



BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI - 620 014, INDIA.
QUALITY ASSURANCE DEPARTMENT

STANDARD QUALITY PLAN FOR FURNACE MAINTENANCE PLATFORMS

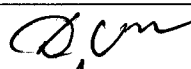
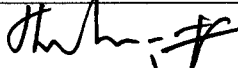
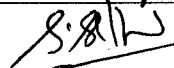
SQP:SD:05 Rev 00

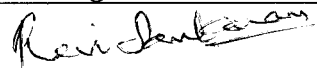
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Prepared By
Quality Assurance

VENKANNA RUPANI

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24/08/2015

Reviewed by	Signature
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Quality Control	 (CS. SEKAR)

Rev No	Date	Approved by	Signature
00	24/08/2015	AGM / QA & BE	

Record of Revisions

Rev No	Details of Revision	Remarks
00	Fresh Issue	

		MANUFACTURER'S NAME & ADDRESS: BHEL: TIRUCHIRAPPALLI APPROVED SUPPLIERS	STANDARD QUALITY PLAN								QWI NO:SQP:SD:05 REV NO: 00 DATE: 24/08/2015 PAGE: 2 OF 3			
			PRODUCT: FURNACE MAINTENANCE PLATFORMS											
			SUB-SYSTEM: STEAM GENERATOR AND AUXILIARIES											
SL NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
					M	C/N				M	C	N		
1	2	3	4	5	M	C/N	7	8	9	D*	**	10	11	

1.0	RAW MATERIALS													
1.1	Materials for Platforms	Chemical, Mechanical Properties	A	TC Verification	100%	100%	BHEL Spec/ approved datasheet		MTC	√	P	V	V	
1.2	Stirrups-Hot Galvanized & retainer complete with fasteners	Chemical, Mechanical Properties	B	TC Verification	100%	100%	BHEL Spec/ approved datasheet		MTC	√	P	V	V	
1.3	Gear Wheels	Chemical, Mechanical Properties	A	TC Verification	100%	100%	BHEL Spec/ approved datasheet		MTC	√	P	V	V	
1.4	Castings	Chemical, Mechanical Properties	A	TC Verification	100%	100%	BHEL Spec/ approved datasheet		MTC	√	P	V	V	
1.5	Hoists (Rope Climbing Machine)	Components and Safe Working Load	B	TC Verification	100%	100%	BHEL Spec/ approved datasheet		MTC	√	P	V	V	
1.6	Safety Devices & Control boxes	Make/rating, size, qty, performance, etc	B	TC Verification	100%	100%	BHEL Spec/ approved datasheet		MTC	√	P	V	V	
1.7	Wire Rope (Galvanized Steel) with fittings, shackles, etc	Size & Construction, Length; Tensile Strength	A	Visual & Measurement; TC Verification	100%	100%	BHEL Spec/ approved datasheet		MTC	√	P	V	V	
1.8	Power Supply Cables	Size, Construction, Capacity, Length, routine tests as per applicable standards	B	TC Verification	100%	100%	BHEL Spec/ approved datasheet		MTC	√	P	V	V	
1.9	Motors	Ratings, Performance, Speed, type & routine tests, etc.	A	TC Verification	100%	100%	BHEL Spec/ approved datasheet		MTC	√	P	V	V	
2.0	INPROCESS CONTROLS													
2.1	Welding Qualifications	Procedure	B	Review	100%	100%	AWS D1.1 / ASME Sec IX / BS EN 287-1/ BS EN ISO 9606-2		PQR & WPS	√	P	V	V	
		Personnel	B	Review	100%	100%			WQR	√	P	V	V	
2.2	Machining of Components	Workmanship, Finish & Dimensions	B	Visual & Measurement	100%	100%	Manufacturer's drawing	Manufacturer's drawing	IR	√	P	V	V	
2.3	All machined areas	Surface Quality	B	NDE-LPI	100%	100%	ASME E165 / EN ISO 3452-2	ASME Sec VIII Div 1 Appx 8 Cl 8.4 / EN ISO 3452-2	IR	√	P	V	V	
2.4	Fit-up Inspection	Location, height, Orientation	B	Measurement	100%	100%	Manufacturer's drawing	Manufacturer's drawing	IR	-	P	-	-	

LEGEND: * RECORDS IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION; ** M: MANUFACTURER, C: BHEL QC/BHEL AIA, N: CUSTOMER; P: PERFORM. W: WITNESS, V: VERIFICATION; CLASS : A - CRITICAL ; B - MAJOR ; C - MINOR
MTC- Manufacturer's Test Certificate; IR- Inspection/Test Report; (R): Routine test; (I)/(Ts): Type test.

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					M	C/N				M	C	N			
1	2	3	4	5			7	8	9	D*	**	10	11		
2.5	Weld Inspection														
a	Weld Inspection	Profile, size, reinforcement	B	Visual and measurement	100%	100%	Manufacturer's drawing	Manufacturer's drawing	Log	-	P	-	-		
b	All welds	Weld Quality	B	MPI/LPI	100%	100%	ASTM E709 / ASTM E165 / EN ISO 3059	ASME Sec VIII Div 1 Appx 8 Cl 8.4 / EN ISO 3059	IR	√	P	V	V		
2.6	Platforms	Workmanship, Finish & Dimensions	B	Visual & Measurement	100%	100%	BHEL approved drawing	BHEL approved drawing	IR	√	P	V	V		
3.0	FINAL ASSEMBLY & INSPECTION														
3.1	Assembly of Hoist, Motor & Safety Devices														
a	Electric Test	Wiring Control, IR, HV, Functional Checks & DOP*	A	Visual	100%	100%	Manufacturer's Standard	BHEL Spec/ approved datasheet	IR	√	P	V	V	*Degree of protection	
b	Performance Test	Performance	A	Visual	100%	100%			IR	√	P	V	V		
c	Load Test	WL Test	A	Visual	100%	100%			IR	√	P	V	V		
d	Over speed Test	Emergency Descent	A	Visual	100%	100%			IR	√	P	V	V		
e	Sky Lock/Fall Arrest device (Safety Brake)	Drop Test	A	Visual	100%	100%			IR	√	P	V	V		
f	Limiters	Manual	A	Visual	100%	100%			IR	√	P	V	V		
g	Brakes	Manual & Auto	A	Visual	100%	100%			IR	√	P	V	V		
h	Anti-Tilting	Manual	A	Visual	100%	100%			IR	√	P	V	V		
3.2	Assembly of Platforms, Handrails, etc	Workmanship, Finish & Dimensions	A	Visual & Measurement	100%	100%	BHEL approved drawing	BHEL approved drawing	IR	√	P	V	V		
3.3	Painting	Surface Preparation, Color Shade & DFT	B	Visual & Measurement	100%	100%	BHEL Spec & PO	BHEL Spec & PO	IR	√	P	V	V		
3.4	Marking/ Identification	W.O. No, DU No, Part No (if applicable) on name plates	B	Visual	100%	100%	BHEL Spec & PO	BHEL Spec & PO	IR	√	P	V	V		
3.5	Packing	Tightness & Stability#	B	Visual	100%	100%	As per Manufacturer's Procedure.		IR	√	P	V	-	#with handling & storage instructions to Sites	
3.6	Data Folder	Completeness of documentation	B	Review of documents	100%	100%	BHEL Spec/ approved datasheet		---	√	P	V	V		

Note: 1. Customer verification stages specified above shall be followed. Any witness stages shall be as specified/indicated in BHEL PO.

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