

## QUALITY ASSURANCE PLAN

### A) DESIGN FEATURES

DESIGN CODE : API 650 / ASME SEC VIII DIV 1 ED 2001

HYDRO TEST PRESSURE : WATER FILL

SR. #	COMPONENTS & OPERATION	CHARACTERISTICS CHECKS	REFERENCE DOCUMENT ACCEPTANCE NORMS	FORMAT OF RECORD	HOLD POINTS	
					EDES	CLIENT
<b>B) DOCUMENT CONTROL</b>						
1	Drg. Approval	As per Clients requirements.	P.O. and Specification.	Drg by client	P	R
2.	Review of wps	As per Welding details in Drgs.	ASME sec VIII Div 1 & Sec IX	Records	P	R
<b>C) INPROCESS CONTROL</b>						
3	<b>Pressure part.</b> a) Material Identification for shell. Dished ends,	Dimension, surface defects and Chemical properties	Lab T.C. and approved Drgs.	Inspection Report Lab T. C.	R	R
4.	<b>Non-Pressure Parts.</b> Materials Identification for Lugs, name plate bracket, gussets etc.	Dimensions, Surface Defects	As per respective Materials specn. & Approved Drgs. / visual inspection	Internal Inspection Report	W	-
5	Set up of long seams of main shell courses, dish ends and pipes etc	Weld geometry offset. ovality. Etc.	ASME Sec VIII Div I	Internal Inspection Report	P/R	-
6	Back chip & D.P. test of long seam and circumseam weld joints	Welding defects.	ASME Sec V	Internal Inspection Report.	P/R	-
7	Dished ends Forming & cone forming	Profile as per the template and Dimensions Including thinning at KR, DP test	ASME Sec VIII Div I & Approved Drg.	Internal Inspection Report.	P/R	-
8	Set up of nozzle pipes to Nozzle Flanges.	Weld Geometry, Gasket Seat facing tell/tale hole.	Approved Drg.	Inspection Report	P	-
9	Set up of Nozzles on Top dished end.	Weld geometry, orientations, projn, height, bolt hole Straddling	ASME sec VIII Div I & Approved Drg.	Internal Inspection Report	P	-
10	Back chip & D.P.test of nozzles to dished end welding.	Welding Defects	ASME sec V	Internal Inspection Report.	P/R	-
11	Circ seam set up of bottom dished end to main shell.	Weld geometry, orientation etc.	ASME Sec VIII Div I & Approved Drg.	Internal Inspection Report	P/R	-
12	Back chip & D.P.test of Bottom dished end to shell welding.	Welding Defects	ASME Sec V	Internal Inspection Report	P/R	-



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13	Set up of top Dished end to main shell.	Weld geometry, orientation etc.	ASME Sec VIII Div I & Approved Drg.	Internal Inspection Report	P/R	-
14	Back chip & D.P.test of Top dished end to shell welding.	Welding Defects	ASME Sec V	Internal Inspection Report	P/R	-
15	Setup of annular ring on top dish	Weld geometry over all dimension details in dwg etc	ASME Sec V	Internal Inspection Report	P	R
16	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	-
17	Set up of Lugs support, pads & support to Shell	Tightness of Wear Plates, elevation orientation, overall Dimensions etc.	ASME sec VIII Div 1 Approved Drgs.	Internal Inspection Report	P	-
18	Setup of box on top dish	Elevation, ,major dimension etc.	Approved dwgs.	Internal Inspection Report	P	R
19	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	R
20	Hydrostatics Test	Water fill	ASME sec VIII Div I & Approved Drgs.	Inspection Report	W	R
21	Polishing	Mirror finish	ASME Sec VIII Div I	Internal Inspection Report	P	W
22	Cleaning & painting of CS part	Surface finish	SKF std. procedure	-	P	W
23	Pre- dispatch & Issue of Release note.	Review of documents like Material Heat Chart, Test Cer. Insp. Rep. for prev. stages etc	-	Internal Inspection Report	R	W