



CHEMDIST PROCESS SOLUTIONS PVT. LTD

QUALITY ASSURANCE PLAN (REACTOR)

PURCHASE ORDER No./LOI NO.	9222100090 DT. 12.05.2022	QAP Document No	CDPS-QAP-SO-646, REV-00	Date- 17.05.2022
VENDOR NAME	CHEMDIST PROCESS SOLUTIONS PVT. LTD	PROJECT	EV-XYZ, JOLVA	
EQUIPMENT DESCRIPTION & TAG No.	4KL CS CAUSTIC PREPARATION TANK WITH CS LIMPET COIL (T-1611)	INSPECTION BY	ELECTROMECH ENGINEERING ENTERPRISES	
DRAWING NUMBER & REVISION	-	CDPS SO NO.	646	

Sr. No.	INSPECTION ACTIVITY & DESCRIPTION	CHARACTERISTICS	TYPE/METHOD OF CHECK	REFERENCE DOCUMENTS	ACCEPTANCE CRETERIA/STANDARD	FORMAT OF RECORD	INSPECTION By			REMARK
							VENDOR	TPI	GFL	
1	DOCUMENT CONTROL & APPROVALS									
1.1	REVIEW & APPROVAL OF G.A. & FABRICATION DRAWING	ASSEMBLY AND DETAILED ENGINEERING DRAWING	REVIEW & APPROVED	P.O./DATASHEET/APPLICABLE ASME CODE		APPROVED DRAWING	P	R	A	Approved by Client
1.2	APPROVAL OF INSPECTION & TEST PLAN	APPROVED DRAWING & SPECIFICATION	REVIEW & APPROVED	P.O./DATASHEET/APPLICABLE ASME CODE/DRAWING/TECHNICAL DATA SHEET		QUALITY ASSURANCE PLAN	P	R	A	Approved by Client
1.3	APPORVAL OF WELDING DOCUMENTS & CONSUMABLES	AS PER WELDING DETAILS & REVIEW OF WPS/PQR/WPQ & QUALIFICATION REQUIREMENT	WPS, PQR, WPQ, WELD MAP, WELDING PARAMETERS & TECHNIQUES	ASME SEC II, IX/APPROVED DRAWING & SPECIFICATION		WPS/PQR/WPQ/WELD MAP/CONSUMABLE TEST CERTIFICATE	P	R	R	To be carried out if existing procedure not available
1.4	INSPECTION & TEST PROCEDURE FOR NDT, HYDRO/PNEUMATIC TEST ETC.	REVIEW/APPROVAL OF PROCEDURES	APPROVAL OF PROCEDURES	ASME SEC V, VII, IX	ASME SEC V, VIII, IX AND APPLICABLE STANDARDS	APPROVED PROCEDURES	P	R	R	
2	MATERIAL CONTROL & IDENTIFICATION (PRESSURE & NON PRESSURE PARTS)									
2.1	PLATE MATERIAL FOR SHELL, DISHEND, LIMPET COIL ETC.	VISUAL AND DIMENSION CHECK	TEST CERTIFICATE VERIFICATION, VISUAL & IDENTIFICATION	APPROVED DRAWING & APPLICABLE CODE	APPLICABLE ASME STANDARD	MILL TEST CERTIFICATES/LAB TEST REPORTS & INSPECTION REPORTS	P	W	R	1. EN 10204 3.1 CERTIFICATION REQUIRED 2. IF MTC IS NOT AVAILABLE, THEN SAMPLES TO BE DRAWN FROM MATERIAL FOR CHEMICAL & MECHANICAL TEST AT NABL ACCREDITED LAB.
		CO-RELATION OF MARKINGS WITH MILL TEST CERTIFICATES. MECHANICAL & CHEMICAL PROPERTIES, ETC.					P	W	R	
2.2	MATERIAL FOR STD NOZZLE PIPES & FLANGES	VISUAL AND DIMENSION CHECK	TEST CERTIFICATE VERIFICATION, VISUAL & IDENTIFICATION	APPROVED DRAWING & APPLICABLE CODE	APPLICABLE ASME STANDARD	MILL TEST CERTIFICATES/LAB TEST REPORTS & INSPECTION REPORTS	P	W	R	
		CO-RELATION OF MARKINGS WITH MATERIAL TEST CERTIFICATES. MECHANICAL & CHEMICAL PROPERTIES, ETC.					P	W	R	
2.3	FASTENERS, GASKETS	CO-RELATION OF MARKINGS WITH MATERIAL TEST CERTIFICATES. MECHANICAL & CHEMICAL PROPERTIES, ETC.	TEST CERTIFICATE VERIFICATION & IDENTIFICATION	APPROVED DRAWING / APPLICABLE CODE	APPLICABLE ASME STANDARD	MILL TEST CERTIFICATES/LAB TEST REPORTS & INSPECTION REPORTS	P	R	R	
2.4	OTHER PRESSURE & NON PRESSURE PARTS (INTERNAL & EXTERNAL ATTACHMENTS)	REVIEW OF MATERIAL TEST CERTIFICATES	TEST CERTIFICATE VERIFICATION	APPROVED DRAWING	APPLICABLE ASME STANDARD	MILL TEST CERTIFICATES/LAB TEST REPORTS & INSPECTION REPORTS	P	R	R	
2.5	POSITIVE MATERIAL IDENTIFICATION	PMI OF ALL STAINLESS STEEL AND SPECIAL MATELLURGY MATERIALS COMPONENTS	ONE SPOT EACH	APPROVED DRAWING	APPLICABLE ASME STANDARD	INSPECTION REPORT	P	R	R	NA FOR SS304
2.6	OTHER BOUGHT OUT ITEMS	MOTOR, GEAR BOX, MECHANICAL SEAL, FLUSH BOTTOM VALVE ETC.	ROUTINE TEST	APPROVED DRAWING	AS PER APPLICABLE PARAMETER AND TECHNICAL DATA SHEET	ITEM TEST CERTIFICATE	P	R	R	



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							VENDOR	TPI	GFL	
3	MANUFACTURING STAGES AND PROCESS CONTROL									
3.1	FORMED COMPONENTS (SHELL, DISH ETC.)	VISUAL AND DIMENSION CHECK	VISUAL, MEASUREMENT, PROFILE CHECKING	APPROVED DRAWING & NDT PROCEDURE	APPLICABLE ASME STANDARDS	INSPECTION REPORT	P	R	R	IF REQUIRED STRESS RELIEVING TO BE DONE.
		DPT ON DISHED ENDS- CROWN & KNUCKLE PORTION	INSIDE & OUTSIDE SURFACE OF KNUCKLE PORTION & EDGES				P	W	R	
3.2	FIT-UP OF L/S, C/S, BOTTOM PLATE JOINTS	VISUAL, DIMENSION, WELD EDGE PREPARATION, ROOT GAP, OFFSET, ALIGNMENT ETC.	VISUAL, MEASUREMENT, PROFILE CHECKING	APPROVED DRG.	APPLICABLE DRAWING & ASME STANDARD	INSPECTION REPORT	P	R	R	
3.3	FIT UP OF SHELL TO NOZZLES, ROOF, LIMPET COIL ETC	VISUAL, DIMENSION, EDGE PREPARATION, ROOT GAP, PT EXAMINATION ON WEP	VISUAL AND MEASUREMENT	APPROVED DRG. & NDT PROCEDURE	APPLICABLE ASME STANDARD	INSPECTION REPORT	P	R	R	
3.4	INSPECTION OF COMPLETED WELDS	VISUAL INSPECTION FOR UNDERCUTS, REINFORCEMENTS & OTHER SURFACE DEFECTS	VISUAL AND MEASUREMENT	APPROVED DRAWING & NDT PROCEDURE	APPLICABLE ASME STANDARDS	INSPECTION REPORT	P	R	R	REVIEW OF ALL RT REPORTS WITH FILMS
		TO CHECK WELDING / FABRICATION QUALITY	APPLICABLE NDT(DPT/RT/UT ETC.) AS PER WELD PLAN			NDT REPORTS/ RADIOGRAPHY FILMS	P	W	R	
3.5	OTHER PRESSURE/NON PRESSURE PART ATTACHMENTS TO EQUIPMENT	VISUAL, DIMENSION, WELDING FABRICATION TESTING ETC.	VISUAL AND MEASUREMENT	APPROVED DRAWING & NDT PROCEDURE	APPLICABLE ASME STANDARDS	INSPECTION REPORT	P	R	R	
			APPLICABLE NDT METHODS			TEST REPORTS	P	R	R	
4	FINAL INSPECTION/TESTING									
4.1	FINAL DIMENSION AND WELD VISUAL (INTERNAL & EXTERNAL)	VISUAL AND DIMENSION CHECK OF COMPLETE ASSEMBLY	VISUAL AND MEASUREMENT	APPROVED DRAWING	APPROVED DRAWING AND SPECIFICATION	INSPECTION REPORT	P	W	R	
4.2	PNEUMATIC TEST OF RF PADS/LINER	PRESSURE TEST OF LEAK TIGHTNESS BY AIR	VISUAL	APPROVED DRAWING & PROCEDURE	APPLICABLE ASME/API STANDARDS	INSPECTION REPORT	P	R	R	
4.3	SPARK TESTING (IN CASE OF LINED EQUIPMENT	TO CHECK INTEGRITY OF LINING	SPARK TESTING	APPROVED DRAWING & AS PER PROCEDURE	NO SPARK	INSPECTION REPORT	P	W	R	
4.4	WATER FILL TEST / HYDROSTATIC TEST	LEAK CHECK / PRSSSURE TEST OF LEAK TIGHTNESS BY WATER	VISUAL	APPROVED DRAWING & PROCEDURE	NO LEAKAGE / APPLICABLE ASME STANDARDS	INSPECTION REPORT	P	W	R	WATER USED FOR HYDROTEST SHALL NOT BE MORE THAN 25PPM CHLORIDES.
4.5	RUNNING TRIAL OF EQUIPMENT	RUNNING TRIAL WITH LOAD	CHECK AS PER PARAMETER	APPROVED DRAWING	AS PER APPLICABLE PARAMETER AND TECHNICAL DATA SHEET	INSPECTION REPORT	P	W	R	



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4.6	DRAINING & DRYING	VISUAL INSPECTION	VISUAL	AS PER PROCEDURE	COMPLETE DRAINING & DRYING	VISUAL VERIFICATION	P	R	R	
4.7	SURFACE PREPARATION & PAINTING	SURFACE ROUGHNESS, FINISH & COATING THICKNESS CHECK	VISUAL AND MEASUREMENT	APPROVED DRAWING & PROCEDURE	APPROVED DRAWING & PROCEDURE	INSPECTION REPORT	P	R	R	
4.8	PICKLING & PASSIVATION OF ALL S.S./SPECIAL MATTTELURGY	VISUAL INSPECTION FOR SURFACE CLEANLINESS	VISUAL	APPROVED DRAWING & SPECIFICATION	ASTM A 380/SPECIFICATION	INSPECTION REPORT	P	R	R	
5	DISPATCH/DOCUMENTATION									
5.1	FINAL STAMPING ON NAME PLATE	VERIFYING NAME PLATES DETAILS AND STAMPING	VISUAL	APPROVED DRAWING	APPROVED DRAWING	NAME PLATE/RUB OFF	P	V	R	
5.2	INSPECTION RELEASE NOTE	VERIFICATION OF DOCUMENTS	AS BUILT DRAWING	-	PURCHASE ORDER AND SPECIFICATION	RELEASE NOTE	P	V	H	
5.3	DOCUMENTATION	VERIFICATION & COMPILATION OF INSPECTION & TEST RECORDS	-	-	PURCHASE ORDER AND SPECIFICATION	QUALITY CONTROL DOSSIER	P	R	R	

LEGENDS- P: PERFORM, V: VERIFICATION/REVIEW OF REPORT, R: REVIEW, W: WITNESS, H: HOLD, A: APPROVAL, TPI-THIRD PARTY INSPECTION, RW-RANDOM WITNESS

NOTE-

- ALL STAGE WISE FABRICATION INSPECTION SHALL BE DONE BY FABRICATOR AND INSPECTION REPORTS SHALL BE MAINTAINED FOR THE SAME.
- RAW MATERIAL IMPACT TEST SHALL BE CARRIED OUT IF NECESSARY AS PER DRAWING AND CODES & STANDANDRS.
- EQUIPMENT ORIENTATION MARKING SHALL BE REQUIRE FOR FURTHER SITE INSTALLATION. (TOP & BOTTOM)
- WHEREVER BACKCHIPPING IS NOT POSSIBLE, FULL PENETRATION ROOT RUN WELDING TO BE CARRIED OUT BY GTAW PROCESS.

 Mr. Rahul Chavan Prepared By Vendor	 Mr. Pravin Shelke Approved By Vendor	Approved/Reviewed By TPI	Approved By GFL
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