

 Ranipet		MANUFACTURER'S NAME & ADDRESS		STANDARD QUALITY PLAN						
M/S BHEL / BAP / RANIPET TAMIL NADU-632 406		ITEM/SUB SYSTEM:		Doc. No		SQP APH 102				
		Rev. No/Date		04/07.03.2014						
		Page No		01 of 03						
SL NO	COMPONENT & OPERATION	CHARACTERISTICS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENTS	ACCEPTANCE NORMS	FORMAT OF RECORDS	Agency	REMARKS	
1	2	3	4	5	6	7	8	M	10	
								B		
1.0	Raw Material Tubes, pipes, sheets and plates	Chem. & Mech. Properties	Analysis	One/melt / batch	Respective matl. Spec. as per approved drawing and Note - 1	TC	P	V		
2.0	In Process Control									
Welders & Procedures shall be qualified to ASME SEC.IX. BHEL will review procedures and welders Qualification.										
a)	Fit up of tubes with fins	Fin height, fin density	Measurement	100%	As per approved drawing	HC	P	V		
b)	Galvanization of Fin Tube Assembly (Carbon Steel Fins)	a) Wt of zinc coating b) Thickness of coating c) Uniformity of coating d) Adhesion test.	Visual measurement & lab test	One /batch wise	IS 4759	Test Report	P	V		
	If Aluminium Fins (G type) are envisaged, hot dip galvanizing is not required									
LEGENDS:			Prepared by		APPROVED BY:					
M - Manufacturer, BHEL Shop / Subcontractor, B - BHEL QC/ Authorised Inspection agency P - Performed By, V - Verification Of Reports, W - Witness TC - Test Certificate R- report, HT-Heat treatment			Reviewed by		(SDGM/QA,BE,QC(Proc.))					

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			STEAM COIL AIR		Rev. No/Date	04/07.03.2014
			PREHEATER (SCAPH)		Page No	02 of 03

SL NO 1	COMPONENT & OPERATION 2	CHARACTERISTICS 3	TYPE OF CHECK 4	QUANTUM OF CHECK 5	REFERENCE DOCUMENTS 6	ACCEPTANCE NORMS 7	FORMAT OF RECORDS 8	Agency 9	REMARKS 10
								M B	
2.2	Fit up of galvanised tubes with tube sheet, Tube sheet with header, Header with nozzle, Nozzle with flange	Dimensions & orientation	Measurement	100 %	As per approved drawing		DR	P V	#Tube to tube sheet weld witness. Other welds verification
2.3	Welding	Weld size and finish	Measurement	100%	As per approved drawing		DR	P W	
3.0	Final Inspection	Weld quality	DPT	100%	ASME Sec VIII Division 1, UHT 57		NDT Reports	P W#	
3.1	Hydro test	Leak Proof	Hydro test	100%	As per approved drawing /Engineering specification		DR	P W	CHP

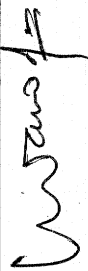
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SL NO 1	COMPONENT & OPERATION 2	CHARACTERISTICS 3	TYPE OF CHECK 4	QUANTUM OF CHECK 5	REFERENCE DOCUMENTS 6	ACCEPTANCE NORMS 7	FORMAT OF RECORDS 8	Agency 9 M B	REMARKS 10
3.2	Dimensions	Overall dimensions & orientation	Measurement	100%	As per approved drawing		DR	P W	CHP
3.3	Final assembly	Cleaning, painting & preservation	Visual	100%	As mentioned in the Approved drawing /Note -2		DR	P W	CHP

Notes

- Tubes meant for SCAPH are to be procured with following conditions and the same are to be co related in respective tube material certificate
 - Soundness of the each tube to be ensured by conducting Hydro static test instead of Eddy current test. Minimum test pressure shall be 70 bar and hydro static pressure shall be maintained for not less than 5seconds as per ASTM A 714-99(Reapproved 2009).
 - Valid manufacturers marking shall be available in each tube .The list of valid manufactures are 1) KLT Automotive and Tubular Products LTD CHENNAI, 2) TATA steel Limited Kolkata, CHENNAI, 3) Tube investments of India Ltd CHENNAI, 4) BHUSHAN steel Limited CHENNAI ,RAIGAD, 5) CAPARO tubes India DEWAS . Any new vendors are also acceptable subject to the prior approval from BHEL Ranipet..
 - The List of Valid manufacturers for Seamless Steel Tubes are (1) BHEL, Trichy (2) ISMT Limited, Pune, (3) KALPANA STEEL CENTRE, Mumbai (4) MADRAS STEELS & TUBES, Chennai (5) MAHARASTRA SEAMLESS LIMITED, (6) NAVARATNA METAL CORPN, Mumbai (7) PSL Ltd Chennai (8) STEELMET INDUSTRIES, Mumbai.(9) M/s SAINEST TUBES PVT LTD,Gugrat.
- After hydro test, the water in the SCAPH shall be completely drained and dried. All openings of SCAPH shall be closed with suitable end covers.

Record of revision		Original Issue	
Rev 00/DT 19 112001		Painting requirement corrected	
Rev 01/ DT 17 01 07		Note 1 Details added to take care of Tubes procurement .	
Rev 02/DT 27 01 2010		CI 2.0 b modified by including remarks for Aluminium Fins	
Rev 03/DT 04 06 2103		Note 'c' added, CL 2.3 revised.	
Rev 04/DT 07 03 2014		Note 'c' updated, CL 2.3 revised.	

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