

BHEL		STANDARD MANUFACTURING QUALITY PLAN							MQP. NO.: SMQP/FPS/06/092013				
PROJECT ENGINEERING & SYSTEMS DIVISION BHEL, RC PURAM, HYD-502032						PRODUCT:PIPES			REV NO: 00		DATE: 01/09/2013		
PAGE 1 OF 2													
SL NO	COMPONENTS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	* D	AGENCY			REMARKS
										P	W	V	
1.0	RAW MATERIALS & BOUGHT OUT ITEMS												
	Raw Material (Mother Hollow, Billets etc.)	Mechanical & Chemical Properties	Major	Mech., Chem. Analysis	One per Lot/Batch /Heat	BHEL Spec	BHEL Spec	MTC	√	2		1	
2.0	INPROCESS INSPECTION												
		Heat Treatment	Major	TC Review	One per Lot/Batch /Heat	BHEL Spec	BHEL Spec	TC, HT Chart	√	2	2	1	*If applicable
		WPS, PQR, WPQ*	Major	Doc. Review	100%	BHEL Spec	BHEL Spec	WPS,PQR, WPQ	--	2		1	*for Welded pipes
		NDE*	Critical	RT/UT /LP	As per BHEL Spec	BHEL Spec	BHEL Spec	NDE Reports	√	2		1	*as applicable
3.0	FINAL INSPECTION & TESTING												
	PIPES	Mechanical Analysis (UTS, YS, EL, BEND/Flattening)	Major	Mech. Analysis	One per Lot/Batch /Heat	BHEL Spec	BHEL Spec	MTC	√	2		1	
		Chemical Analysis	Major	Chem. Analysis	One per Lot/Batch /Heat	BHEL Spec	BHEL Spec	MTC	√	2		1	
		Dimensional (OD, ID, Length, Thickness, Edge preparation, Straightness, etc.)	Critical	Measure ment	100%	BHEL Spec	BHEL Spec	TC	√	2	1		10% Witness by BHEL/BHEL's TPIA
		Hydrostatic Test/ Eddy Current test/ Ultrasonic test	Critical	Hydro Test ET/UT	100%	BHEL Spec	BHEL Spec	TC	√	2	1		10% Witness by BHEL/BHEL's TPIA
		IBR Certificate*	Critical	TC Review	100%	BHEL Spec	BHEL Spec	TC	√	2		1	*If applicable
		PMI*	Critical	PMI test	Random	BHEL Spec	BHEL Spec	TC	√	2	1		*If applicable

LEGEND: P: PERFORM, W: WITNESS, V: VERIFICATION. INDICATE 1 FOR BHEL / BHEL NOMINATED INSPECTION AGENCY/END USER/END USER'S REPRESENTATIVE & 2 FOR VENDOR/SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT /CHARACTERISTIC UNDER P, W & V COLUMNS. * FOR ITEMS MARKED ✓ (TICK) IN COLUMN 'D', TEST CERTIFICATES SHALL BE SUBMITTED TO BHEL FOR RECORDS.	PREPARED BY BHEL QA S	APPROVED BY BHEL QA S	APPROVED BY CUSTOMER'S SIGNATURE & STAMP (IF APPLICABLE)
			

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		Galvanizing (Coating weight, uniformity, Adherence)	Critical	Strip test, Preece test, Bend/ Pivot hammer test	Random	BHEL Spec	BHEL Spec	TC	√	2	1		*for G.I Pipe
4.0	PRESERVATION & PACKING												
		Painting*, (Shade, DFT Check) Marking	Major	Visual, Measurement	Random	BHEL Spec	BHEL Spec	TC	√	2	1		*if applicable
		Packing*	Major	Visual	Random	BHEL Spec	BHEL Spec	Packing List	√	2		1	

NOTE:-

1. This standard MQP should be read along with specification (latest revision), approved drawings & approved data sheet.
2. Drawing/data sheet shall prevail over quality plan for contradiction if any between quality plan and drawing/specification.
3. All test certificates/reports reviewed and certified by TPI/BHEL shall be submitted to BHEL as documentation package.
4. All type test reports submitted shall not be older than 5 yrs from the date of purchase order.
5. Any project/customer specific requirements which shall be notified have to be fulfilled by the vendor at the time of execution of order.

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