



DEHDASHT PETROCHEMICAL INDUSTRY COMPANY
DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT



Contract No.: DPIC/98-12	DOCUMENT TITLE: K.O. DRUM Drawing	POI: IFA	Rev.: D1
	DOCUMENT No: DPIC9812-000-VD-1002-ME-DWG-0022	Sheet 1 of 3	

K.O. Drum Drawing (D-PK6101-3)

PURCHASER'S COMMENT/APPROVAL STATUS						Purchaser: NARGAN
1	AP: Approved (Released for Manufacturing)					Requisition No.: DPIC98-12-001-000-ME-MR-4150-0001-D1 Item No. (Tag No.): PK-6101 Vendor Doc. No.: DPIC9812-000-VD-1002-ME-DWG-0022-D0
2	AN: Approved With Minor Comments (Fabrication may Proceed)					
3	NF: Approved With Comments (Fabrication not Proceed)					
4	RJ: Rejected					
5	NR: Not be Returned					
Date: XX.XX.XX	Signature:					
D1	20 -Feb-22	IFA	A.VOSOUGH	DR.A.NEJATI	DR.A.NEJATI	
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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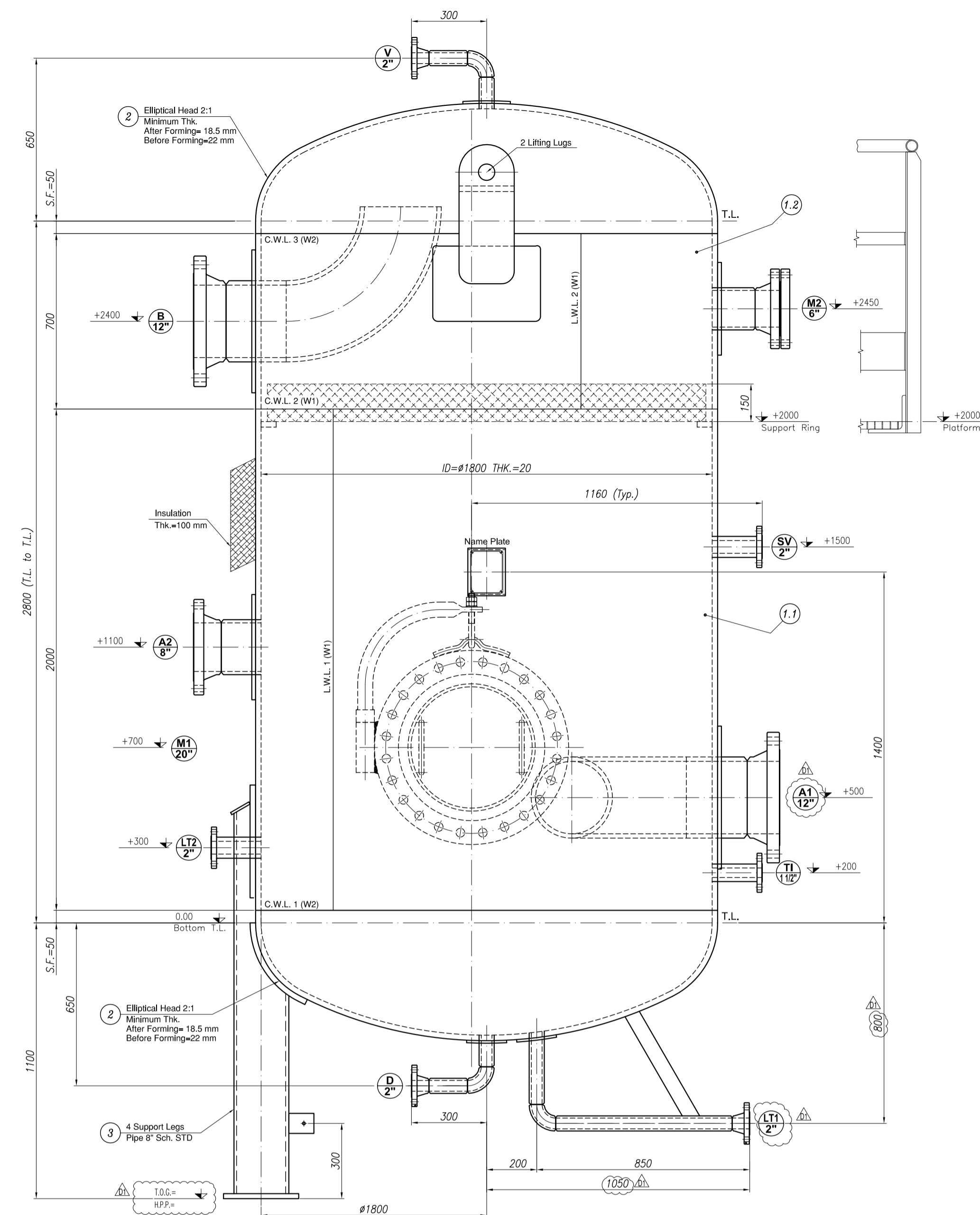
Contract No.: DPIC/98-12	DOCUMENT TITLE: K.O. DRUM Drawing	POI: IFA	Rev.: D1
	DOCUMENT No: DPIC9812-000-VD-1002-ME-DWG-0022	Sheet 2 of 3	

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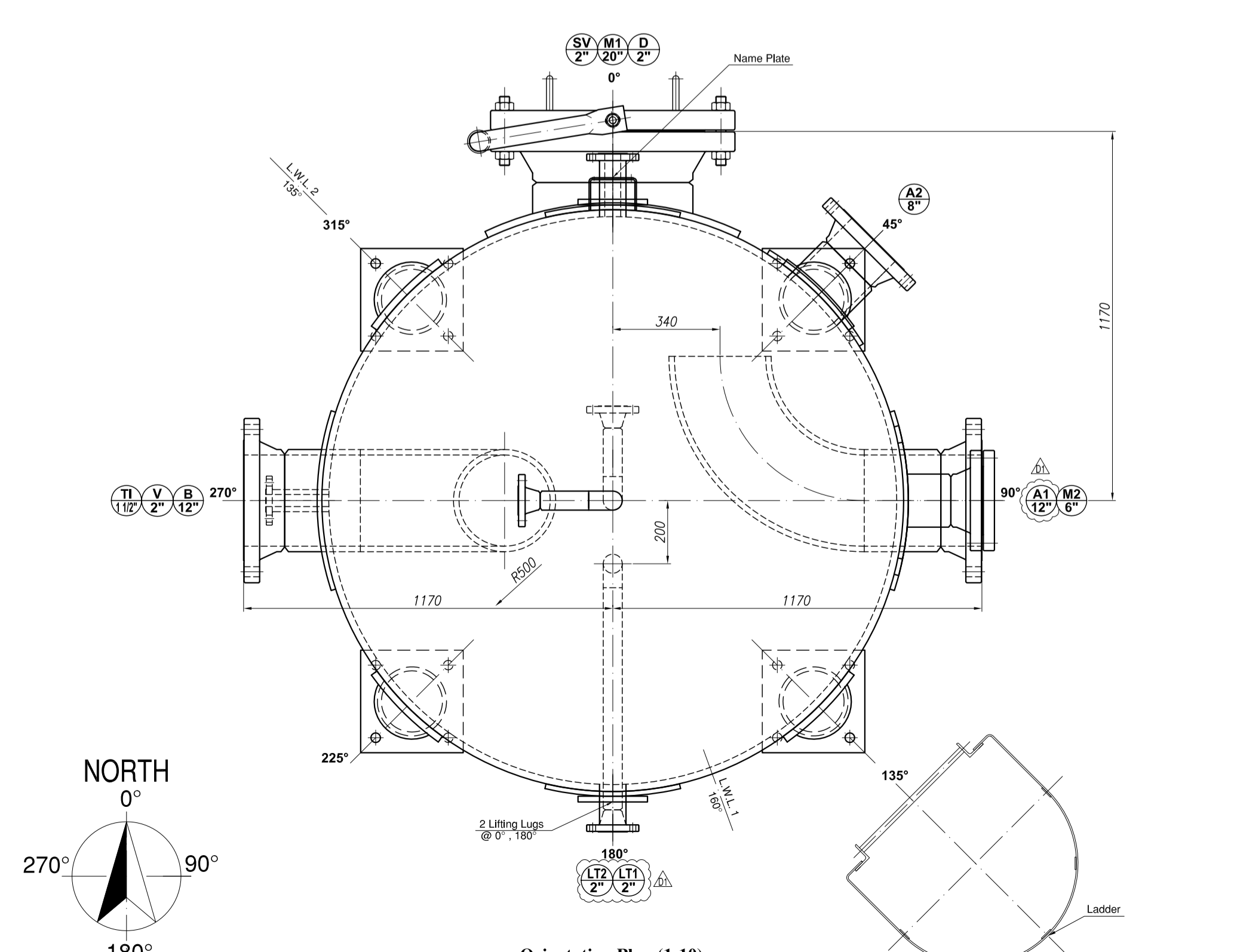
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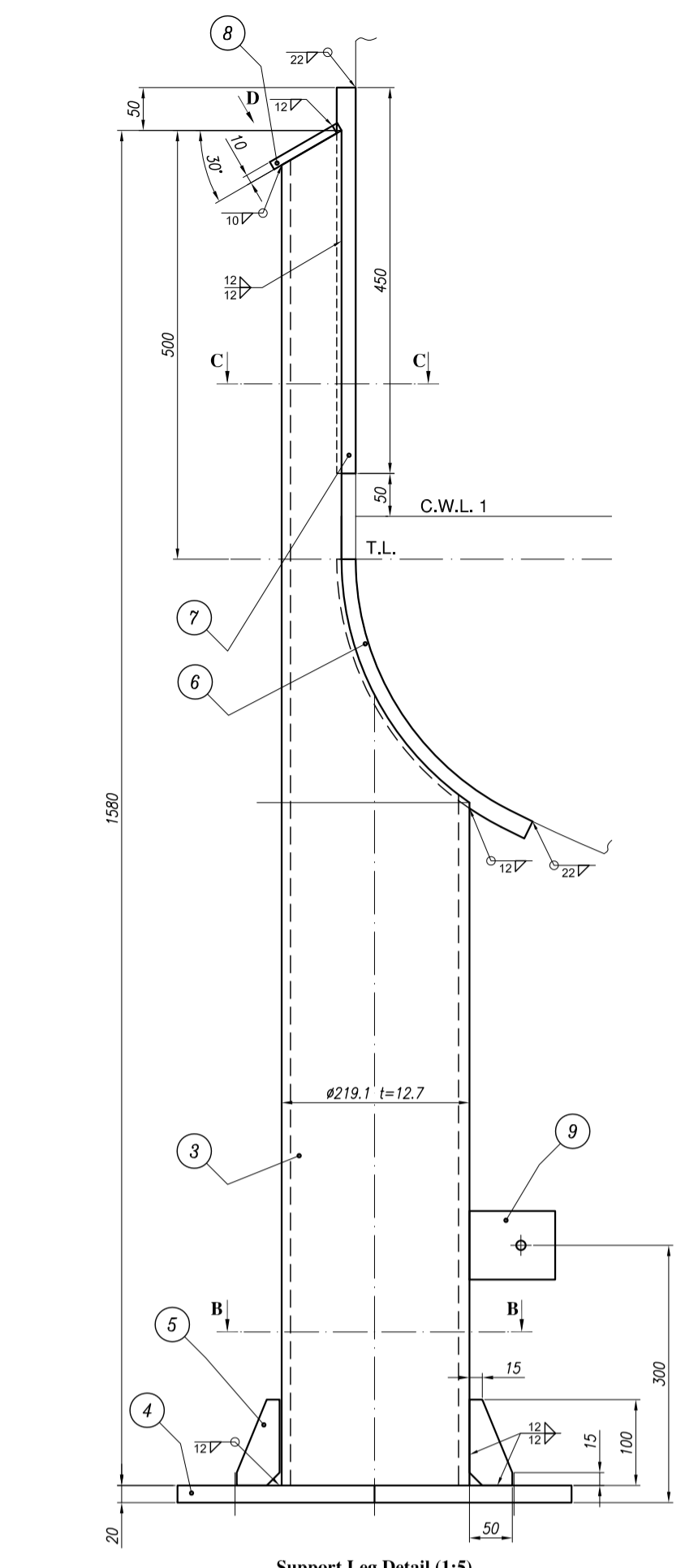
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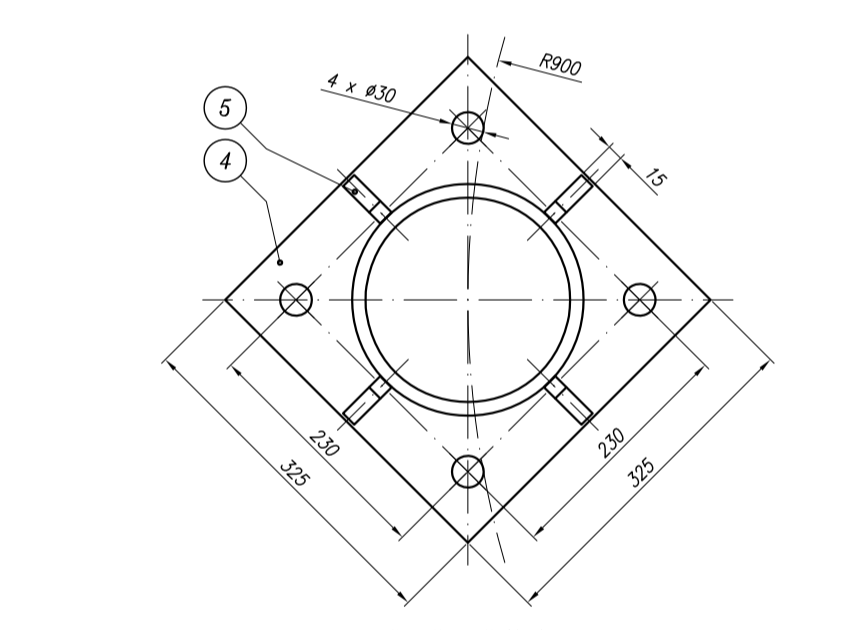
Elevation View (1:10)



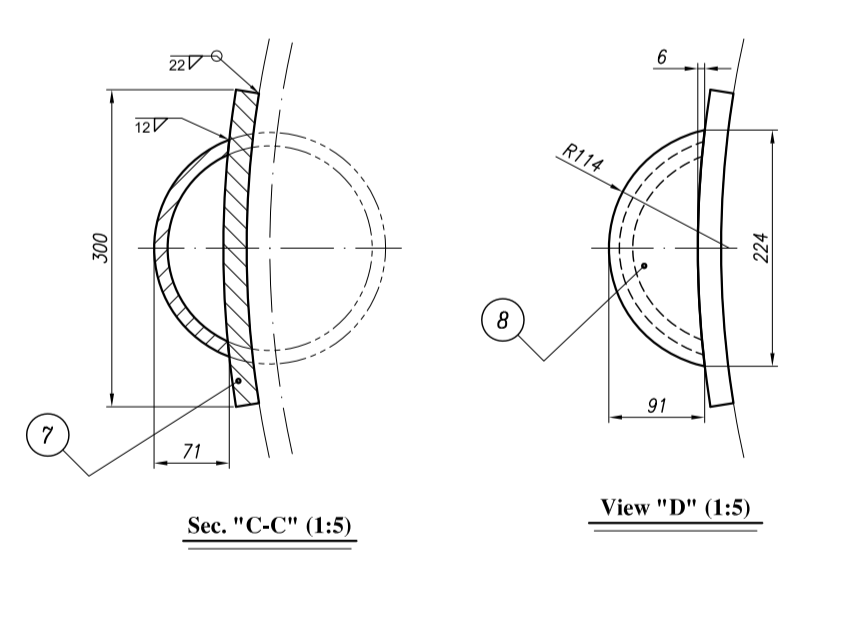
Orientation Plan (1:10)



Support Leg Detail (1:5)

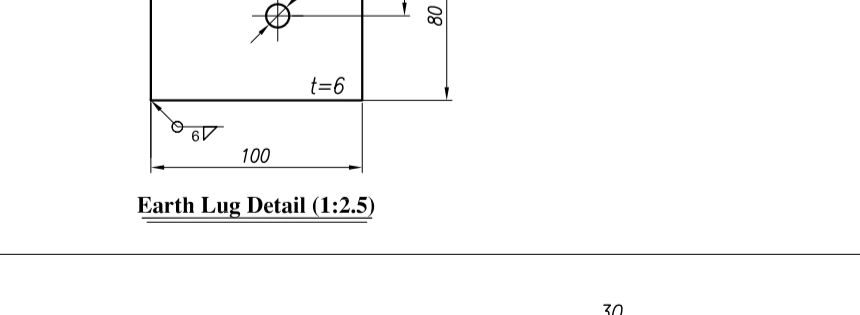


Sec. "B-B" (1:5)

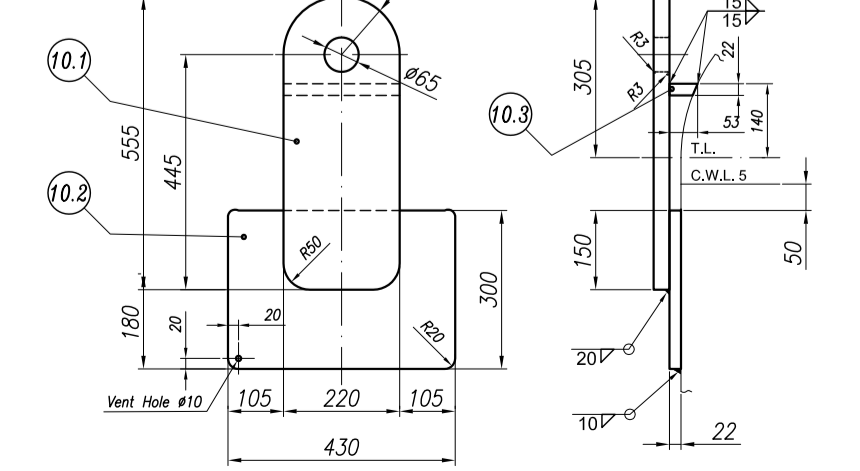


Sec. "C-C" (1:5)

View "D" (1:5)

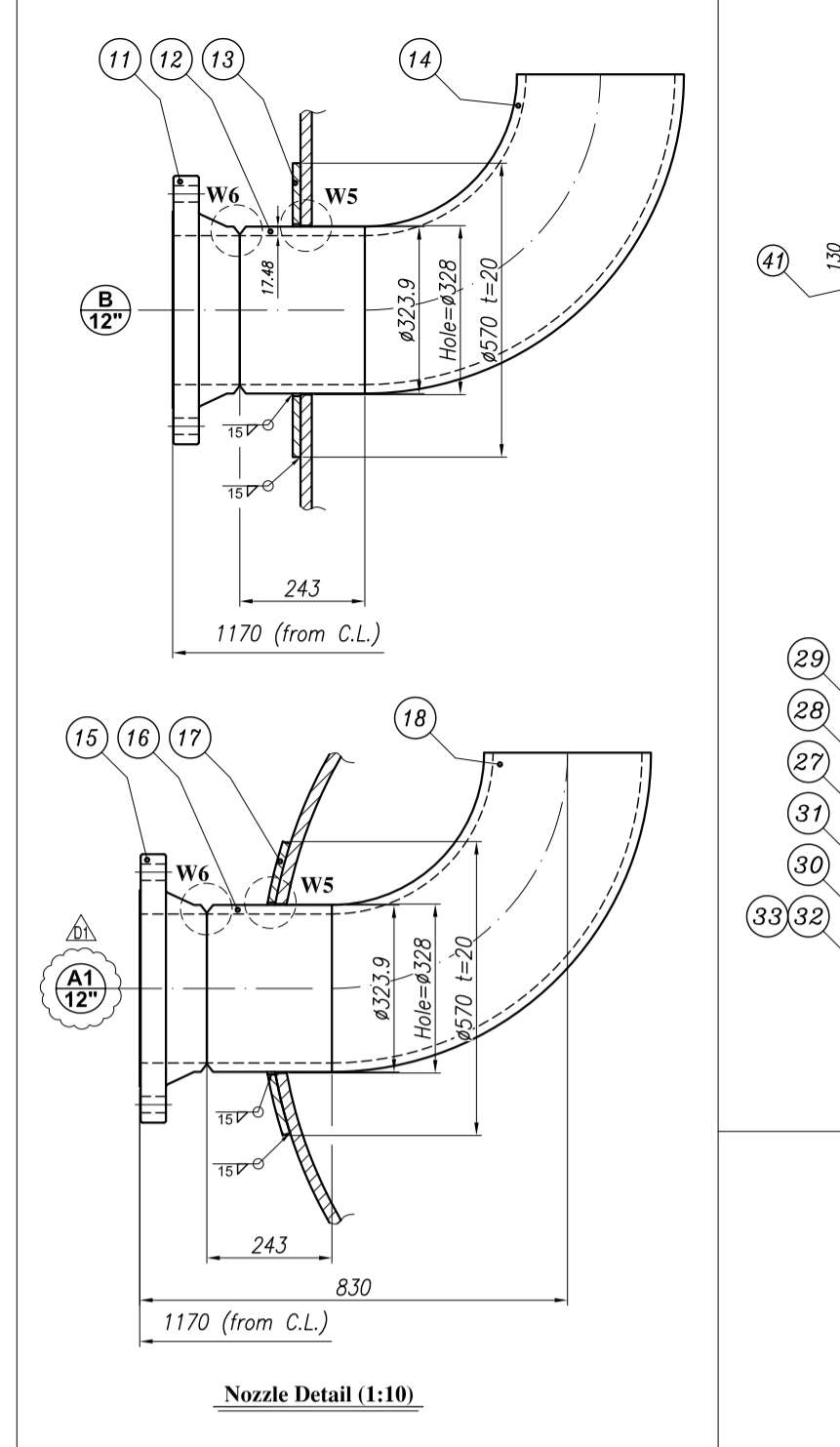


Earth Lug Detail (1:2.5)

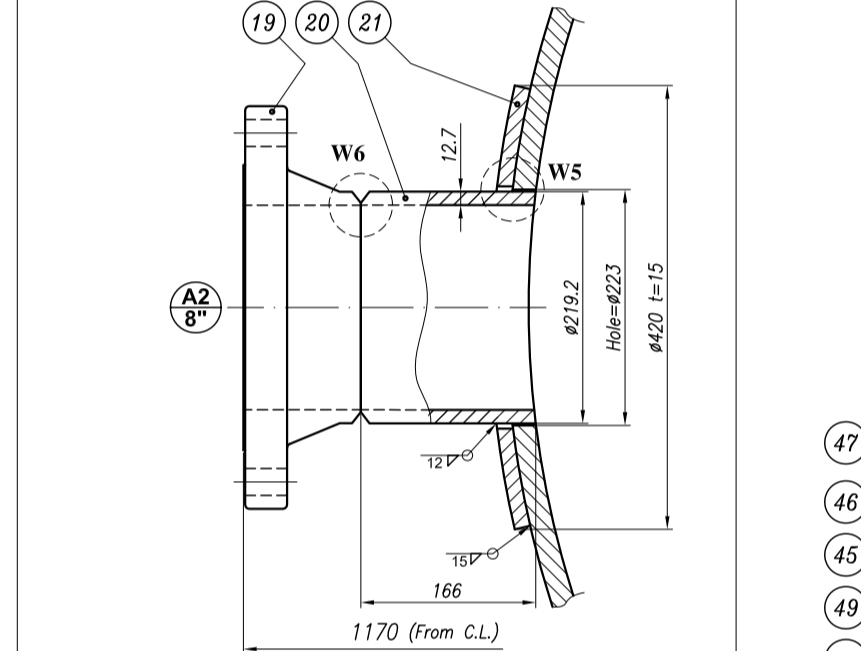


Lifting Lug (1:10)

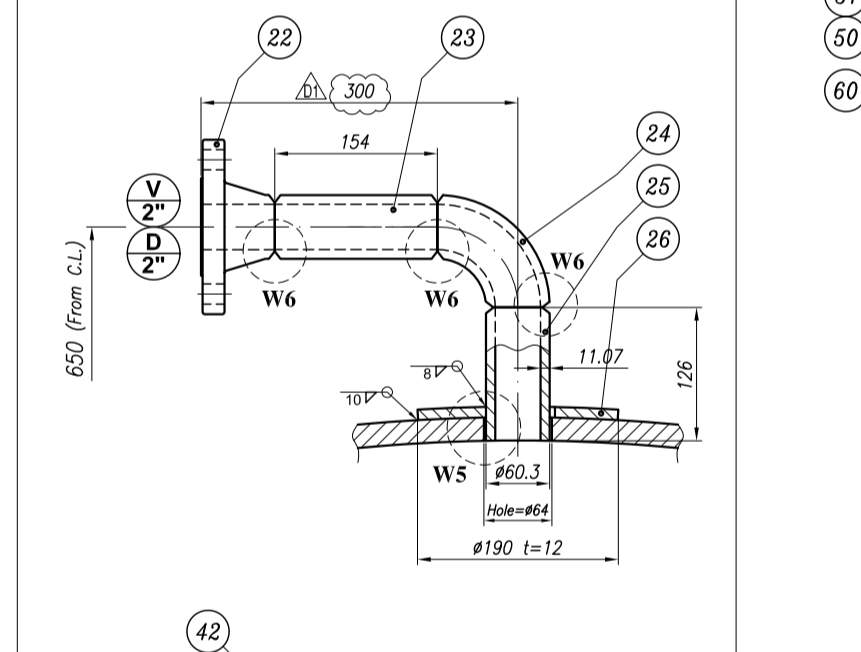
Nozzle Detail (1:5)



Nozzle Detail (1:10)

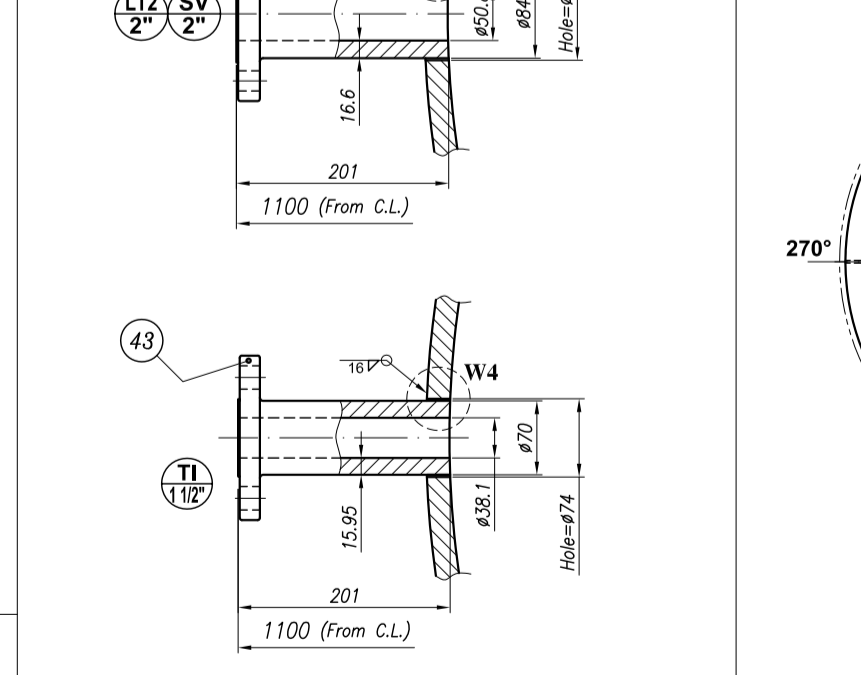


Manhole & Davit (1:10)

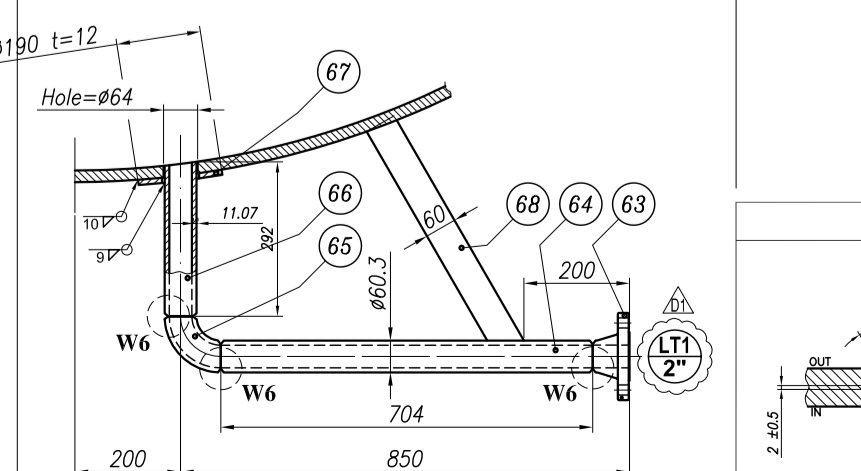


Eye Let (1:5)

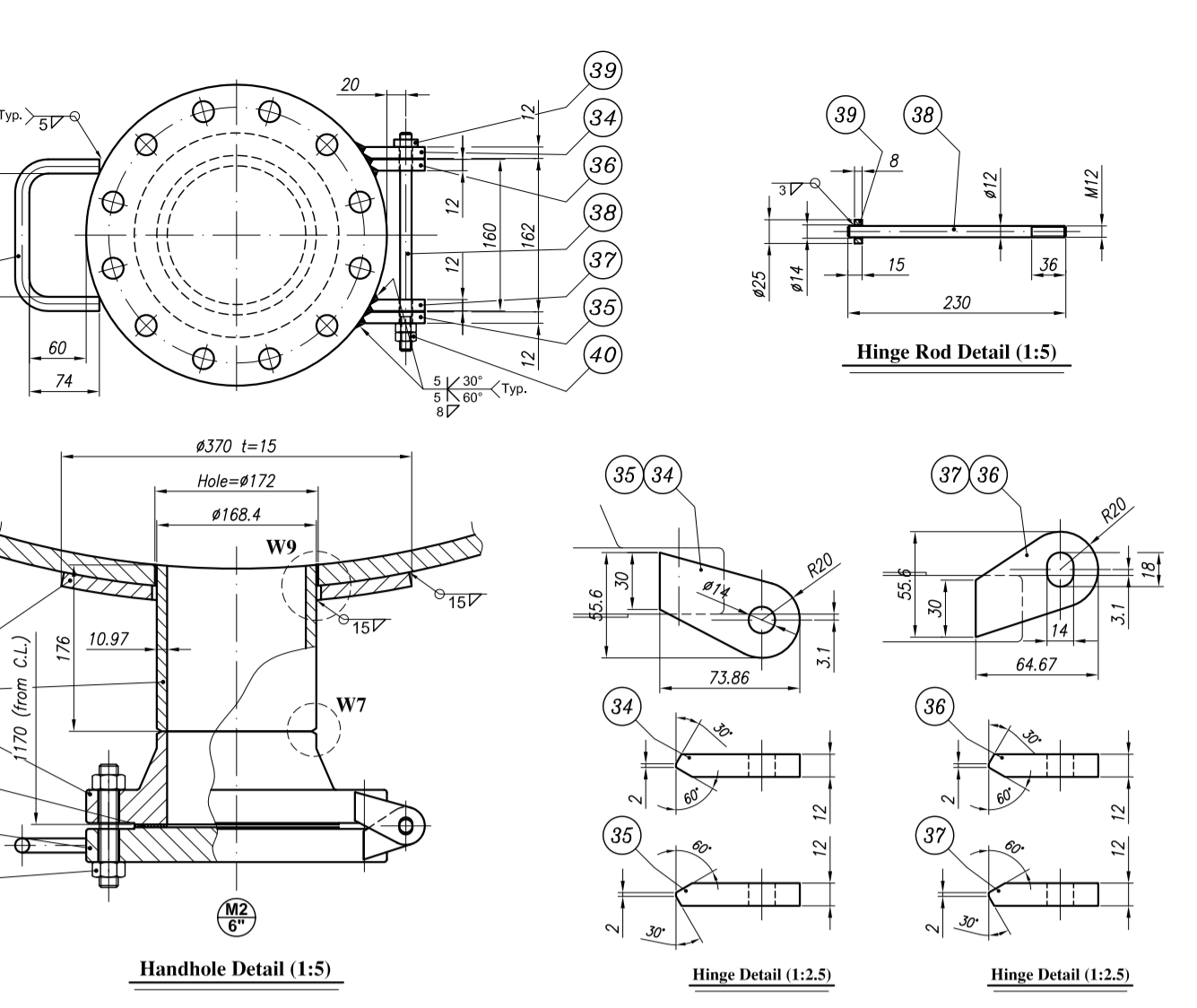
Eye Bolt (1:5)



Internal Ring Support (1:20)



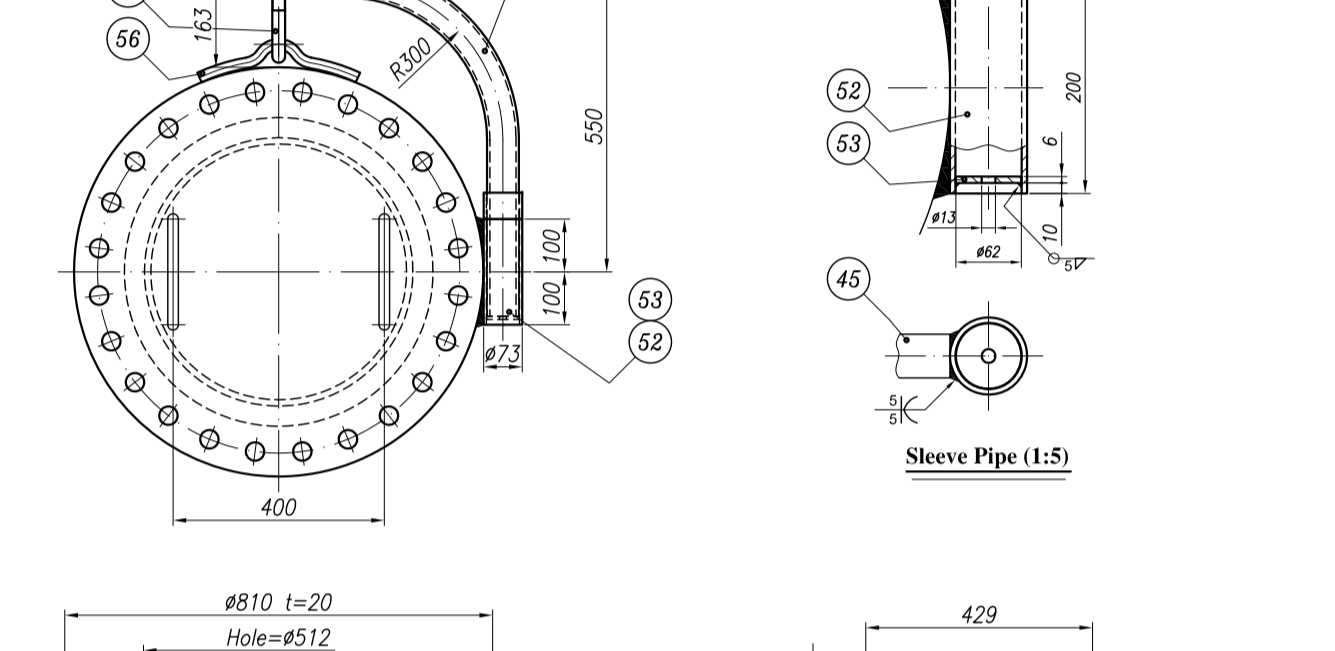
Nozzle Detail (1:5)



Hinge Rod Detail (1:5)

Hinge Detail (1:2.5)

Hinge Detail (1:2.5)



Sleeve Pipe (1:5)

Manhole & Davit (1:10)

Davit Pipe (1:10)

Eye Let (1:5)

Eye Bolt (1:5)

Handle (1:5)

Internal Ring Support (1:20)

Nozzle Detail (1:5)

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Nozzle Detail (1:5)

NOZZLE DATA		DESIGN DATA		LOADING DATA AT BASE	
MARK NO.	QTY	SIZE	TYPE	FLANGE	DESCRIPTION
A1	1	12"	SCH 80	WAL. R.F.	1170
B	1	12"	SCH 80	WAL. R.F.	1170
D	1	2"	SCH XKS	WAL. R.F.	DMG
M1	1	20"	-A/20	300 #	WAL. R.F.
M2	1	6"	SCH 80	300 #	WAL. R.F.
SV	1	2"	-7/16	300 #	L.W.N. R.F.
TI	1	1 1/2"	-7/16	300 #	L.W.N. R.F.
V	1	2"	SCH XKS	300 #	WAL. R.F.
DESIGN DATA OPERATING PRESS. (Max.) (bar) NO IN. OUT. OPERATING TEMP. (°C) -24 DESIGN CODE (CLASS) TYPE ASME SEC. VIII MATERIAL (SHELL) (NOZZLE) SA 516 Gr. 70 (SUPPORT LEG) SA 333 Gr. 6 DESIGN TEMPERATURE (°C) (135) EXTENSIVE DESIGN PRESS. (bar) 1.534 WINDING TEST PRESSURE (bar) 30 MOUNT. & D.P. (MATERIAL) 23.25 ALLOW. PERMISS. (bar) 23.25 CORROSION ALLOWANCE (mm) 3 IMPACT TEST (KJ) (CS)					
MAX. ALLOWABLE NOZZLE LOADS TABLE NOZZLE DIRECT LOADS (N) MOMENT LOADS (N.M) MARK NO. SIZE F _A F _C F _T M ₁ M ₂ M ₃ M ₄ D 2" 2000 2000 2000 500 400 400 L1, L1 SV 2" 2000 2000 2000 500 400 400 A1 12" 12000 12000 12000 18900 15300 15300 B 12" 12000 12000 12000 18900 15300 15300 A2 8" 8000 8000 8000 8400 6800 6800					
GENERAL NOTES (1) All dimensions are in millimeters unless otherwise noted. (2) Projection of nozzles are measured from flange face to center line of vessel or flange face to T.L. (3) All elevations are measured from bottom T.L. unless otherwise specified. (4) Bolt holes for flanges shall be strodded to equipment main. (5) Stated thickness is minimum after forming thickness of straight flange of elliptical heads shall be in no case smaller than vessel shell required thickness. (6) Gasket material: spiral wound with containment filler: graphite Stainless Steel, 3.2 mm THK spiral wound: AISI 304 / inner ring: AISI 304 / outer ring: AISI 304. (7) Full radiographic examination shall be performed for nozzle necks made by plate. (8) Flange Face finishing shall be smooth with 125 micro finish to 250 micro finish maximum as per ASME B.16.5 for 24" and less. Also ASME B16.47 SERIES B for more than 24". (9) Test pressure calculated as per UG-99 (D). (10) All stud bolts shall be supplied tropicalized. (ASTM-A633-SCS-TYPE 2). (11) Painting: 70 Micron ZINCETHYL SILKATE UP TO 200C SA3 Surface Per Partion SA3. (12) A reduction scalar factor of 0.7 and 0.6 is considered in the calculation of seismic and wind loads respectively.					
LOADING DATA AT BASE MOMENT (kN.m) 19.1 SHEARLOAD (kN) 1.4 EARTHQUAKE WIND					
WEIGHTS OPERATING WEIGHT (kg) 6665 HYDROSTATIC WEIGHT (kg) 14256 FABRICATE WEIGHT (kg) 2488					
PARTS LIST					
NO.	PART NAME	MATERIAL	DIMENSION	QTY	REMARK
1.1	Shell (Plate)	SA 516 Gr. 70	2000 x 5724 x 20	1	1977/1977
1.2	Shell (Plate)	SA 516 Gr. 70	700 x 5724 x 20	1	692/692
2	Ellip. Head 2:1	SA 516 Gr. 70	1170 x 1170 x 20	2	701/1402
3	Support Leg Pipe	SA 108 Gr. B	2" SCH. 80 L=1680	4	73/293
4	Base Plate	SA 283 Gr. C	325 x 325 x 20	4	15/64
5	Gusset Plate	SA 283 Gr. C	50 x 100 x 15	16	0.3/4.8
6	Support Pad	SA 516 Gr. 70	100 x 450 x 22	4	23/92
7	Support Pad	SA 516 Gr. 70	300 x 450 x 22	4	29/92
8	Closure Plate	SA 283 Gr. C	91 x 224 x 10	4	1/4
9	Earth Lug	SA 240 Gr. 304	80 x 100 x 6	2	0.4/0.8
10.1	Lifting Lug (Plate)	SA 516 Gr. 70	220 x 55 x 30	2	27/54
10.2	Lifting Lug Pad (Plate)	SA 516 Gr. 70	300 x 450 x 22	2	22/44
10.3	Gusset Plate	SA 516 Gr. 70	53 x 220 x 22	2	4
11	Flange (N1, N2)	SA 350 LF2	8" W.N. 300# R.F. SCH. 80	2	31/62 ASME B.16.5
12	Flange (N1, N2)	SA 333 Gr. 6	8" SCH. 80 L=131	2	7/14 ASME B.16.5
13	Pad	SA 516 Gr. 70	100 x 450 x 22	2	22/44
14	Flange (B)	SA 350 LF2	12" W.N. 300# R.F. SCH. 80	1	64/64 ASME B.16.5
15	Pipe (B)	SA 333 Gr. 6	12" SCH. 80 L=243	1	33/33 ASME B.16.5
16	Pad	SA 516 Gr. 70	100 x 450 x 22	1	20/20
17	Flange (B)	SA 350 LF2	12" W.N. 300# R.F. SCH. 80	1	64/64 ASME B.16.5
18	Flange (A1)	SA 333 Gr. 6	12" SCH. 80 L=243	1	33/33 ASME B.16.5
19	Flange (A2)	SA 333 Gr. 6	12" SCH. 80 L=243	1	33/33 ASME B.16.5
20	Pipe (A1)	SA 333 Gr. 6	12" SCH. 80 L=166	1	10/10 ASME B.16.5
21	Pad	SA 516 Gr. 70	100 x 450 x 22	1	20/20
22	Flange (V, D)	SA 350 LF2	20" W.N. 300# R.F. SCH. 80	1	4/4 ASME B.16.5
23	Pipe (V, D)	SA 333 Gr. 6	2" SCH. XKS L=154	2	1.7/3.4 ASME B.16.5
24	Elbow (V, D)	SA 234 WPB	2" SCH. XKS L.R. 90°	2	1.3/2.6 ASME B.16.5
25	Pipe (V, D)	SA 333 Gr. 6	2" SCH. XKS L=126	2	1.4/2.8 ASME B.16.5
26	Pad (V, D)	SA 516 Gr. 70	100 x 450 x 22	2	2/2
27	Flange (M2)	SA 350 LF2	8" W.N. 300# R.F. SCH. 80	1	19/19 ASME B.16.5
28	Pipe (M2)	SA 333 Gr. 6	8" SCH. 80 L=176	1	7/7 ASME B.16.5
29	Pad	SA 516 Gr. 70	100 x 450 x 22	1	9.7/9.7
30	Blind Flange	SA 350 LF2	20" W.N. 300# R.F. SCH. 80	1	22/22 ASME B.16.5
31	Gasket	Spiral Wound	20" 300# In. 4.5	1	NOTE (4)
32	Stud Bolt	SA 193 Gr. B7	3/4" UNC L=130	12	0.35/4.2
33	Hex. Nut	SA 194 Gr. 2H	3/4" UNC	24	0.97/2.1
34	Hinge Plate	SA 516 Gr. 70	56 x 74 x 12	1	0.4/0.4
35	Hinge Plate	SA 516 Gr. 70	56 x 74 x 12	1	0.4/0.4
36	Hinge Plate	SA 516 Gr. 70	56 x 65 x 12	1	0.3/0.3
37	Hinge Plate	SA 516 Gr. 70	56 x 65 x 12	1	0.3/0.3
38	Hinge Rod	SA 36	O12 L=230	1	0.2/0.2
39	Ring	SA 516 Gr. 70	Q25 x O14 x 8	1	0.02/0.02
40	Hex. Nut	SA 194 Gr. 2H	M12	2	0.87/2.1 DN 934
41	Handle (Bar)	SA 36	O15 L=285	1	0.2/0.2
42	Flange (GV, LT)	SA 350 LF2	2" L.W.N. 300# R.F. L=201	2	7/14 ASME B.16.5
43	Flange (TI)	SA 350 LF2	1 1/2" L.W.N. 300# R.F. L=201	1	4/4 ASME B.16.5
44	DELETED				
45	Manhole Flange (M1)	SA 350 LF2	20" W.N. 300# R.F. L=201	1	182/182 ASME B.16.5
46	Pipe (Plate)	SA 516 Gr. 70	145 x 152 x 7.20	1	38/38
47	Pad	SA 516 Gr. 70	100 x 450 x 22	1	22/22
48	Blind Flange	SA 350 LF2	20" W.N. 300# R.F. SCH. 80	1	230/230 ASME B.16.5
49	Gasket	Spiral Wound	20" 300# In. 4.5	1	NOTE (4)
50	Stud Bolt	SA 193 Gr. B7	1 1/4" UNC L=220	24	1.4/4.0
51	Hex. Nut	SA 194 Gr. 2H	1 1/4" UNC	48	0.35/1.7
52	Sleeve Pipe	SA 108 Gr. B	2 1/2" SCH. 40 L=200	1	1.7/1.7 ASME B.16.5
53	End Plate	SA 285 Gr. C	O82 x O13 x 8	1	0.1/0.1
54	Davit Pipe	SA 36	2" SCH. 160 L=975	1	10.0/10.0 ASME B.16.5
55	Ring (Pipe)	SA 108 Gr. B	2 1/2" SCH. 40 L=450	1	0.4/0.4 ASME B.16.5
56	Eye Let (Rod Bar)	SA 36	O20 L=333	1	0.8/0.8
57	Eye Bolt (Rod Bar)	SA 36	O24 L=300	1	0.9/0.9 M24
58	Washer	SA 285 Gr. C	O44 x O25 x 4	1	0.03/0.03 DN 125
59	Hex. Nut	SA 194 Gr. 2H	M24	2	0.13/0.26 DN 934
60	Handle (Rod Bar)	SA 36	O20 L=375	2	0.9/1.8
61	Internal Ring Support	SA 516 Gr. 70	O1800 x O1600 x 22	1	91/91
62	Blind Flange	SA 350 LF2	100 x 100 x 3.0	8	34/34
63	Flange (LT)	SA 350 LF2	2" W.N. 300# R.F. SCH. 80	1	4/4 ASME B.16.5
64	Pipe (LT)	SA 333 Gr. 6	2" SCH. XKS L=704	1	7.8/7.8 ASME B.16.5
65	Elbow (LT)	SA 234 WPB	2" SCH. XKS L.R. 90°	1	1.3/1.3 ASME B.16.5
66	Pipe (LT)	SA 333 Gr. 6	2" SCH. XKS L=292	1	3.2/3.2 ASME B.16.5
67	Pad (LT)	SA 516 Gr. 70	O190 x O70 x 12	1	2/2
68	Supporter Plate	SA 516 Gr. 70	80 x 6 x L=500	2	1.5/3
TOTAL WEIGHT (kg) 6010					
CLIENT: MC		CONTRACTOR:			
PROJECT TITLE: DEHDASHT PETROCHEMICAL INDUSTRY COMPANY DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT		DRAWING TITLE: K.O. DRUM DRAWING (D-PK6101-3)			
DOCUMENT NO: DPIC9812-000-VD-1002-ME-DWG-0022		SC: A0		SIZE: A0	
Proj. Code Area No. 10 Material Code RD No. 001 Doc. Type Serial No. Rev. Sheet No.		DPIC9812 000 VD 1002 4150 ME DWG 0022 D1 3 OF 3			
PURCHASER'S COMMENTS/ APPROVAL STATUS:		PURCHASER:			
1. IAF Approved (Released for Manufacturing)		REQUESTION NO. 1100-0001-03			
2. H. Approved (After Completion of Project)		ITEM NO. (TAG NO.) D-PK6101-3			
3. IAF Approved with Comments (Fabrication not Proceed)		DATE: 09/09/2009			
4. H. Approved		VENDOR DOC NO: 065-0022-01			
5. NR: Not to Return					
6. Date:					
REV. DATE		DESCRIPTION			
PREP. D.		CHK. D.			
APP. D.					