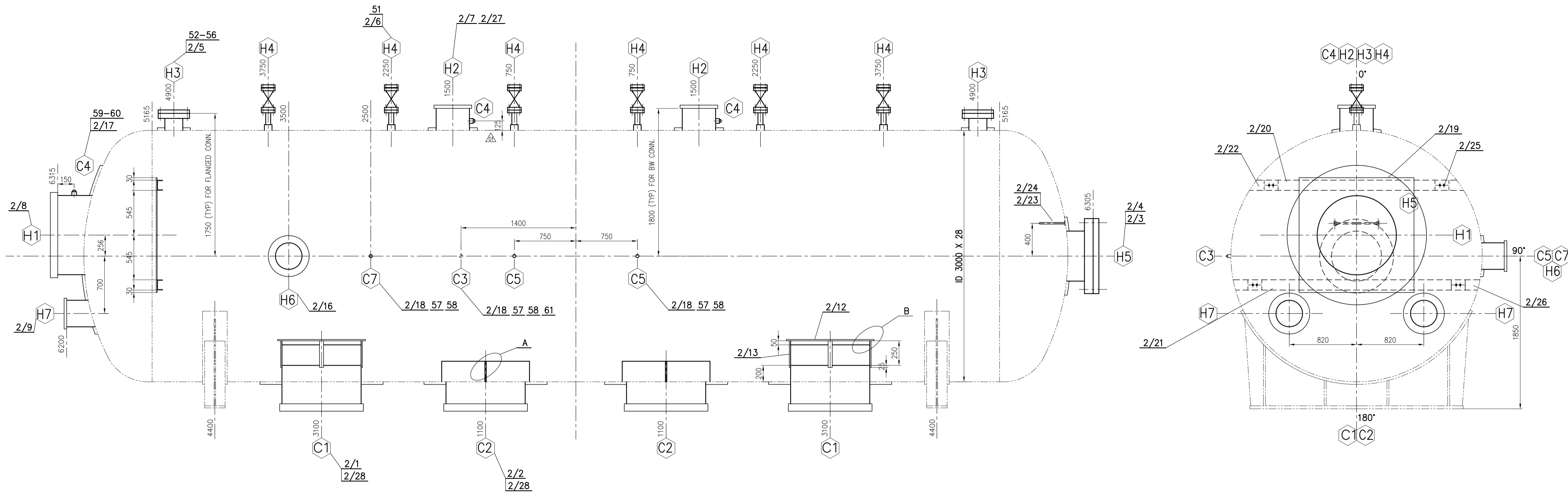


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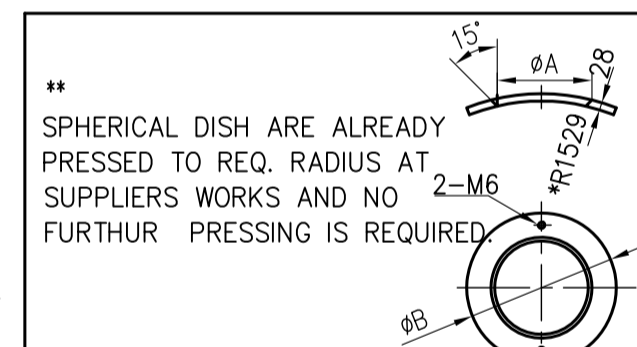
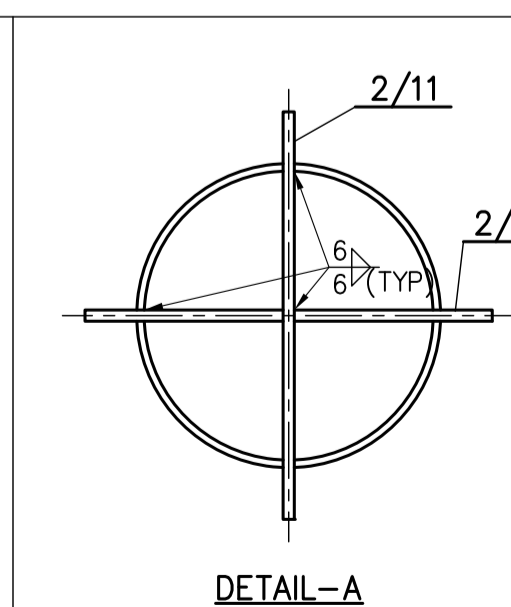
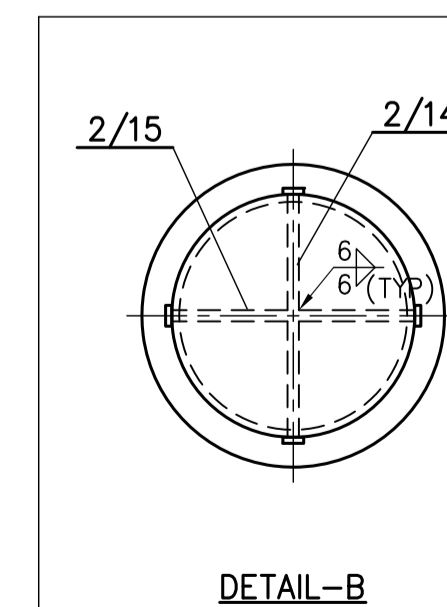
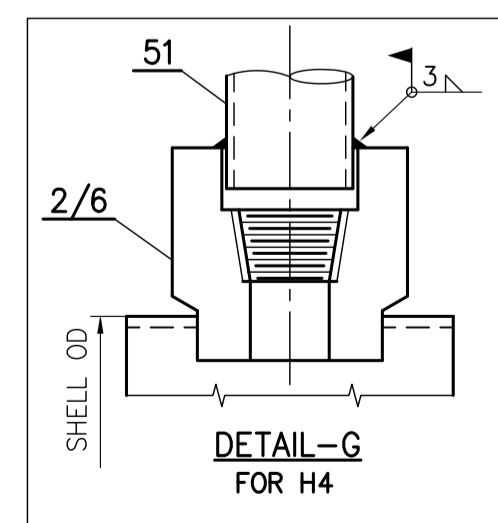
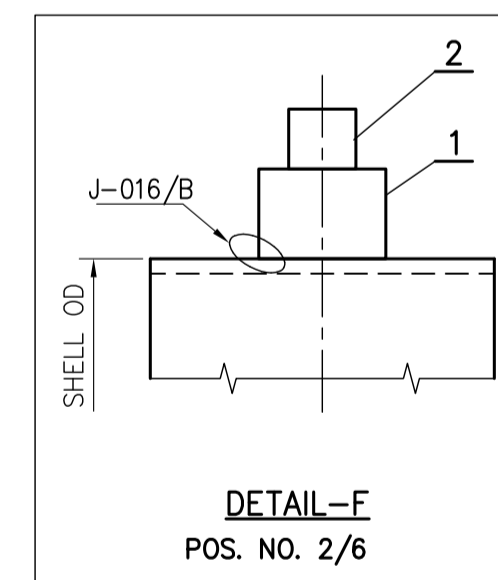
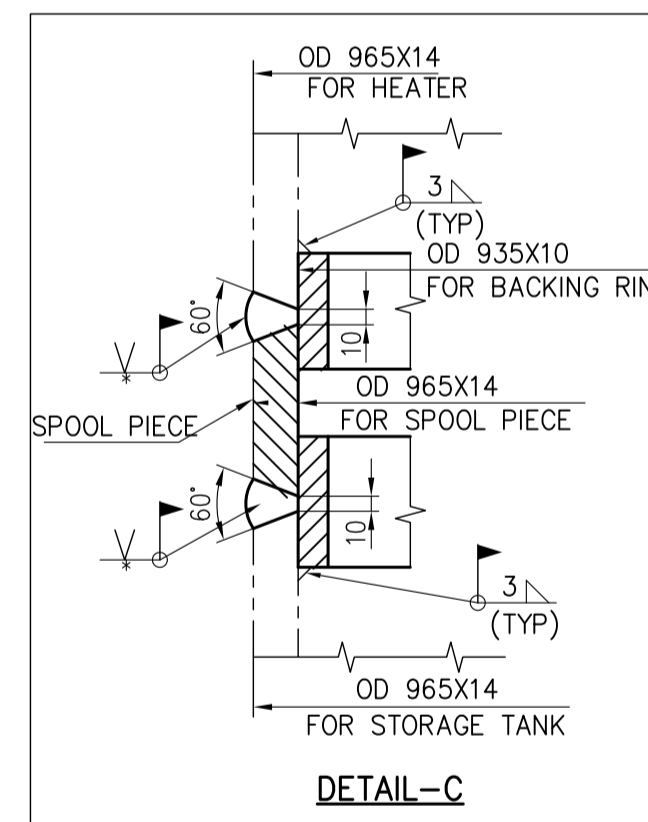
PREFIX 1/ TO ALL POS. NOS., EXCEPT POS. NOS. 51 TO 61.

NOTES:-

- 1) ALL FLANGE BOLT HOLES SHALL STRADDLE NORMAL CENTRE LINES OF VESSEL.
- 2) ALL FABRICATED NOZZLES TO BE FULLY RADIOGRAPHED.
- 3) HYDROTEST BLANKING PLATES SHALL BE REMOVED ONLY AT SITE.
- 4) WPS FOR FILLET WELDS ON SHELL SHALL BE AS PER J-002/A.
- 5) ALL LONGITUDINAL AND CIRCUMFERENTIAL WELDS ARE TO BE BACK-GOUGED TO SOUND METAL.
- 6) MAGNETIC PARTICLE TEST REQUIRED ONLY AT NOZZLE TO HEAD WELDS AND NOZZLE TO SHELL WELDS.
- 7) VESSEL WILL BE DESPATCHED IN SINGLE PIECE.
- 8) INSIDE EDGES OF ALL PROJECTED NOZZLES SHALL BE ROUNDED OFF.
- 9) BOLTING TO SECURE HEATER TO STORAGE TANK IS 8 Nos OF M27x160
- 10) HYDRAULIC TEST: AS PER HY0852061 & ICR REGULATION 601.
- 11) NOZZLE H4 SHALL BE PLUGGED AT WORKS FOR HYDROTEST PURPOSE. WHICH SHALL THEN BE REMOVED AT SITE AND VENT ORIFICE ASSLY (POS. NO. 51) AS PER RELEVANT DRG. SHALL BE WELDED AS PER DET-G FOR H4.
- 12) ▽ INDICATES SITE WELDING.
- 13) TEST COUPONS REQUIRED FOR ALL LONGITUDINAL SEAM OF ROLLED PIPES.

IMPORTANT NOTES ON DEAERATOR VENT PIPING

- 1) NO SHARP BENDS AND TRAPS ARE ALLOWED IN VENT PIPING.
- 2) VENT PIPE SHALL RISE VERTICALLY FROM DEAERATOR HEATER IN A SHORT LENGTH OF PIPE
- 3) AVOID LONG LINES WITH GREAT NUMBERS OF TURNS
- 4) HORIZONTAL RUNS SHALL BE AVOIDED IN VENT PIPING.
- 5) DON'T JOIN INDIVIDUAL VENT LINES WITH A COMMON HEADER.



\*\* SPHERICAL DISH ARE ALREADY PRESSED TO REQ. RADIUS AT SUPPLIERS WORKS AND NO FURTHER PRESSING IS REQUIRED.

LIST OF NOZZLE CONNECTIONS

REF.	DESCRIPTION	SIZE	OD x THK	TYPE	QTY	WELDING DETAILS			REMARKS	ØA	ØB	REF.	VAR.
						SHELL TO	NOZZLE TO	NOZZLE END CONNECTION					
H1	STEAM INLET	38"	965 X 16	BW	1	DET-D1	DET-D1	DET-D5		981	1700	H1	01
H2	CONDENSATE INLET	16"	406 X 14	BW	2	DET-D1	DET-D1	DET-D5		422	600	H2	02
H3A,B	SAFETY RELIEF VALVE	8"	219.1 X 12.7	FLG. CL.300 RF	2	DET-D8	DET-D8	DET-D8		235	400	H3A,B	03
H4	VENT CONN.	2"	COUPLING 6000#	SW	6	DET-G	DET-G	DET-F				H4	04
H5	TRAY REMOVAL OPENING	24"	610 X 14	FLG. CL.300 RF	1	J-007/A	J-015/A			626	950	H5	05
H6	SPARE CONN.	12"	323.9 X 12.7	BW	1	DET-D1	DET-D1			340	500	H6	06
H7	HPH DRAIN CONN. 6A/B	12"	323.9 X 12.7	BW	2	DET-D10	DET-D10	DET-D5	WITH DISPENSER	340	500	H7	07
C1	EVALISER CONN.	38"	965 X 14	BW	2	DET-D1	DET-D1	DET-D5 & DET-C		981	1500	C1	21
C2	DOWN COMMER CONN.	38"	965 X 14	BW	2	DET-D2	DET-D2	DET-D5 & DET-C		981	1500	C2	22
C3	PRESSURE GAUGE CONN.	1/2"	COUPLING 6000#	SW	1	DET-D6	DET-D6	DET-D31	**			C3	23
C4	TEMPERATURE GAUGE CONN.	M33X2	COUPLING	SCREWED	3	J-008/A	***	SCREW THERMOWELL	SPECIAL COUPLING			C4	24
C5	PRESSURE TRANSMITTER CONN.	1/2"	COUPLING 6000#	SW	2	DET-D6	DET-D6	DET-D31	**			C5	23
C7	PG TEST PRESS. TAP POINT CONN.	1/2"	COUPLING 6000#	SW	1	DET-D6	DET-D6	DET-D31	**			C7	23

\*\* SW PIPE TO COUPLING AFTER REMOVING PLUG  
\*\*\* SCREW PLUG WITH WASHER

\* NOTES FOR LIST OF NOZZLE CONN. TABLE

- 1) FOR DETAILS D1 TO D31 REFER DRG. 1-163-10-11178.
- 2) FOR DETAILS J-001/A, J-002/A, J-007/A, J-008/A, J-015/A, J-014/B & J-016/B REFER DRG. 2-163-10-00014.
- 3) FOR DET-A, B, C, F & G REFER THIS DRG.

GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

REV.	DATE	ALTERED	CHECKED	APPD	REV.	DATE	ALTERED	CHECKED	APPD	REV.	DATE	ALTERED	CHECKED	APPD	REV.	DATE	ALTERED	CHECKED	APPD	REV.	DATE	ALTERED	CHECKED	APPD	REV.	DATE	ALTERED	CHECKED	APPD	REV.	DATE	ALTERED	CHECKED	APPD		
01	29.05.15																																			

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT: OPGCL-BANHARPALLI 2X660MW

BHARAT HEAVY ELECTRICALS LTD. HYDERABAD

DR. NAME: B UMA, CHD. UMESH MENON, APPD. ACS

DATE: 22.04.14, 10.04.15

DEPT: HEE, GRADE OF TOL.DIM: C/M/F, SCALE: NTS, WEIGHT (KG): NA, REF. TO ASSY DRG.: NA, ITEM NO.: N.A., NO. OF ITEMS: N.A.

TITLE: NOZZLE ASSEMBLY (FOR DEAERATOR HEATER)

DRAWING NO.: 1-163-16-11519

SHEET No. 1, NO OF SHEETS 1