




DEHDASHT PETROCHEMICAL INDUSTRY COMPANY
DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT



Contract No.: DPIC/98-12	DOCUMENT TITLE: Economizer Drawing	POI: IFA	Rev.: D0
	DOCUMENT No: DPIC9812-000-VD-1002-ME-DWG-0023	Sheet 1 of 3	

Economizer Drawing (E-PK6101-3)

PURCHASER'S COMMENT/APPROVAL STATUS						Purchaser: NARGAN
1	AP: Approved (Released for Manufacturing)					
2	AN: Approved With Minor Comments (Fabrication may Proceed)					
3	NF: Approved With Comments (Fabrication not Proceed)					
4	RJ: Rejected					Item No. (Tag No.): PK-6101
5	NR: Not be Returned					
Date: XX.XX.XX		Signature:				Vendor Doc. No.: DPIC9812-000-VD-1002-ME-DWG-0023-D0
						
D0	23-DEC.-21	IFA	A.VOSOUGH	DR.A.NEJATI	DR.A.NEJATI	
REV.	DATE ISSUE	Purpose of Issue	PREPARED	CHECKED	APPROVED	

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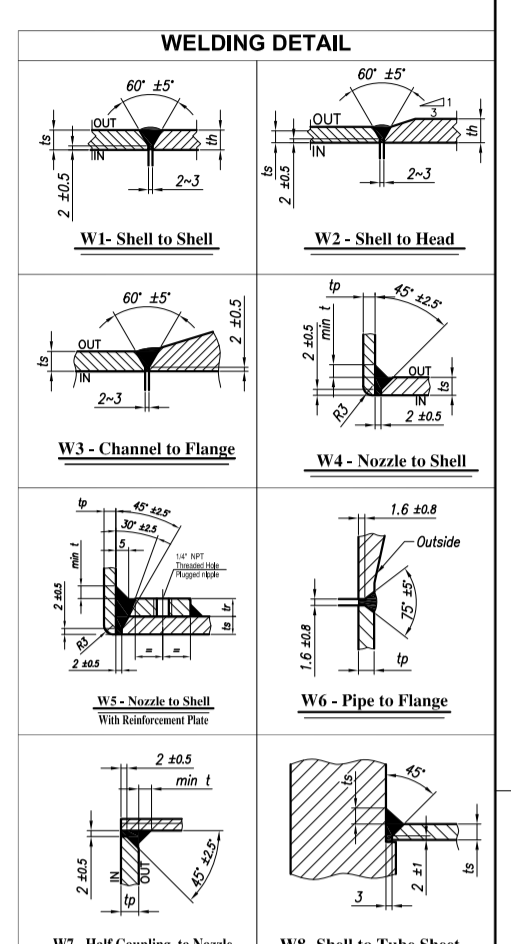
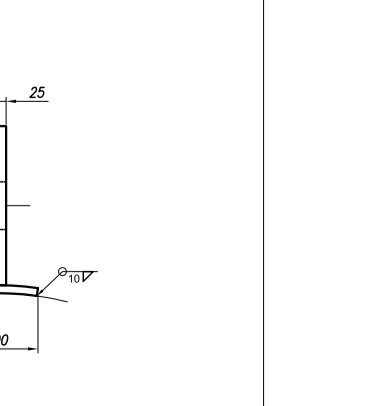
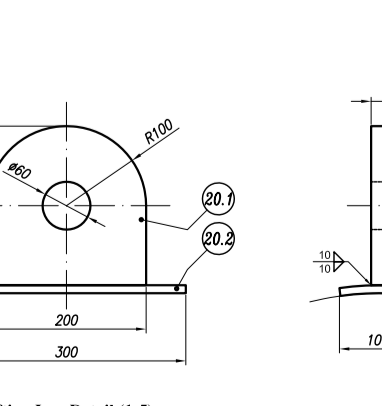
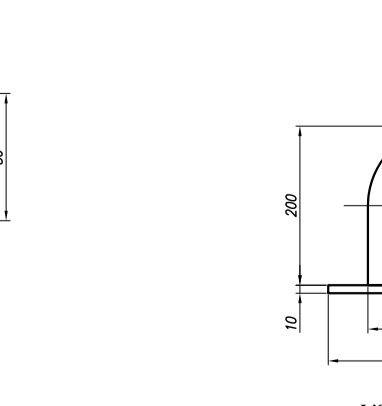
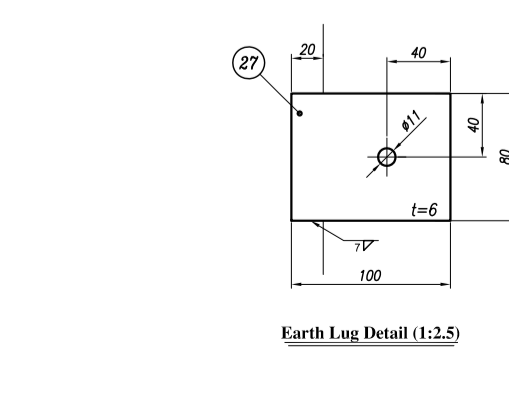
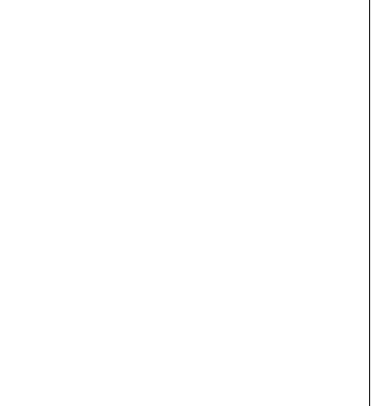
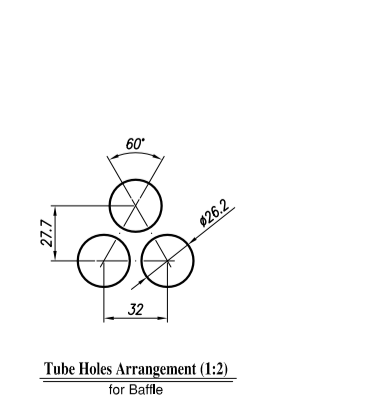
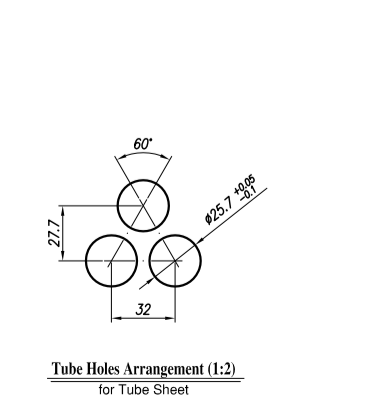
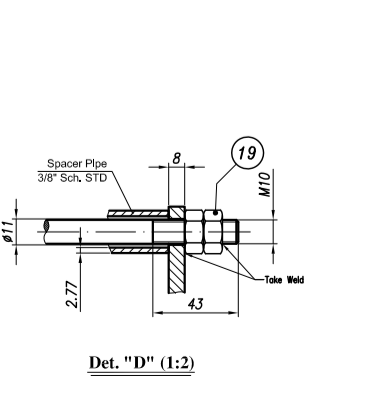
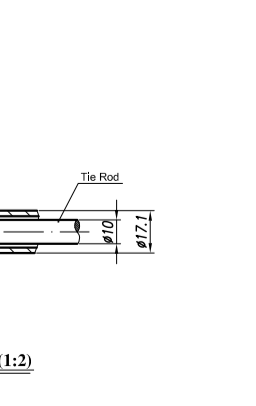
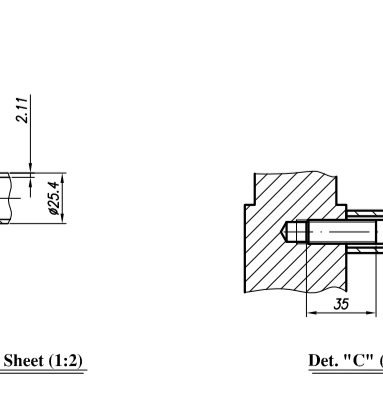
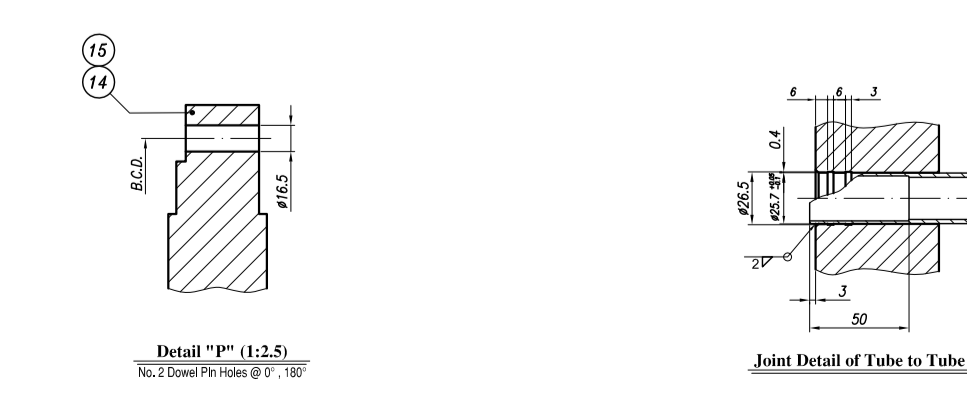
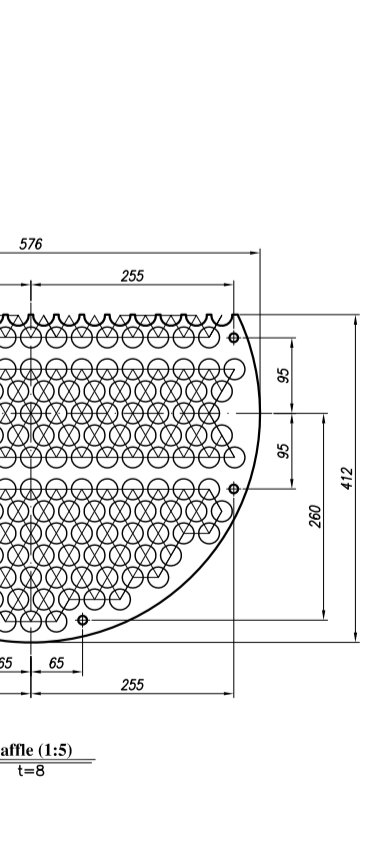
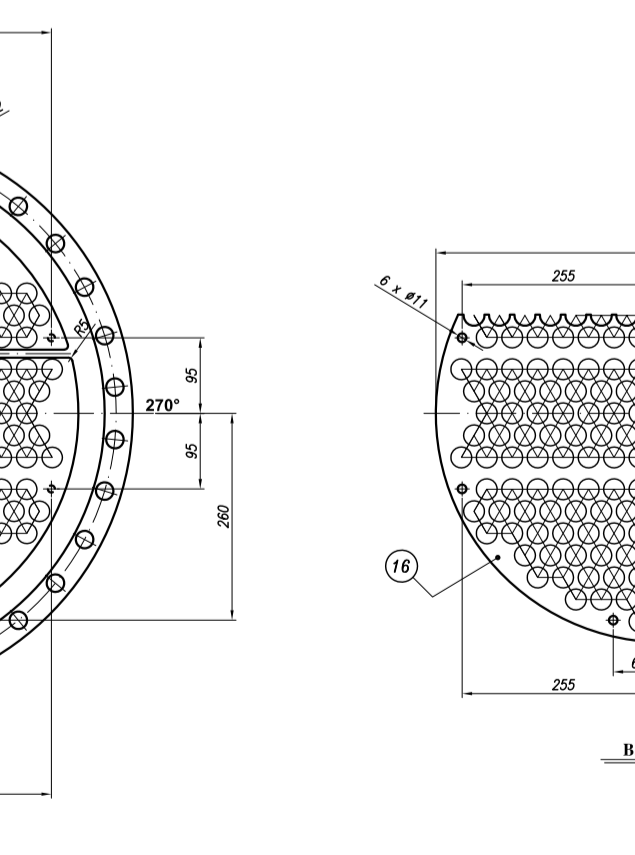
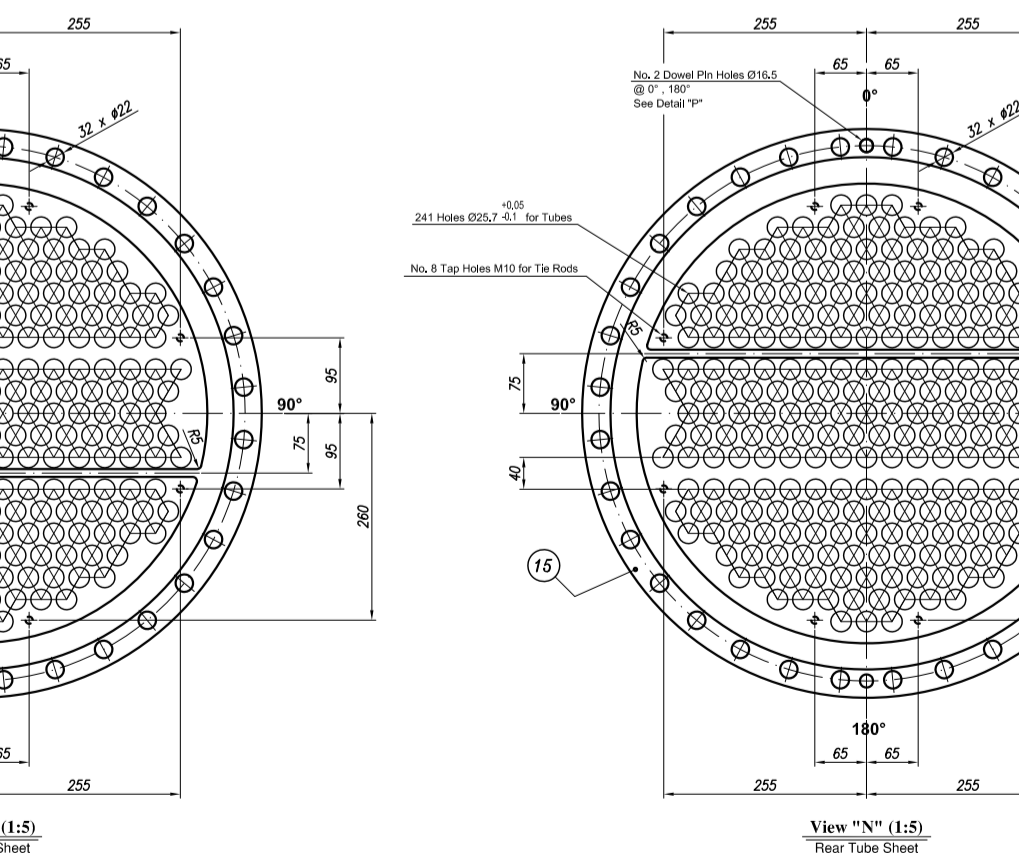
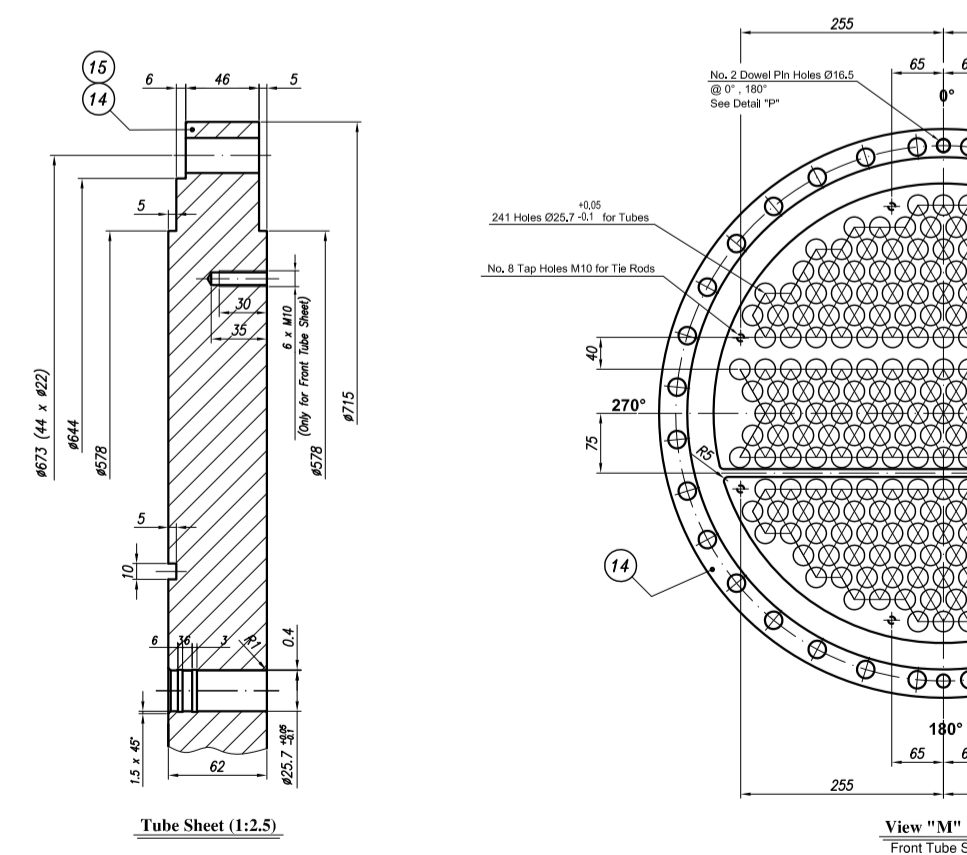
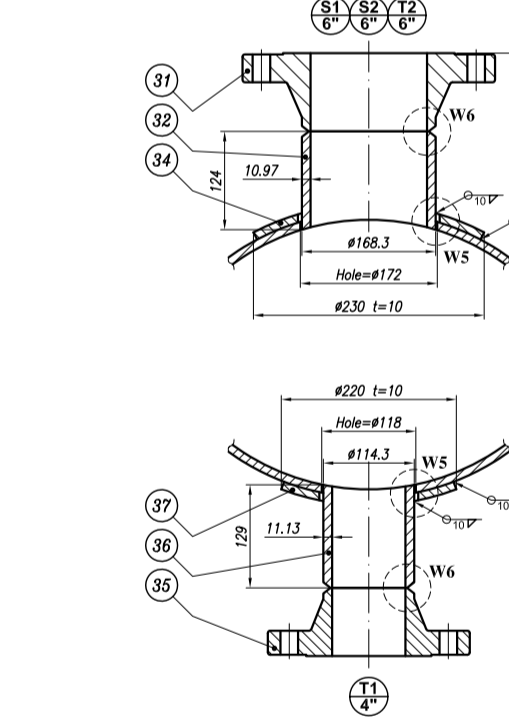
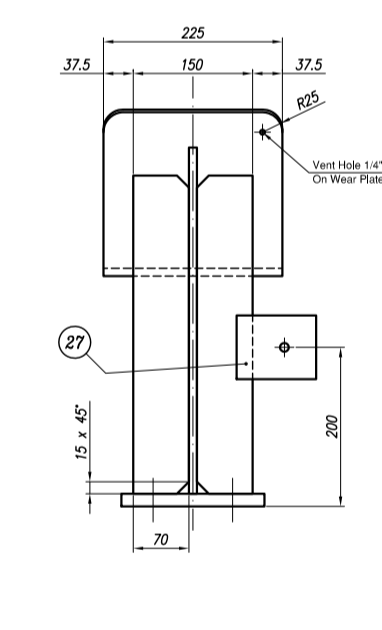
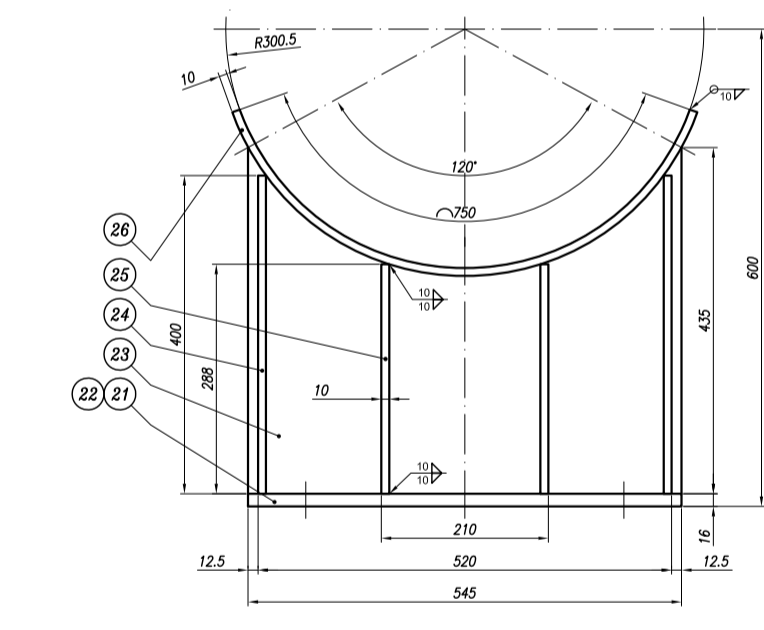
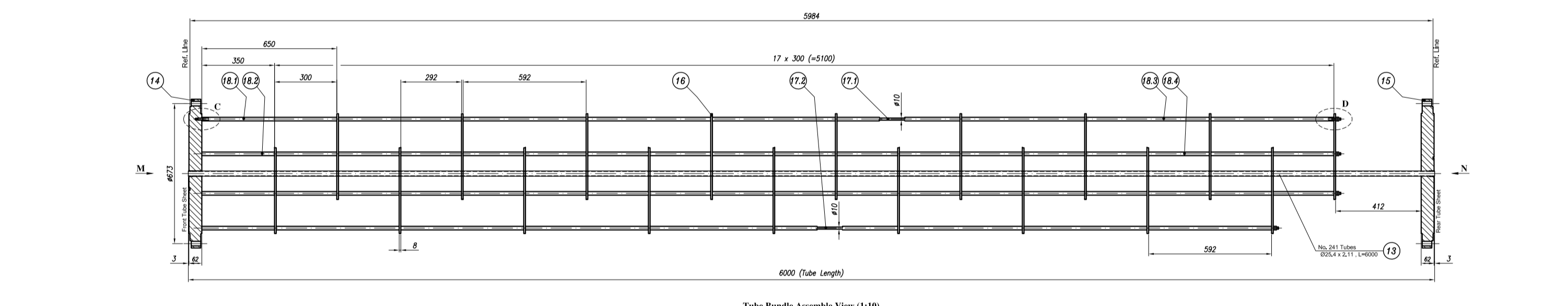
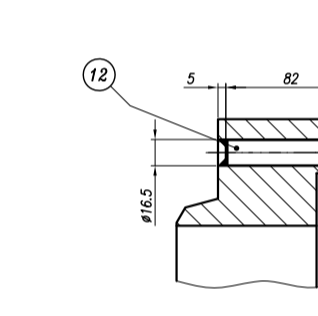
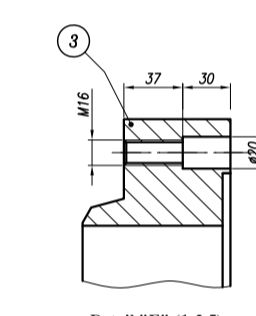
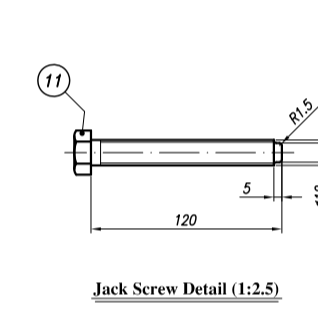
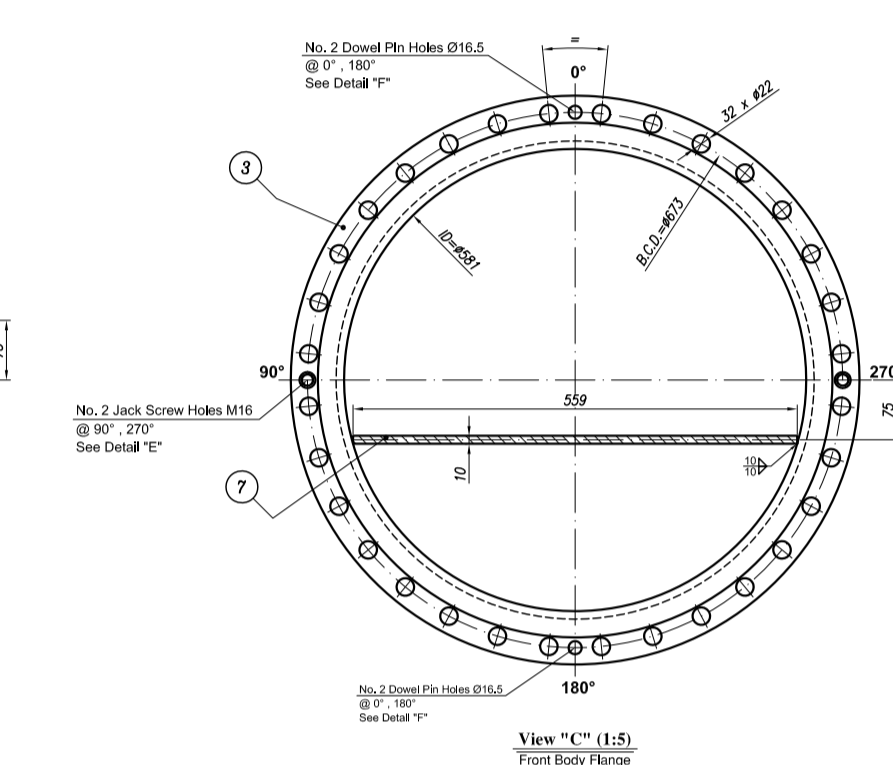
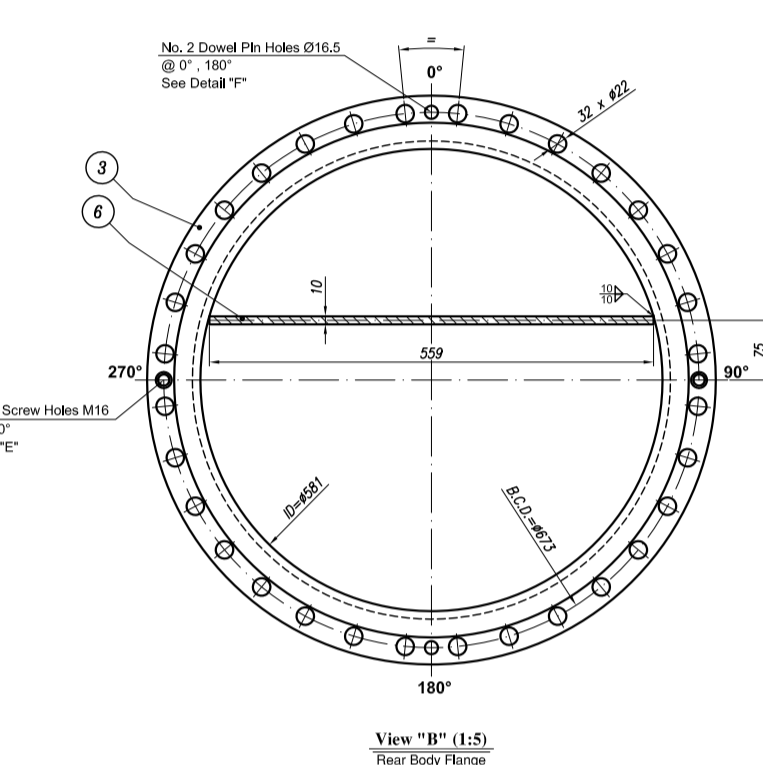
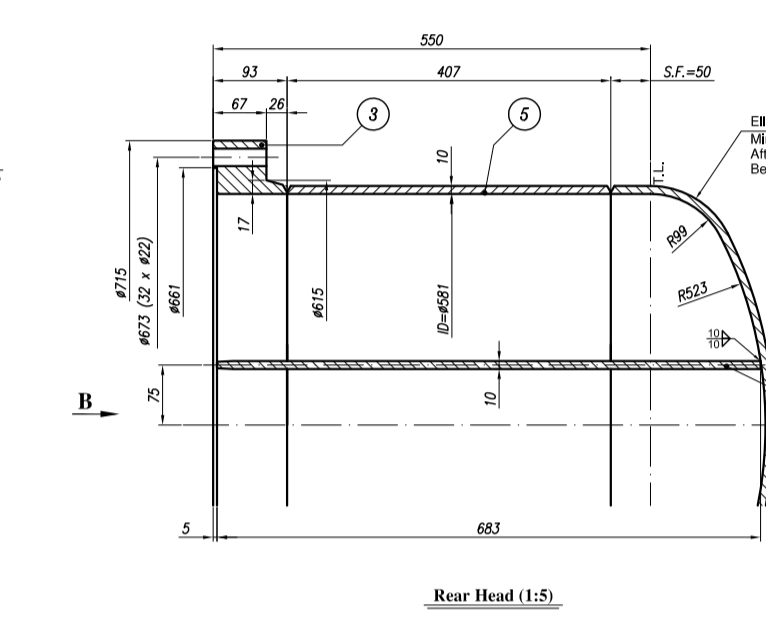
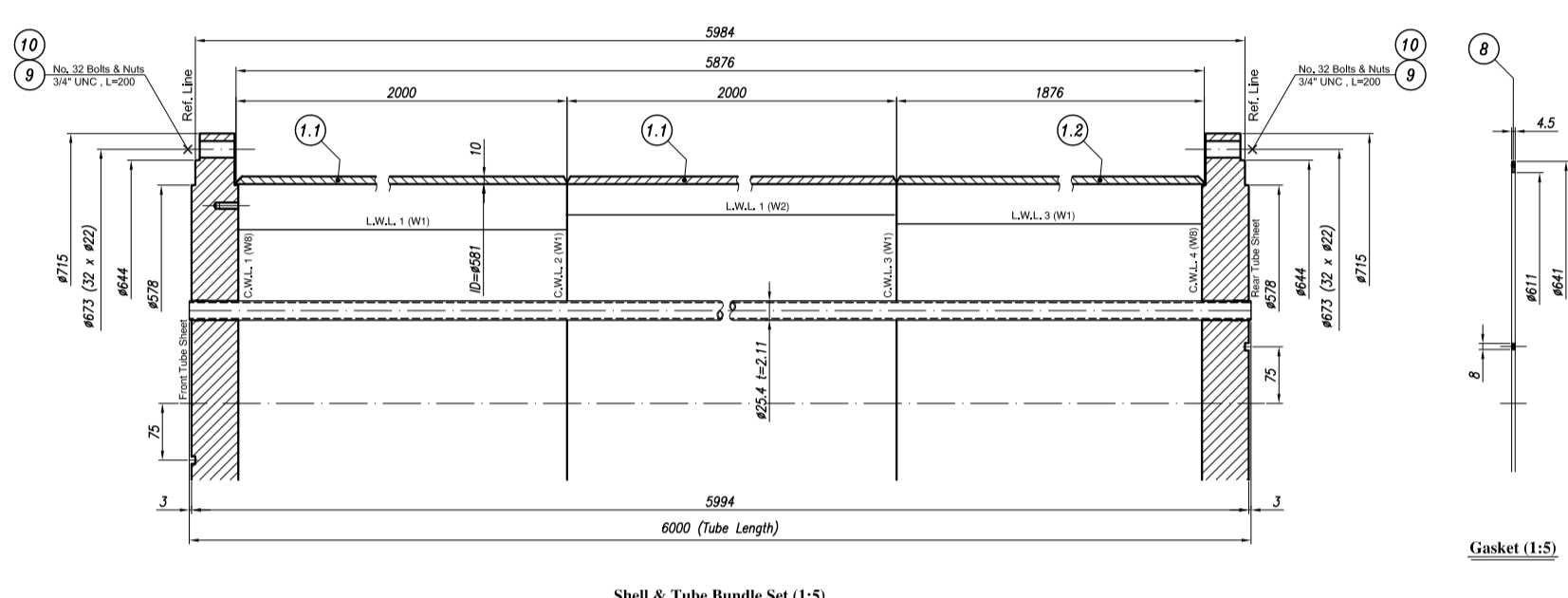
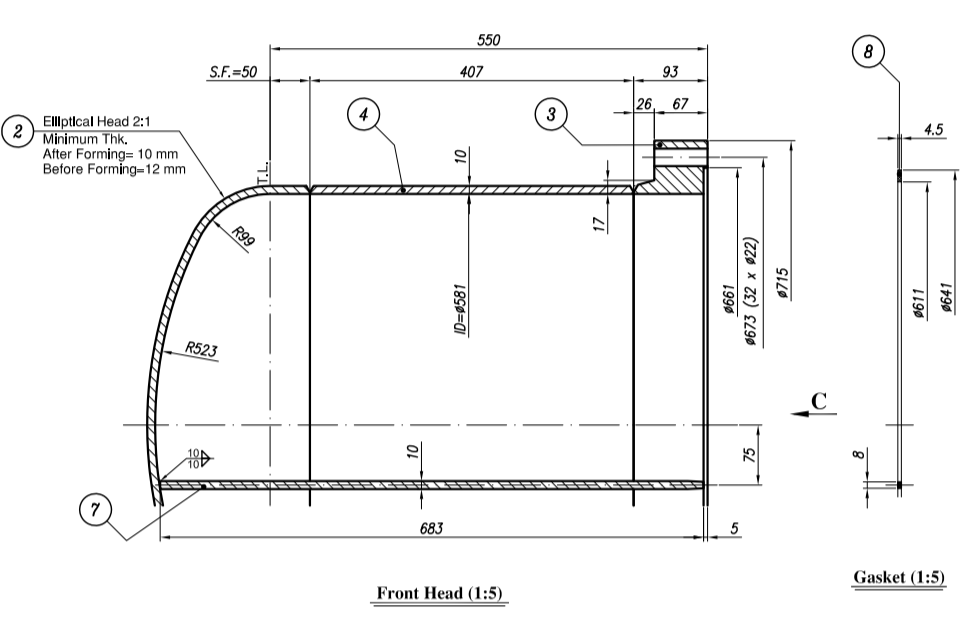
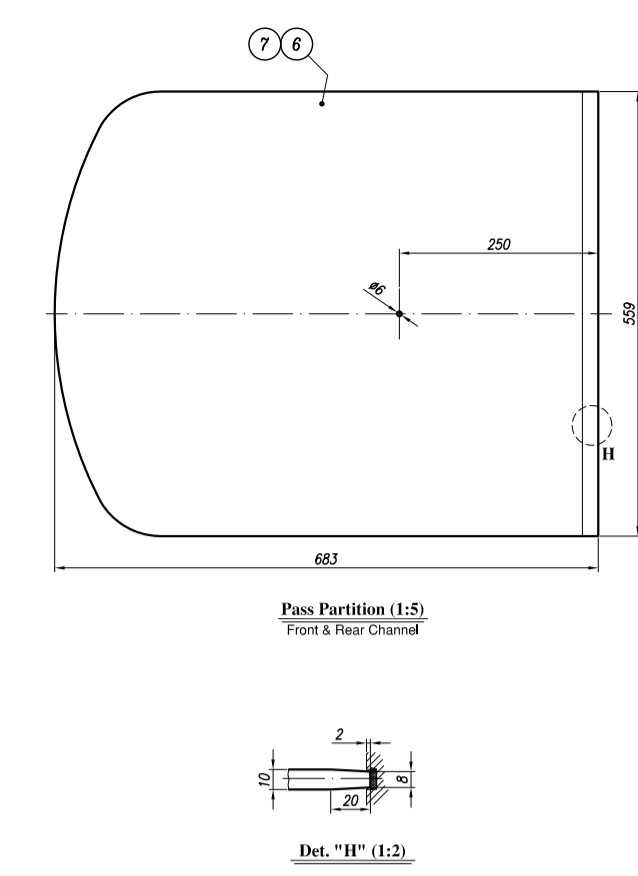
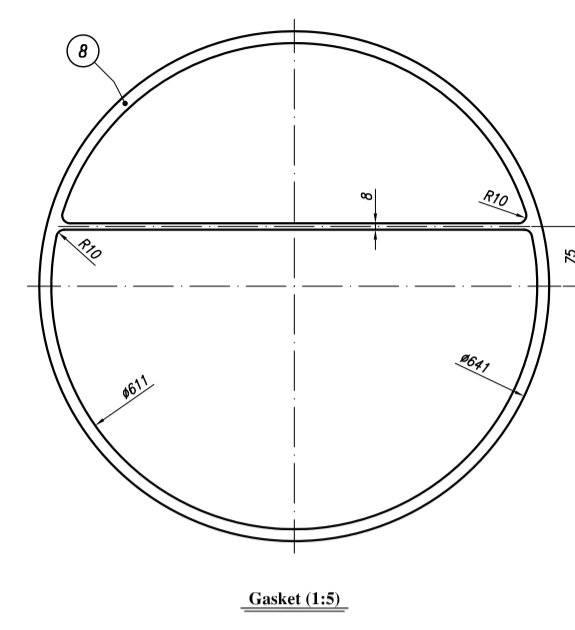
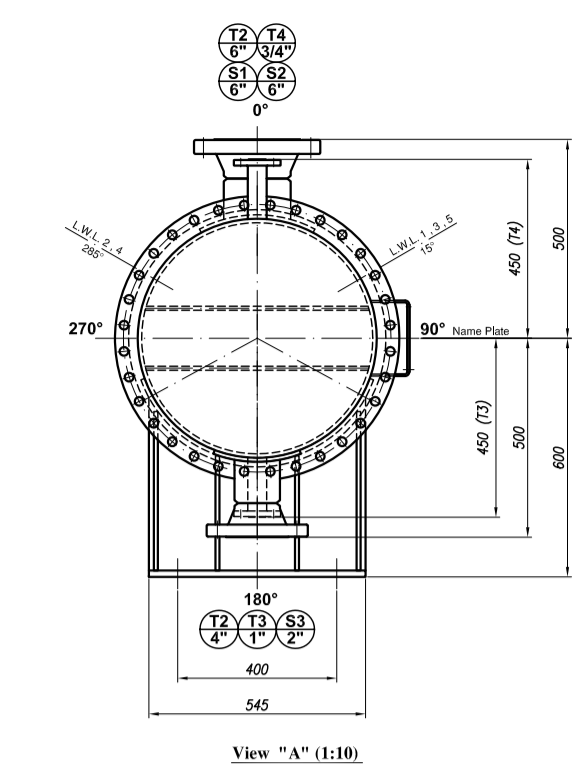
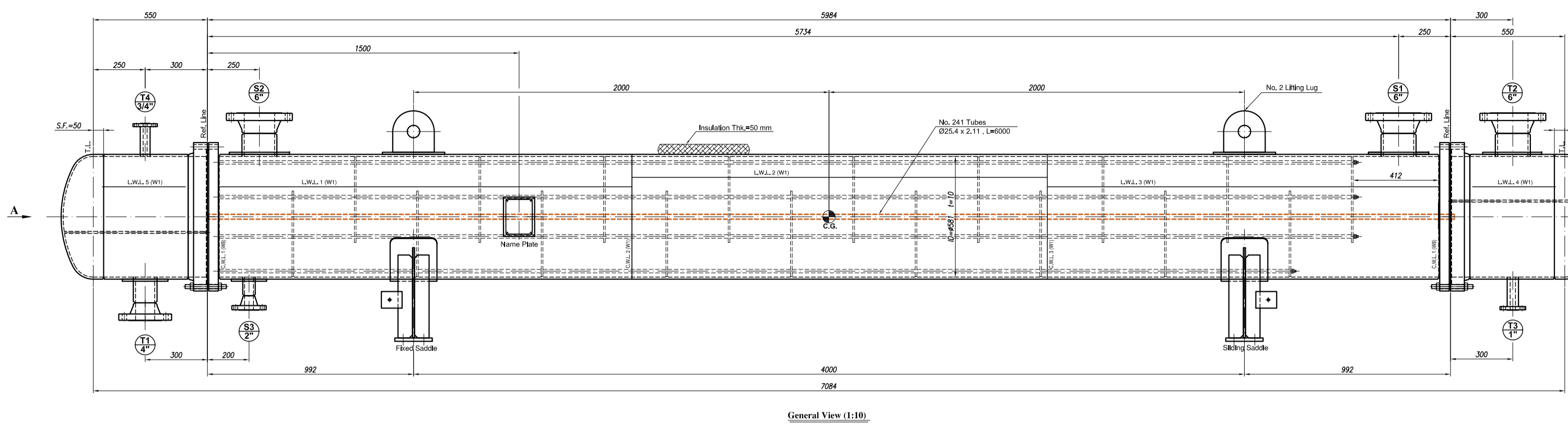
Sheet 2 of 3

TABULATION OF REVISED PAGES

Page	Rev-D0	Rev-D1	Rev-D2	Rev-D3	Rev-D4
1	x				
2	x				
3	x				
4					
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Page	Rev-D0	Rev-D1	Rev-D2	Rev-D3	Rev-D4
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NOZZLE DATA

NO.	SIZE	TYPE	ORIENT.	NO.	SIZE	TYPE	ORIENT.
1	1"	DN	180°	1	1"	DN	180°
2	1"	DN	180°	2	1"	DN	180°
3	1"	DN	180°	3	1"	DN	180°
4	1"	DN	180°	4	1"	DN	180°
5	1"	DN	180°	5	1"	DN	180°
6	1"	DN	180°	6	1"	DN	180°
7	1"	DN	180°	7	1"	DN	180°
8	1"	DN	180°	8	1"	DN	180°
9	1"	DN	180°	9	1"	DN	180°
10	1"	DN	180°	10	1"	DN	180°
11	1"	DN	180°	11	1"	DN	180°
12	1"	DN	180°	12	1"	DN	180°
13	1"	DN	180°	13	1"	DN	180°
14	1"	DN	180°	14	1"	DN	180°

DESIGN DATA

ITEM	DESCRIPTION	UNIT	VALUE
1	DESIGN PRESSURE	BAR	15.5
2	DESIGN TEMP.	°C	150
3	WIND SPEED	M/S	15
4	SEISMIC ZONE		II
5	SEISMIC COEFF.		0.1
6	SEISMIC PERIOD	SEC	0.15
7	SEISMIC DURATION	SEC	10
8	SEISMIC INTENSITY		II
9	SEISMIC COEFF. (WIND)		0.1
10	SEISMIC COEFF. (EARTHQ.)		0.1
11	SEISMIC COEFF. (EARTHQ.)		0.1
12	SEISMIC COEFF. (EARTHQ.)		0.1
13	SEISMIC COEFF. (EARTHQ.)		0.1
14	SEISMIC COEFF. (EARTHQ.)		0.1
15	SEISMIC COEFF. (EARTHQ.)		0.1
16	SEISMIC COEFF. (EARTHQ.)		0.1
17	SEISMIC COEFF. (EARTHQ.)		0.1
18	SEISMIC COEFF. (EARTHQ.)		0.1
19	SEISMIC COEFF. (EARTHQ.)		0.1
20	SEISMIC COEFF. (EARTHQ.)		0.1
21	SEISMIC COEFF. (EARTHQ.)		0.1
22	SEISMIC COEFF. (EARTHQ.)		0.1
23	SEISMIC COEFF. (EARTHQ.)		0.1
24	SEISMIC COEFF. (EARTHQ.)		0.1
25	SEISMIC COEFF. (EARTHQ.)		0.1
26	SEISMIC COEFF. (EARTHQ.)		0.1
27	SEISMIC COEFF. (EARTHQ.)		0.1
28	SEISMIC COEFF. (EARTHQ.)		0.1
29	SEISMIC COEFF. (EARTHQ.)		0.1
30	SEISMIC COEFF. (EARTHQ.)		0.1
31	SEISMIC COEFF. (EARTHQ.)		0.1
32	SEISMIC COEFF. (EARTHQ.)		0.1
33	SEISMIC COEFF. (EARTHQ.)		0.1
34	SEISMIC COEFF. (EARTHQ.)		0.1
35	SEISMIC COEFF. (EARTHQ.)		0.1
36	SEISMIC COEFF. (EARTHQ.)		0.1
37	SEISMIC COEFF. (EARTHQ.)		0.1
38	SEISMIC COEFF. (EARTHQ.)		0.1
39	SEISMIC COEFF. (EARTHQ.)		0.1
40	SEISMIC COEFF. (EARTHQ.)		0.1
41	SEISMIC COEFF. (EARTHQ.)		0.1
42	SEISMIC COEFF. (EARTHQ.)		0.1
43	SEISMIC COEFF. (EARTHQ.)		0.1
44	SEISMIC COEFF. (EARTHQ.)		0.1
45	SEISMIC COEFF. (EARTHQ.)		0.1
46	SEISMIC COEFF. (EARTHQ.)		0.1
47	SEISMIC COEFF. (EARTHQ.)		0.1
48	SEISMIC COEFF. (EARTHQ.)		0.1
49	SEISMIC COEFF. (EARTHQ.)		0.1
50	SEISMIC COEFF. (EARTHQ.)		0.1

MAX. ALLOWABLE NOZZLE LOADS TABLE

NOZZLE NO.	NOZZLE SIZE	DIRECT LOADS (N)	MOMENT LOADS (N.M)
1	1"	4000	4000
2	1"	4000	4000
3	1"	4000	4000
4	1"	4000	4000
5	1"	4000	4000
6	1"	4000	4000
7	1"	4000	4000
8	1"	4000	4000
9	1"	4000	4000
10	1"	4000	4000
11	1"	4000	4000
12	1"	4000	4000
13	1"	4000	4000
14	1"	4000	4000
15	1"	4000	4000
16	1"	4000	4000
17	1"	4000	4000
18	1"	4000	4000
19	1"	4000	4000
20	1"	4000	4000
21	1"	4000	4000
22	1"	4000	4000
23	1"	4000	4000
24	1"	4000	4000
25	1"	4000	4000
26	1"	4000	4000
27	1"	4000	4000
28	1"	4000	4000
29	1"	4000	4000
30	1"	4000	4000
31	1"	4000	4000
32	1"	4000	4000
33	1"	4000	4000
34	1"	4000	4000
35	1"	4000	4000
36	1"	4000	4000
37	1"	4000	4000
38	1"	4000	4000
39	1"	4000	4000
40	1"	4000	4000
41	1"	4000	4000
42	1"	4000	4000
43	1"	4000	4000
44	1"	4000	4000
45	1"	4000	4000
46	1"	4000	4000
47	1"	4000	4000
48	1"	4000	4000
49	1"	4000	4000
50	1"	4000	4000

GENERAL NOTES

- All dimensions are in millimeters unless otherwise specified.
- Production of nozzles are measured from flange face to center line of vessel or flange face to L.L.
- All nozzles are to be measured from bottom L.L. unless otherwise specified.
- Ball holes for flanges shall be smoothed to equipment grade.
- Drift pins shall be cut out after fitting of drift pins of correct length of 40mm to 45mm.
- What is in no case smaller than vessel shell thickness.
- Drift pins shall be cut out after fitting of drift pins of correct length of 40mm to 45mm.
- Full radiographic examination shall be performed for nozzle necks made by plate.
- Flange face welding shall be smooth to 125 U.S. Both ends to 150 mm from both maximum.
- As per ASME B16.5 for 2" and less, ASME B16.47 SERIES B for more than 2".
- Welding is to be done in accordance with AWS D10.1 or AWS D11.1.
- Test pressure shall be as per USAS 900 (3).
- 11" shell thickness shall be in accordance with ASME VIII-2, UG-27 (c).
- Painting to be done in accordance with IS 8011.
- 11" A vessel factor of 0.7 and 0.8 is contained in the calculation of stress and shell thickness.

LOADING DATA AT BASE

ITEM	NO.	UNIT	VALUE
WEIGHT	1158	KG	1158
HEIGHT	1000	MM	1000
WEIGHT	1158	KG	1158
HEIGHT	1000	MM	1000

WEIGHTS

ITEM	NO.	UNIT	VALUE
WEIGHT	1158	KG	1158
HEIGHT	1000	MM	1000
WEIGHT	1158	KG	1158
HEIGHT	1000	MM	1000

PARTS LIST

NO.	PART NAME	MATERIAL	DIMENSION	QTY.	REMARK
1.1	Shell (Plate)	SA 516 Gr. 70N	2000 x 1800 x 10	2	2000 (17)
1.2	Front Head (Plate)	SA 516 Gr. 70N	1800 x 1800 x 10	1	1800 (17)
2	Rear Head (Plate)	SA 516 Gr. 70N	1800 x 1800 x 10	2	48 (16)
3	Front Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	2	48 (16)
4	Rear Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	1	58 (16)
5	Pass Partition (Plate)	SA 516 Gr. 70N	1800 x 1800 x 10	1	28 (16)
6	Front Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	1	28 (16)
7	Rear Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	1	28 (16)
8	Gasket (Front & Rear)	SA 304 Gr. 304	1800 x 1800 x 10	1	28 (16)
9	Front Head (Plate)	SA 516 Gr. 70N	1800 x 1800 x 10	1	28 (16)
10	Rear Head (Plate)	SA 516 Gr. 70N	1800 x 1800 x 10	1	28 (16)
11	Jack Screw	SA 304 Gr. 304	1800 x 1800 x 10	4	63 (16)
12	Drift Pin	SA 304 Gr. 304	1800 x 1800 x 10	4	63 (16)
13	Tube	SA 304 Gr. 304	1800 x 1800 x 10	24	17 (16)
14	Front Tube Sheet	SA 304 Gr. 304	1800 x 1800 x 10	1	115 (115)
15	Rear Tube Sheet	SA 304 Gr. 304	1800 x 1800 x 10	1	115 (115)
16	Support Saddle	SA 516 Gr. 70N	1800 x 1800 x 10	18	7 (128)
17	Fixed Saddle	SA 516 Gr. 70N	1800 x 1800 x 10	6	3 (19)
18	Sliding Saddle	SA 516 Gr. 70N	1800 x 1800 x 10	3	1 (4)
19	Web Plate	SA 304 Gr. 304	1800 x 1800 x 10	2	3 (5)
20	Front Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	2	3 (5)
21	Rear Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	2	3 (5)
22	Pass Partition (Plate)	SA 516 Gr. 70N	1800 x 1800 x 10	1	28 (16)
23	Front Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	1	28 (16)
24	Rear Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	1	28 (16)
25	Gasket (Front & Rear)	SA 304 Gr. 304	1800 x 1800 x 10	1	28 (16)
26	Front Head (Plate)	SA 516 Gr. 70N	1800 x 1800 x 10	1	28 (16)
27	Rear Head (Plate)	SA 516 Gr. 70N	1800 x 1800 x 10	1	28 (16)
28	Jack Screw	SA 304 Gr. 304	1800 x 1800 x 10	4	63 (16)
29	Drift Pin	SA 304 Gr. 304	1800 x 1800 x 10	4	63 (16)
30	Tube	SA 304 Gr. 304	1800 x 1800 x 10	24	17 (16)
31	Front Tube Sheet	SA 304 Gr. 304	1800 x 1800 x 10	1	115 (115)
32	Rear Tube Sheet	SA 304 Gr. 304	1800 x 1800 x 10	1	115 (115)
33	Support Saddle	SA 516 Gr. 70N	1800 x 1800 x 10	18	7 (128)
34	Fixed Saddle	SA 516 Gr. 70N	1800 x 1800 x 10	6	3 (19)
35	Sliding Saddle	SA 516 Gr. 70N	1800 x 1800 x 10	3	1 (4)
36	Web Plate	SA 304 Gr. 304	1800 x 1800 x 10	2	3 (5)
37	Front Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	2	3 (5)
38	Rear Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	2	3 (5)
39	Pass Partition (Plate)	SA 516 Gr. 70N	1800 x 1800 x 10	1	28 (16)
40	Front Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	1	28 (16)
41	Rear Flange (Plate)	SA 304 Gr. 304	1800 x 1800 x 10	1	28 (16)