

		BHEL HYDERABAD-32		STANDARD QUALITY PLAN					QP No. : HY/QA/CSSP/001 Rev. : 00 Date : 12.02.2015				
				ITEM: CARBON STEEL SEAMLESS PIPES (SA106 Gr.B)					Page 1 of 3				
				BHEL Spec. No. : AA 10455 Rev. 09									
SL NO	COMPONENTS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	* D	S	M	C	REMARKS
1.0	RAW MATERIAL INSPECTION												
1.1	Mother Hollows	Identification & correlation of material with TCs	Major	Verification	100%	BHEL Spec.	BHEL Spec. & P.O	TC			P	V	NOTE 1
2.0	IN PROCESS INSPECTION												
2.1	In case of Cold Drawn pipe	Heat Treatment	Major	Verification	100%	SA 106 Gr.B	SA 106 Gr.B	HT Chart	✓		P	V	
3.0	FINAL INSPECTION												
3.1	Selection of test samples		Major	Identification	One per Lot	BHEL Spec.	BHEL Spec. & P.O	TC			P	W	Definition of Lot as per SA106
3.2	Test Samples	Product Analysis	Major	Chemical	One per Lot	BHEL Spec.	BHEL Spec. & P.O	TC	✓		P	V	NOTE 2
3.3	Test Samples	Mechanical Properties (Tensile, Bend test, Flattening)	Major	Mech.	One per Lot	BHEL Spec.	BHEL Spec. & P.O	TC	✓		P	W	
3.4	Pipes	Surface & internal defects	Critical	Hydrostatic test / NDT	100% by Mfr.	BHEL Spec.	BHEL Spec.	TC	✓		P	W *	*As per Sampling plan
3.5	Pipes	Visual examination	Major	Visual	100%	BHEL Spec.	BHEL Spec.	TC	✓		P	W	
3.6	Pipes	Dimensional Check	Major	Measure	100% by Mfr.	BHEL Spec. & P.O	BHEL Spec. & P.O	TC	✓		P	W *	NOTE 3 *As per Sampling plan

Legend: *D- Documents marked (✓) to be included by Supplier in Documentation Package. S - Sub Vendor P - Perform C of C : Certificate of Compliance M - Vendor / Manufacturer W - Witness Mfr. : Manufacturer C - BHEL/ Inspection Agency V - Verify Measurt.: Measurement						PREPARED BY  G T S K DAKSHINA MURTHY ENGINEER/QA		APPROVED BY  K S N MURTHY AGM / QA	
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4.0	PREDISPATCH INSPECTION												
4.1	Completeness of all documentation	Verification of all TCs including IBR TC for completion.	Major	Verify	100%	PO, Spec. & QP	PO, Spec. & QP	Insp. Record			P	V	NOTE 4 & 5
4.2		Marking, Preservation and Packing	Major	Visual	100%	AA 049 0001 & SA106	AA 049 0001 & SA106	Insp. Record			P	V	Each pipe shall be stamped with TPIA stamp in addition to Markings as per AA0490001 & SA106

Notes:

- 1) TPIA shall review the source of raw material, if mentioned in P.O.
- 2) Carbon Content shall be restricted to 0.25% max.
- 3) Pipes thickness and OD shall be as specified in P.O. Unless otherwise specified, pipes shall be supplied in single random lengths of 4.8 to 6.7 metres.
- 4) IBR Form III-A / IBR Form-IIID along with Form XVI-G (for Well-known pipe maker) shall be furnished to BHEL for records.
- 5) Correlation of finished products with raw material and manufacturer TCs is to be ensured.
- 6) This QAP is strictly applicable for the BHEL nominated Inspection agencies.
- 7) Scope of inspection by IBR shall be as per IBR code requirements.
- 8) This QAP is not applicable to first time supplies by a new vendor, for which the vendor will be required to submit a separate QAP.
- 9) In case of any inconsistency between the requirements of BHEL Spec./PO & QAP, BHEL Spec./PO shall prevail.

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									D	S	M	C	

Sampling plan for Hydrostatic test/NDT and Dimensional Check witness by BHEL/ BHEL Nominated Inspection Agency:

Lot Size (Offered quantity in numbers)	Sample Size (Numbers)	Acceptance number (Max. no. of permissible defectives)
2 - 8	2	0
8 - 15	3	0
16 - 25	5	0
26 - 50	8	0
51 - 90	13	0
91 - 150	20	0
151 - 280	32	0
281 - 500	50	0
501 - 1200	80	0

- In case of any rejection of sample, 100% witness by BHEL/ BHEL Nominated Inspection Agency.

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