





RENU BHUMI ENGINEERING INDUSTRIES
Design & Manufacturing of Distillation Unit, Brewery &
Refinery Plants & Process Plants Equipments

QUALITY ASSURANCE PLAN

DOC. NO.	RBEI-QAP-01
REV. NO.	0
REV. DATE.	5/1/2020

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Sr. No.	Data	Description			
1	QA Plan No	RENU BHUMI 01/2024			
2	Name of Equipment	--			
3	Drawing Number	--			
4	Client	--			
5	Code of construction	ASME SEC VIII DIV-1/TEMA CLASS			
6	Job No.	--			
7	Equip.No.	--			
8	Inspection Agency	TPIA/CLIENT			
9	Project	--			
10	P.O. No.	--			
0	01.01.2024	Issued for review and approval.			
Rev. No	Date	Revision details			
Signature	Mr. Vikas Prajapati	Mr. Divyang Saraiya			
	 Prepared By	 Approved By	Approved By TPI / Consultant	Approved By Client	Remarks

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SR. NO.	ACTIVITY DESCRIPTION	CHARACTERISTICS TO BE CHECKED	QUANTUM OF CHECK	REF. DOCUMENT /ACC STANDARD	RECORD FORMAT	INSPECTION AND SIGN.						REMARKS
						RBEI		TPIA		CLIENT		
1.0	Documentation											
1.1	Quality Assurance Plan	Documentation	100%	Approved Drawing	Approved QAP	H		R		A		
1.2	Approval of Drawing	Drawing Parameters	100%	Approved Drawing	Drawing	H		R		A		
1.3	Review of WPS,PQR & WPQ / NDE / Pressure test Procedure	Documentation	100%	ASME SEC IX & ASME Section VIII Division 1	Standard Procedure, WPS,PQR &WPQ	H		R		R		
2.0	Raw material Receiving Inspection and Identification:											
2.1	Plate-Main Shell, Channel Shell,Dished End & Cone	Material T.C.Review, Dimensional Check, Visual Inspection, Marking Check.	100%	Approved Drawing	MTC / MATERIAL IDENTIFICATION REPOR. MTC as per EN 10204 Type 3.1	H		W		R		
2.2	Pipe / Tubes / Flanges					H		W		R		
2.3	Tube Sheet / Body Flange					H		W		R		
2.4	Expansion Bellow					H		W		R		
3.0	Material Stamp transfer											
3.1	Material Stamp transfer after marking, before cutting.	Stamp transfer.	100%	Approved Drawing	Stage Inspection Report	H		R		R		
4.0	Long seam Set up of Main Shell & Channel/Cone Fabrication											
4.1	Weld edge preparation	Root face, Bevel angle	100%	Approved Drawing	Inspection Report	H		R		R		
4.2	Set up of long seams & circular seams of shell courses.	Offset, rootgap Dimensions	100%	Approved Drawing	Inspection Report	H		R		R		
4.3	Back chip -cone / L-seam / C-seam	Visual	100%	As per DPT Procedure /ASME Sec. VII Div-1 / Sec. V	DPT Report	H		R		R		
4.4	Top & BTM Cone after forming	Root face, Bevel angle	100%	Approved Drawing	Inspection Report & DPT Report	H		R		R		

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5.0	Circ. Seam Set up of Shell to Shell / Channel Shell to Cone											
5.1	Weld edge preparation	Root face, Bevel angle	100%	Approved Drawing	Inspection Report	H		R		R		
5.2	Set up of Cir.seams	Offset, rootgap, Dimensions	100%	Approved Drawing	Inspection Report	H		R		R		
5.3	Back chip	Visual Inspection	100%	As per DPT Procedure /ASME Sec. VII Div-1 / Sec. V	DPT Report	H		R		R		
6.0	Nozzle Fabrication											
6.1	Weld edge preparation	Root face,Bevel angle	100%	Approved Drawing	--	H		R		R		
6.2	Nozzle Set up	Rootgap, Hole Straddling Dimensions	100%	Approved Drawing	Inspection Report	H		R		R		
6.3	Back chip	Visual Inspection	100%	As per DPT Procedure /ASME Sec. VII Div-1 / Sec. V	DPT Report	H		R		R		
6.4	Pneumatic Testing of RF Pads & Liners	Leakages	100%	Pnumatic Procedure /ASME Sec VII Div. 1	Stage Inspection Report	H		R		R		
7.0	Tubesheet Inspection after machining and drilling											
7.1	Dimension	Dimensional & visual Inspection	100%	Approved Drawing	Inspection Report	H		R		R		
8.0	Set-up & welding of Tube bundle											
8.1	Set-up	Weld edge preparation, Dimension & orientation	100%	Approved Drawing	--	H		R		R		
8.2	Skeleton set up	Dimensional orientation & visual Inspection	100%	Approved Drawing	Inspection Report	H		R		R		
8.3	Bundle Inserting in main Shell	Dimensional orientation & visual Inspection	100%	Approved Drawing	Inspection Report	H		R		R		Before Inserting main shell Inside visual to be offer to TPIA

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9.0	Tubesheet to Shell / Tube to Tubesheet set-up											
9.1	Set-up	Weld edge preparation, Dimension, orientation, profile	100%	Approved Drawing	--	H		R		R		
9.2	Welding	Visual & Dimensions	100%	Approved Drawing	--	H		R		R		
10.0	Final Inspection	Dimensional orientation & visual Inspection	100%	Approved Drawing	--	H		R		R		
11.0	Internal Pneumatic Testing for tube to tubesheet joint (shell side)	Leakages	100%	Pnumatic Procedure /ASME Sec VIII Div. 1	--	H		R		R		
12.0	Tube to Tubesheet Root Run & Final Weld DPT	Visual Inspection	100%	As per DPT Procedure /ASME Sec. VIII Div-1 / Sec. V	DPT Report	H		R		R		
13.0	Setup & welding of non pressure part and attachments.	Visual & Dimensions	100%	Approved Drawing	--	H		R		R		
14.0	Final inspection Before Hydrotest.	Visual	100%	Approved Drawing	Inspection Report. Final Dimension Report	H		W		R		
		Dimensional Inspection		Approved Drawing		H		W		R		
15.0	Hydrostatic (shell side & tube side)	Leak Proof ness & Deformation	100%	Hydro Test Procedure ASME Sec VIII Div.1	Pressure test Report.	H		H		R		
16.0	Draining & Drying of equipment after hydro test	Visual inspection	100%	Approved Drawing	Inspection Report	H		R		R		
	Visual inspection of CS parts before Painting	Visual inspection	100%	Approved Drawing	--	H		R		R		
17.0	Painting	Visual inspection	100%	Painting Procedure	Inspection Report.	H		R		R		
18.0	Pickling & Passivation of SS parts	Visual inspection	100%	Pickling & Passivation Procedure	Inspection Report.	H		R		R		
19.0	Varification of nameplate details & TPI stamping	Visual inspection	100%	Approved Drawing	Name plate Photo	H		H		R		

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19.0	Attachment of stamped name plate to equipment	Visual Inspection.	100%	Approved Drawing	--	H		R		R		
20.0	Review of Final Document	Checking of Document	100%	--	Document Folder	H		H		A		
21.0	Issue of Release note / Dispatch Clearance	--	--	Approved Drawing / P.O	Release Note / Inspection Report	H		H		A		
Legends:	RENU- Renu Bhumi Engineering Industries, , P.O-Prchase Order , DPT - Dye Penetration Test.											
H	Under inspection column indicates HOLD POINT. This means the job cannot proceed further unless cleared by the RBEI internal inspection.											
W	Under inspection column indicates WITNESS POINT. This means the stipulated authority shall be notified to witness and verify a specific operation. Further operation shall proceed where the stipulated authority does not validate his option and gives consent to proceed. This notification shall be documented suitably.											
R	Under inspection column indicates REVIEW POINT. This means document shall be submitted to stipulated authority for review.											
RW	Randomly check inspection at stage.											