOOTHLY MACHINED AFTER WELDING & STRESS RELIEVING IF ANY.
17. ALL TELL-TALE HOLES & VENT HOLES IN WRAPPER PLATES TO BE PLUGGED WITH HARD GREASE AFTER PNUMATIC TESTING.
18. ALL WELDS ON SHELL SIDE WILL BE GROUND FLUSH. ALL OTHER WELDS MAY BE DRESSED SMOOTH OR LEFT UNGROUND BUT IN DESCALED CONDITION.
19. ALL NOZZLES WILL BE PROVIDED WITH COMPANION FLANGE STUDS, NUTS & GASKET INCLUDING SPARES.
20. WIRE WOUNDED WOODEN COVERS WILL BE PROVIDED FOR ALL NOZZLES OPENING BEFORE DESPATCH TO SITE.
21. COMPANION FLANGES AND SPARES WILL BE PACKED IN WOODEN BOX, EQUPT. WISE AND SHOULD BE PROPERLY INDENTIFIED.
22. F.P.D.I.L. REFERENCE DRG. & STD. DRG. NO.
   i) 1026 OD 10WG 26 SHEET NO 1076 TO C OF C. SKETCH & SPECIFICATION.
   ii) JOINING OF TUBES TO T/S. PDS HE 101. (TYPE 1&2)
   iii) SUPPORT - PDS HE 501 TYPE - P.
   iv) NAME ℗ & BRACKET PDS. HE - 321.
   v) FAB & SPECN ES: 3201, 3101 & ES - 3010.
   vi) NOZZLE PROJECTION :- PDS. PV - 002.
   vii) LIFTING LUG, DOWEL PIN, JACK SCREW. PDS. HE - 304.
23. INSPECTION BY :- F.P.D.I.L.
24. OVERALL SIZE OF THE EQUIPMENT - 776 x 1125 x 5225 (l) APPROX.
    WEIGHT OF THE EQUIPMENT - WHEN EMPTY - 3295 Kg. APPROX.
    WHEN FULL OF WATER - 4795 Kg. APPROX.
    WT. OF TUBE BUNDLE - 1460 Kg. APPROX.
25. DISHED ENDS SHALL BE SEAMLESS OR ANY JOINT WITHIN DISHED END BLANK SHALL BE FULLY RADIOGRAPHED.







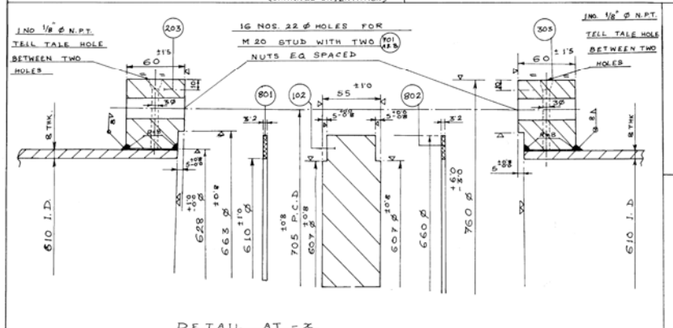


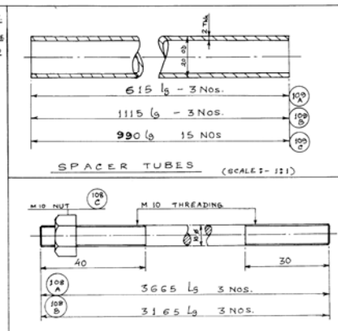


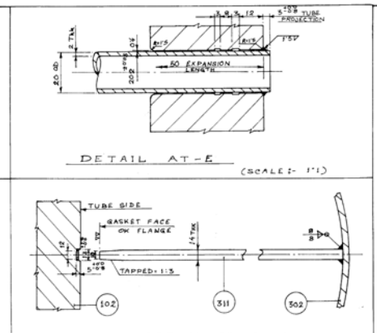
'U' TUBE SCHEDULE

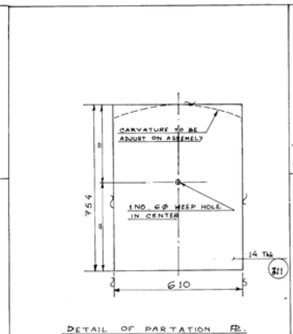
COMP NO.	STRAIGTH LENGTH 'L' (ONE SIDE)	RADIUS 'R'	TOTAL LENGTH (DEVELOPED)	QNTY.
101 A	4000	40	8125.7	21 NOS
101 B	4000	66	8207.5	20 NOS.
101 C	4000	92	8289.14	21 NOS.
101 D	4000	118	8370.85	19 NOS.
101 E	4000	144	8452.57	17 NOS.
101 F	4000	170	8534.28	17 NOS.
101 G	4000	196	8616	14 NOS.
101 H	4000	222	8697.71	12 NOS.
101 I	4000	248	8779.42	8 NOS.

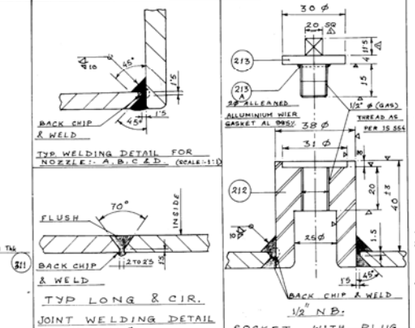
RB-EXTRA 250 MM MORE LENGTH IS REQUIRED FOR BENDING ALLOWANCE.

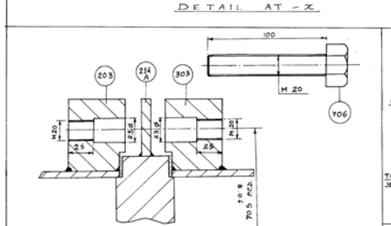


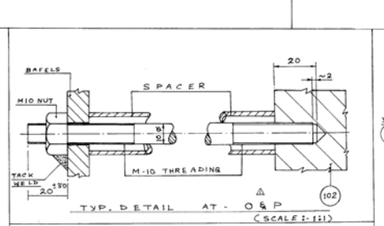


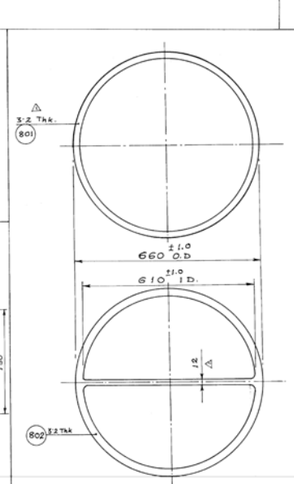


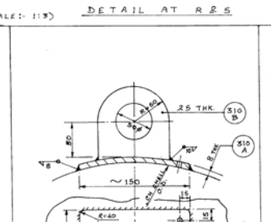


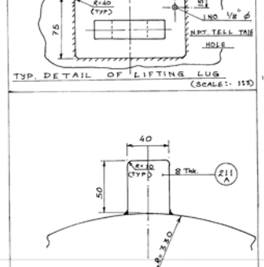


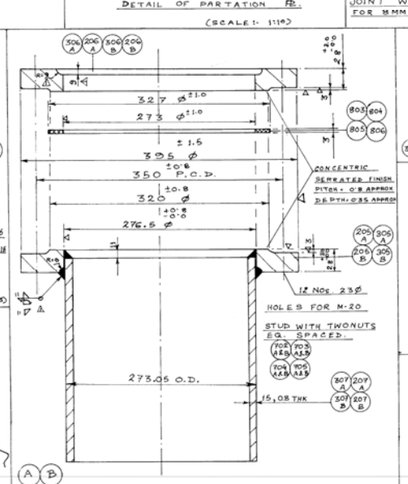


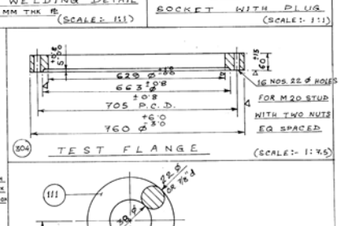


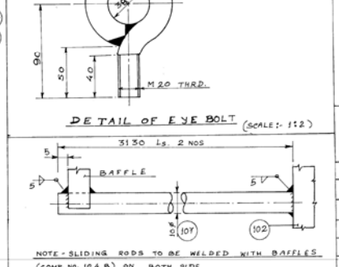












REF. DRG. NO. SMCH-40-4673-REV-3

BRAHMAPUTRA VALLEY FERTILIZER CORPORATION LIMITED, NAMRUP

SCALE:-		DATE:-	TITLE:- CONDENSATE COOLER FOR UREA-II PLANT
DRAWN:-	Dipankar	25/10/90	
TRCD:-			
CHKD:-	Dutta Roy	25/10/90	
COMP:-			
APPD:-	A.K. 28/10/90		

DRAWING NO:- N-III/M-949