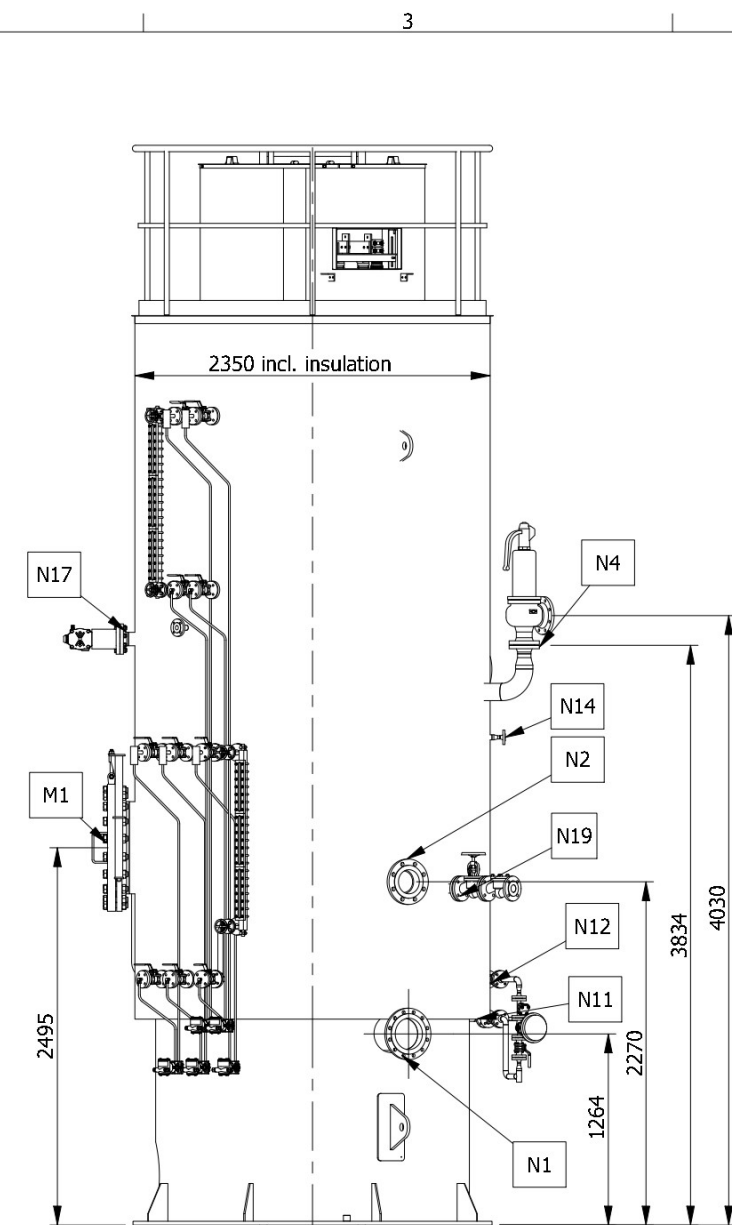
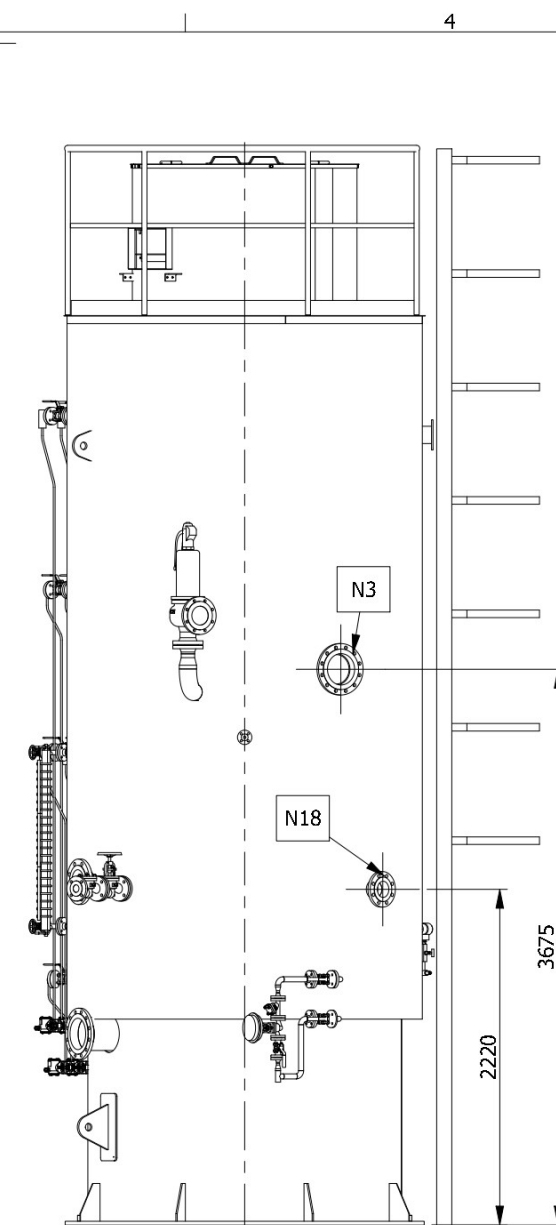
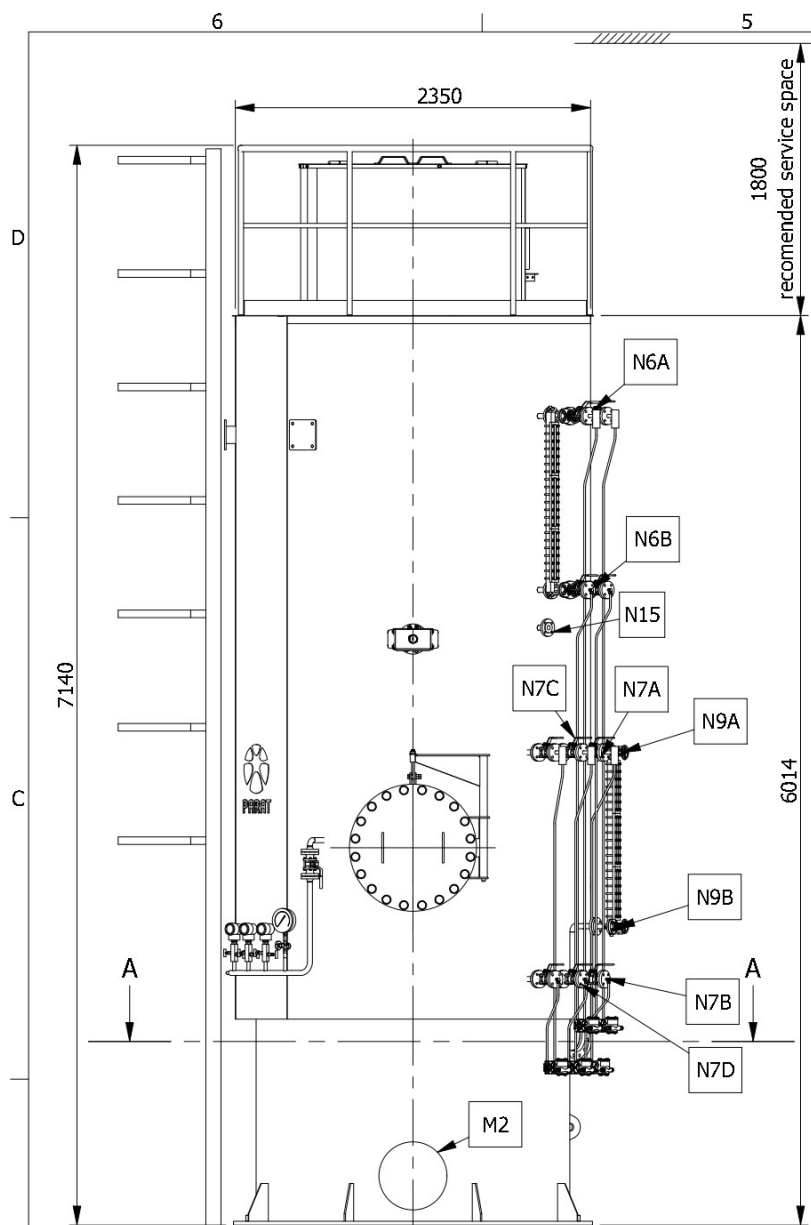
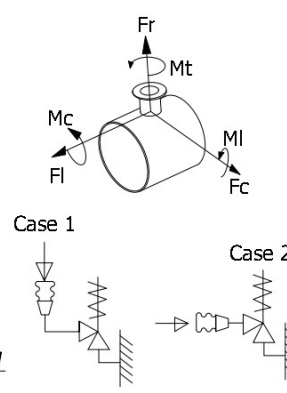




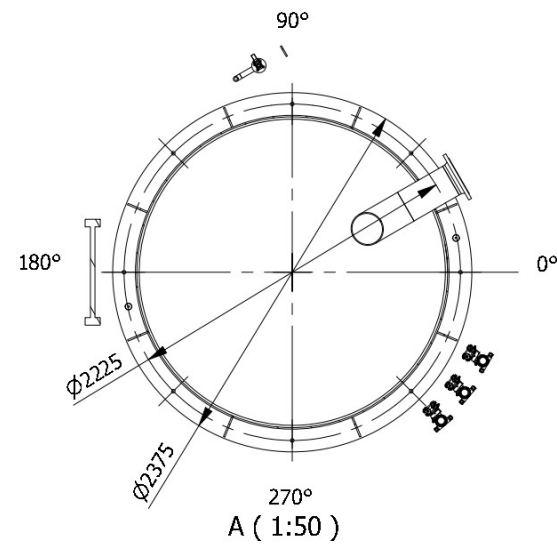
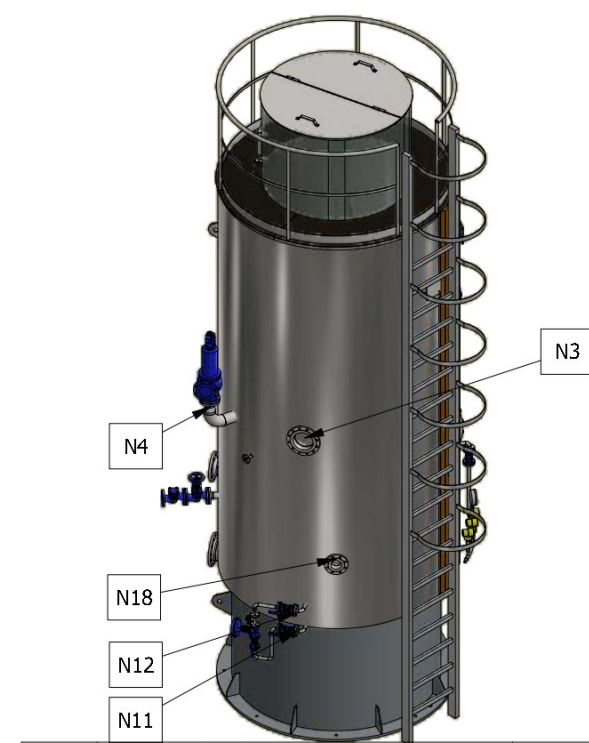
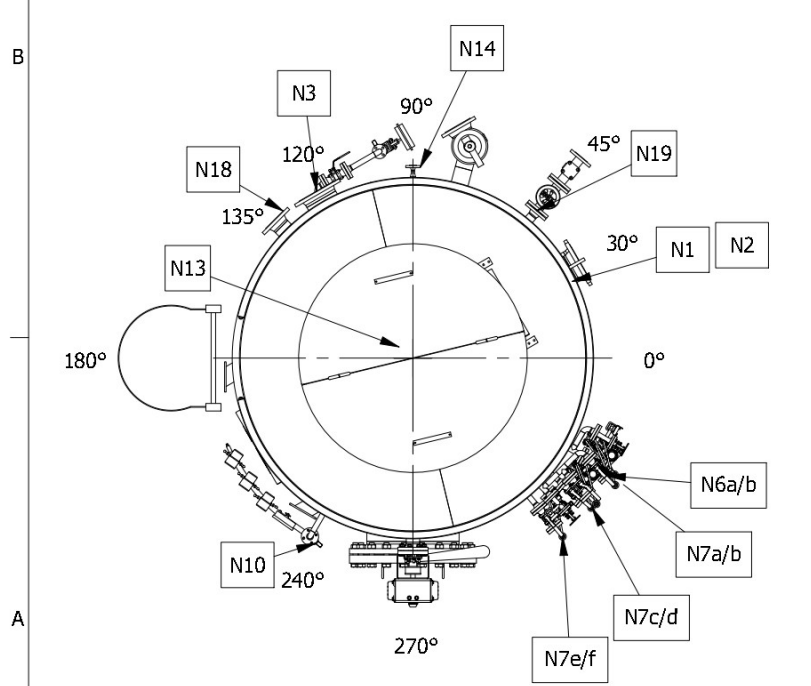
Nozzle list					
Item	No.	Dim.	Orientation	Elevation	Service
N1	1	DN200 PN16	30°	1263	Outlet
N2	1	DN150 PN40	30°	2270	Inlet
N3	1	DN200 PN16	120°	3675	Main steam
N4	1	DN80 PN40/ DN125 PN16	75°	3835/ 4030	Safety valve
N5	3	DN150 PN40	See dwg.	on top	Nozzle for electrodes
N6A/B	2	DN25 PN40	See dwg.	5350/4200	DP cell level inner container
N7A/B	2	DN25 PN40	330°	3125/1625	DP cell level control
N7C/D	2	DN25 PN40	320°	3125/1625	DP cell level control
N7E/F	2	DN25 PN40	310°	3125/1625	DP cell level control
N8A/B	2	DN25 PN40	315°	5350/4200	Level gauge upper- Jig set
N9A/B	2	DN25 PN40	See dwg.	3125/1975	Level gauge lower-Jig set
N10	1	DN25 PN40	200°	FF 2467	Pressure column
N11	1	DN25 PN40	120°	1363	Drain
N12	1	DN25 PN40	120°	1625	Blow down
N13	1	DN100 PN40	CENTER	6132	Ventilation/inspection
N14	1	DN15 PN40	90°	3225	Airing
N15	1	DN25 PN40	315°	3950	Drainage - Inner container
N17	1	DN80 PN40	270°	3875	For level regulation
N18	1	DN100 PN40	135°	2220	El. element
N19	1	DN50 PN40	15°	2225	Feedwater inlet
N50	1		180°		Ladder
M1	1	DN600 PN16	270°	2495	Manway
M2	1	ø450mm	270°	325	Manway in skirt

Allowable nozzle loads		
Item	Force Fr,Fi,Fc[KN]	Moment Mt,Ml,Mc[KNm]
N1	6	6
N2	5	4
N3	5	4

Note : Loads acting on the pipe/shell connection



Reaction loads from PSV		
Description	Force Fr / Fi[KN]	Moment Mi[KNm]
Allowable	7/7	6
Case 1	0/5.8	4.6
Case 2	5.8/0	2.7



Design code: EN-13445 2021
 Design pressure int. : 13 barg
 Working pressure : 10 barg
 Test pressure : 21 barg
 Design temperature max : 195°C
 Corrosion allowance : 0,75
 Joint factor : 0,85
 Heat treatment : NONE
 Weight dry : approx 7.5 tons
 Weight operating : approx 10.5 tons
 Weight full : approx 20.7 tons
 Volume : 13.2 m³
 Tolerances : acc. to PARAT doc.no.: 10.26/
 Insulation : 150mm Rockwool covered with alu. plates
 Painting : Unisolated part : Dark grey , Parat STD

Reference drawings:
 Fabrication drawing : 45454-63
 Material list : 421609-01
 Strength calculations acc. EN13445: 45454-63-01

01	Pressure rating for N2 changed to PN40	14.12.2022	Fis
00	Released to manufacturing	22.11.2022	Fis
Rev	Comment	Date	Approved by

Creation date: 04.11.2022	Created by: 	Scale: 1:50	Format/Size: A3	Project no.:	Discipline: -	Area/Module: -	System no.: -
Issued by:	Checked by:	Approved by: FIS	 	Client:			
 Parat Halvorsen AS P.O. Box 173 NO-4402 Flekkefjord Norway Tel +47 99 48 55 00 Fax +47 38 22 44 71 office@parat.no www.parat.no				Subject: G.A. drawing 10MW Electrodeboiler 10kV, 10barg			
				PHAS dwg. no.: 45453-63.idw		Sheet:	Rev.:
				Client dwg. no.: -		1 / 1	01
Ref. doc.: -							
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