

STANDARD QUALITY PLAN FOR SEAMLESS PIPES OR TUBES

Vendor Name and Address:		Customer : BHEL HYDERABAD		BHEL P.O.No.:		QP NO.: MES / PIP / 001					
		Product : PIPES / TUBES (SEAMLESS)		P.O. Date:		REV.: 01					
Applicable material specification		P.O. Date:		REV.: 01		Date : 10.11.2012					
						PAGE : 1 OF 2					
Sl.No.	Characteristics	Type of Check	Quantum of Check	Reference document	Acceptance Norms	Format of records	Documents to be submitted	Inspection Agency	Remarks		
								P	W	V	
1.	Identification & correlation between TCs and Input materials (mother hollows)	Verification	100%	BHEL spec	BHEL spec	--	--	2	-	1	
2.	Manufacturing	Process controls	Each lot	Vendors own process	BHEL spec	--	--	2	--	--	As per applicable P.O. & specification
3.	Heat treatment	HT charts Review	Each HT batch	BHEL spec	BHEL spec	TC	TC	2	--	1	A copy of certified HT charts / cycles shall be submitted along with the TC
4.	Visual examination	Physical verification & measurement	100%	BHEL spec	BHEL spec	TC	TC	2	1	--	Note: 10 % Witness by TPIA The following shall be ensure & certified: 1. Size & Length of each pipe / tube as per order 2. Straightness of all pipes / tubes 3. Defect free surfaces 4. Marking & punching on all pipes / tubes
5.	Dimensional inspection	Measurement	100%	BHEL spec	BHEL spec	TC	TC	2	1	--	10 % Witness by TPIA
6.	Identification of test samples	Test piece location & size	Each melt & HT batch per size	BHEL spec	BHEL spec	TC	TC	2	1	--	Test sample location and orientation shall be mentioned in TC
7.	Product analysis	Chemical analysis	Each melt	BHEL spec	BHEL spec	TC	TC	2	1	--	

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8.	Mechanical properties	Tensile, Hardness, Impact etc.	Each melt & HT batch per size	BHEL spec	BHEL spec	TC	TC	2	1	--	
9.	Microstructure, Grain size	Metallography test	Each melt & HT batch per size	BHEL spec	BHEL spec	TC	TC	2	1	--	
10.	Hydro test	Pressure testing	100%	BHEL spec	BHEL spec	TC	TC	2	1	--	10 % Witness by TPIA
11.	Surface and Internal defects	NDT	100%	BHEL spec	BHEL spec	TC	TC	2	1	--	10 % Witness by TPIA
12.	Corrosion properties	IGC test	Sampling as per BHEL spec	BHEL spec	BHEL spec	TC	TC	2	1	--	
13.	Marking	Visual	100%	BHEL spec	BHEL spec	--	--	2	--	1	Marking on the bars shall be correlated with the TCS
14.	Preservation and packing	Visual	100%	BHEL spec	BHEL spec	--	TCS --	2	--	1	TPIA shall endorse all test reports, HT charts, and Raw material test certificates.
15.	Completeness of all documentations	Verification	100%	BHEL spec	BHEL spec	TC	TC	2	--	1	

Note: 1. Tests 7, 8, 9, 10, 11, & 12 shall be carried out as per applicable P.O. and specification.

2. This SQP is not applicable to the material specifications where IBR requirements are specified. In such cases, inspection & certification shall be as per IBR requirements.

LEGEND: P PERFORM; W WITNESS; V VERIFICATION; INDICATE 1 FOR BHEL OR BHEL NOMINATED INSPECTION AGENCY & 2 FOR VENDOR/SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTIC UNDER P, W & V COLUMNS. AND TEST CERTIFICATES SHALL BE SUBMITTED TO BHEL RECORDS.

PREPARED BY:

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10/11/2012

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10/11/2012

परीक्षण के अभियंता

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VENDOR'S SIGNATURE & STAMP: