

QUALITY ASSURANCE PLAN

A) DESIGN FEATURES

DESIGN CODE : ASME SEC VIII DIV 1 ED 2001

HYDRO TEST PRESSURE : AS PER ORDER.

SR. No.	COMPONENTS & OPERATION	CHARACTERISTICS CHECKS	REFERENCE DOCUMENT ACCEPTANCE NORMS	FORMAT OF RECORD	HOLD POINTS	
					EDES	CLIENT
B) DOCUMENT CONTROL						
1	Drg. Approval	As per Clients requirements.	P.O. and Specification.	Drg	P	W
2.	Review of wps	As per Welding details in Drgs.	ASME sec VIII Div 1 & Sec IX	Records	P	R
C) INPROCESS CONTROL						
3.	<u>Pressure part.</u> a) Material Identification for Shell, Dish end, cone, bonnet shell & body flange.	Dimension and Chemical properties	As per respective material Specn & Mfgr's Test Certificates and approved Drgs.	Inspection Report	W	W
	b) Nozzle pipe & Nozzles Flanges	Chemical	"	"		
4.	<u>Non-Pressure Parts.</u> Materials Identification for lug support.	Dimensions, Surface Defects	As per respective Materials specn. & Approved Drgs.	Internal Inspection Report	W	
5	PQR	Weld soundness, physical test.	ASME sec IX	Test Reports	P	R
6	Dished end & Cone Forming	Profile as per the template and Dimensions Including thinning at KR, SF, DP test	ASME Sec VIII Div I & Approved Drg.	Internal Inspection Report.	W	R
7.	Set up of long seams of main shell courses, dish end, cone and fabricated pipes etc	Weld geometry offset. Profile W.R.T Template ID, ovality. Etc.	ASME Sec VIII Div I	Internal Inspection Report	P	R
8	D.P. test of back chip of long seam welding	Welding defects.	ASME Sec V	Internal Inspection Report.	P	R
9	Circ Seams set up of Shell courses, shell to cone, shell to dish.	Weld geometry offset, Alignment, Dimensions & ovality.	ASME Sec VIII Div I & Approved Drg.	Internal Inspection Report.	W	R
10	Back chip & D.P.test of Circ Seam welding of Shells.	Welding defects	ASME Sec V	Internal Inspection Report	W	R



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11	Set up of nozzle pipes to Nozzle Flanges.	Weld Geometry, Gasket Seat facing tell/tale hole.	Approved Drg.	Inspection Report	W	R
12	Set up of nozzles, handhole etc. on main shell, dish & cone.	Weld Geometry, orientation etc.	Approved Drg.	Inspection Report	W	R
13	Back chip & D.P. test of above.	Welding Defects	ASME sec V	Inspection Report.	W	R
14	Flush grinding of all nozzles from inside and rounding off of corners	Corners to be rounded off to a minimum of 3-mm radius.	ASME sec VIII div 1	Internal Inspection Report	P	R
15	Pneumatic test of Nozzle RF pads	Press: 1.25 Kg/cm ² (g) to be tested with soap solution	ASME Sec VIII Div I.	Internal Inspection Report	W	R
16	Set up of grid support to shell.	Tightness of Wear Plates, elevation orientation, overall Dimensions etc.	ASME sec VIII Div 1 Approved Drgs.	Internal Inspection Report	P	R
17	Final inspection & dimensional check of vessel prior to Hydrostatic test.	All dimensions to be checked, Internal & External Surface to be checked for under cut weld defects & arc strikes etc.	ASME Sec VIII Div I & Approved Drgs.	Inspection Report	W	W/R
18	Hydro test	Test pressure as per Approved drg. Medium: water Duration: 1 hr.	ASME sec VIII Div I & Approved Drgs.	Inspection Report	W	R
19	Polishing	Surface finish	ASME Sec VIII Div I	Internal Inspection Report	P	W
20	Pre- dispatch inspection	Review of documents like Material Heat Chart, Test Certificates Inspection Reports for previous stages etc	-	Inspection Report	R	R