

MANUFACTURER'S NAME AND ADDRESS			QUALITY PLAN				TO BE FILLED BY BHEL		TO BE FILLED BY BHEL				
BHEL	VENDOR'S NAME	ITEM			QP NO.								
					REV								
		DRG. NO.	AS PER PO										
		SPEC.	AS PER PO										
	REV						Page 1 of 1						
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS	
1	2	3	4	5	6	7	8	9	D	10	11		


Note 1: BHEL approved NDT procedure should be obtained by vendors before performing NDT , if the same is not already available with the vendor for the job.

Note 2: All page of inspection documents shall be numbered in chronology with the QAP clause , dully mentioning the corresponding QAP clause nos. at the top of each page. One index page containing the documents descriptions, their page no & QAP clause shall be attached upfront the inspection documents.

MANUFACTURER/SUBCONTRACTOR	LEGEND: ! RECORDS IDENTIFIED WITH 'TICK' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION. M: MANUFACTURER / SUBCONTRACTOR B: BHEL / NOM. INSPECTION AGENCY N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER	FOR CUSTOMER USE	
			APPROVED BY

MANUFACTURER'S NAME AND ADDRESS		STANDARD QUALITY PLAN				TO BE FILLED BY BHEL					
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS			REMARKS
								M	B	N	
1	2	3	4	5	6	7	8	9	D	10	11
		Turbine Oil Coolers (Plate Type Heat Exchangers)		QP No.:	QA/BE/QP/346./Koderma	Page 2 of 3					
		As per PO		Rev. No.:	00						
		HE57075 & DOC. NO. HXE/SK/2379									

SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY	REMARKS	
									M B N		
1.5	Tightening bolts and nuts, drain and vent valves	Material, Dimensions, Workmanship and Finish, Contour & Hardness Mechanical Properties Chemical Properties	Major Major Major	Visual & Measurement Mechanical Analysis	100% 1 Per Heat / HT Batch 1 Per Heat / HT Batch	HE57075/ BHEL Appd drg / ADS HE57075/ BHEL Appd drg / ADS HE57075/ BHEL Appd drg / ADS	HE57075/ BHEL Appd drg / ADS HE57075/ BHEL Appd drg / ADS HE57075/ BHEL Appd drg / ADS	TCs MTC or Lab Test Report MTC	V P V V P V V P V	V V V	
2.0	In Process Inspection:										
2.1	Heat Transfer Plates	Plate Pressed in Single Operation Gasket Groove Depth on each Plate Workmanship and Finish Surface Defects and Cracks	Major Major Major Critical	Visual Visual & Measurement Visual Light Box / Vacuum Chamber Test & DP Test	100% 100% 100% 100%	Vendor's Procedure Vendor's Procedure ----- Approved Procedure	Vendor's Procedure Vendor's Procedure No Scratches, Crack, etc Approved procedure	Inspection Report Inspection Report Inspection Report Test Report	V P V V P V V P W V P W	V V W W	V V W * * BHEL approved Test procedure to be followed (* 10% of total order quantity)
2.2	Welding Procedure Specification (WPS)	Correctness	Major	Process	100%	HE57075/ BHEL Appd drg / ADS	HE57075/ BHEL Appd drg / ADS	Records	V P	V	Approved WPS Shall be used For Welding
2.3	Procedure Qualification Records (PQR)	Suitability	Major	Visual	100%	HE57075/ BHEL Appd drg / ADS	HE57075/ BHEL Appd drg / ADS	Records	V P	V	
2.4	Welder Performance Qualification	Welder Performance Soundness of Welds	Major	Visual / RT & Mechanical	100%	HE57075/ BHEL Appd drg / ADS	HE57075/ BHEL Appd drg / ADS	Records	V P	V	NOTE


 Nishant Kumar MAIN CONTRACTOR/MANUFACTURER	Digitally signed by Nishant Kumar	LEGEND: ! RECORDS IDENTIFIED WITH 'TICK' (✓) SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION. M: MANUFACTURER / SUBCONTRACTOR B: BHEL / NOM. INSPECTION AGENCY N: CUSTOMER ADS: BHEL APPROVED DATA SHEET INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER	FOR CUSTOMER USE	APPROVED BY

MANUFACTURER'S NAME AND ADDRESS		STANDARD QUALITY PLAN					TO BE FILLED BY BHEL					
ITEM		Turbine Oil Coolers (Plate Type Heat Exchangers)			QP No.:	QA/BE/QP/346 /Koderma	FORMAT OF RECORDS			AGENCY		REMARKS
DRG. NO.		As per PO			Rev. No.:	00	M	B	N	10		11
SPEC NO.:		HE57075 & DOC. NO. HXE/SK/2379			ACCEPTANCE NORMS			8		9		
CHARACTERISTICS		CLASS			TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	D			10	
2	3	4	5	6	7	8	9	10		11		

SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY	REMARKS	
2.5	Welding	Welding Joint Soundness	Major	Visual	100%	HE57075/ BHEL Appd drg / ADS	No Defects	Inspection Report	V P V	V	
		Fillet Welds	Major	DPT	100%	HE57075/ BHEL Appd drg / ADS	HE57075/ BHEL Appd drg / ADS	Test Report	V P V	V	
		Butt Welds	Major	RT	10%	HE57075/ BHEL Appd drg / ADS	HE57075/ BHEL Appd drg / ADS	Test Report	V P V*	V *Film Review	
2.7	Plate Gaskets	Presence of Gaskets	Major	Visual	100%	Mfg. Spec	Mfg. Spec	Inspection Report	V P -	-	
2.8	Plate Arrangement to Flow Diagram	Correctness	Critical	Visual as Per Flow Diagram	100%	HE57075/ BHEL Appd drg / ADS	HE57075/ BHEL Appd drg / ADS	Inspection Report	V P V	V	
3.0 Final Inspection:											
3.1	Complete Assembly	Conformance to Drawing	Major	Measurement	100%	HE57075/ BHEL Appd drg / ADS	HE57075/ BHEL Appd drg / ADS	Inspection Report	V P W	W	
3.2	Hydraulic test – (Primary & Secondary Side)	Leakage	Major	Hydraulic	100%	HE57075/ BHEL Appd drg / ADS	No Leakage	Test Report	V P W	W	
3.3	Painting	Shade & Dry Film Thickness (DFT)	Major	Visual & Measurement	100%	HXE/SK/2379.		Inspection Report	V P W	W	
4.0 Identification, Marking & Inspection:											
4.1		Identification, Marking & Packing	Major	Measurement & Visual	100%	HE57075/ Approved Drawings	HE57075/ Approved Drawings	Internal Records	V P V	V	

NOTE: 1 – Welding to be done by qualified welder and approved welding procedures.

2.All material of construction shall be as per BHEL approved drawing/datasheet meeting BHEL technical specification requirements.

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