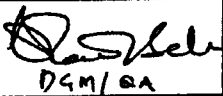
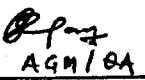
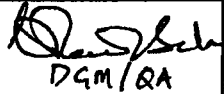
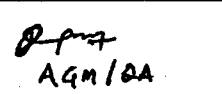
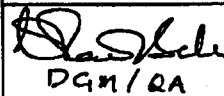
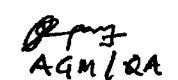


X

S.No		COMPONENT & OPERATIONS	CHARACTERISTICS	CLAS S	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY	REMARKS			
1		2	3	4	5	6	7 #	8	9	D*	** 10	11		
1.0		Material	All raw material and fittings shall be manufactured by the Vendors referred in the "List of Raw Material manufacturers-QCP 17" approved by NTPC											
1.11		Seamless SS Pipes (SA 312... or as per Drg.)	Co-relation & verification of Mill TCs for a) Chemical Composition. b) Mech. Properties c) Soundness (Eddy current test/Hydro test) d) Heat Treatment e) Surface finish f) Dimension (OD / ID & Wall Thickness)	Major	Verification	100%	100%/10%	BHEL Drawing , Material Spec.	Mill TCs	√	P	V	V	Note 1 TC - Test Certificate Note 2
1.12					Chem. Analysis	1/Heat		BHEL Drawing , Material Spec.						
1.13					Mech. Test	1/Heat/size		BHEL Drawing , Material Spec.						
1.14					ECT	100%		ASTM E309						
1.15					Hydro	100%		ASTM A999						
1.16					Time/Temp.	100%		Material Spec.						
1.20		Plates..(SA240 or as per drg)	Co-relation & verification of Mill TCs for a) Chem. Properties. b) Mech. Properties c) Heat Treatment (If applicable) d) Dimension & Surface finish	Major	Verification	100%	100%/10%	BHEL Drawing , Material Spec.	Mill TCs	√	P	V	V	Note 1
1.21					Chem. Analysis	1/Heat		BHEL Drawing , Material Spec.						
1.22					Mech. Test	1/Heat		BHEL Drawing , Material Spec.						
1.23					Time/temp.	100%		BHEL Drawing , Material Spec.						
1.24					Measurement & Visual	100%		BHEL Drawing , Material Spec.						
1.30		Rods, Rounds & Flanges (SA182 or as per drg)	Co-relation & verification of Mill TCs for a) Chem. Properties. b) Mech. Properties c) Soundness	Major	Verification	100%	100%/10%	BHEL Drawing , Material Spec.	Mill TCs	√	P	V	V	Note 1
1.31					Chem. Analysis	1/Heat		BHEL Drawing , Material Spec.						
1.32					Mech. Test	1/Heat		BHEL Drawing , Material Spec.						
1.33					LPI	100%		E165						
					UT (Only on Flanges)	100%		SA 388						
SIGNATURE		PAGE 01 OF 04		LEGEND: * RECORDS, IDENTIFIED WITH "TICK" () SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: MANUFACTURER/SUB-SUPPLIER, C: BHEL / BHEL AUTHORISED AGENCY, N: NTPC, P: PERFORM W: WITNESS AND V: VERIFICATION CHP: NTPC SHALL IDENTIFY IN COLOUM 'N' AS 'W'				NTPC FOR NTPC USE:		DOC. NO. 1240-110-QVM-W-801 REVIEWED BY APPROVED BY APPROVAL SEAL				

		CONTRACTOR'S NAME & ADDRESS BHEL PIPING CENTRE, CHENNAI PROCUREMENT OF MATERIAL, FABRICATION & SUPPLY BY NTPC APPROVED SUB-VENDORS		MANUFACTURING QUALITY PLAN				PROJECT : RIHAND – STPP (2 X 500 MW)							
		ITEM : SS PIPING FABRICATION (with Vendor Material) SUB-SYSTEM : Piping system upto 10 kg / sq cm BHEL Customer nos. : 7051, 7052.				Q.P. No.: 7051QPC14 REV-00 DT- 11.01.2011		PACKAGE : TG Package CONTRACT No.: CS-1240 – 110 – 2 MAIN-SUPPLIER : BHEL, Piping Centre							
S.No	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS		AGENCY			REMARKS	
					M	C/N			9	D*	M	C	N		
1	2	3	4	5	6	7	8	9	D*	** 10			11		
1.34	Pipe fitting SA 403, SA182 or as per drg.	d) Heat Treatment (If applicable)	Major	Time/temp.	100%	-	BHEL Drawing , Material Spec.	TCs	√	P	V	V	Note 3 & 4		
1.35		e) Dimension & Surface finish		Measurement & Visual	100%	-	BHEL Drawing , Material Spec.								
1.40		Co-relation & verification of Mill TCs for		Verification	100%	100%/10%	BHEL Drawing , Material Spec.								
1.41		a) Chem. Composition		Chem. Analysis	1/Heat		BHEL Drawing , Material Spec.								
1.42		b) Mech. Test		Mech. Test	1/Heat		BHEL Drawing , Material Spec.								
1.43		c) Dimensions of fittings (OD & wall thickness, etc.,)		Measurement & Visual	100%		BHEL Drawing , Material Spec.								
1.44		d) Surface Defects		LPI	100%		ASTM E165								
1.45		e) Soundness (for thk-6mm)		UT	100%		SA 388								
1.46		f) Heat Treatment(Solution annealed)		Time/Temp.	100%		As per Material Spec.								
1.47		g) Weld quality (in case of welded fitting, if any)		RT	100%		ASME Sec V / ASME Sec VIII Div-I UW 51								
2.0	IN-PROCESS INSPECTION														
2.1	Material receiving inspection	Marking & transfer of identification	Major	Visual	100%	100%/-	As per drg.	HC		P	V		Note 5		
2.2	Cutting & Edge Preparation	a) Dimension	Minor	Measurement	100%	10%/-	As per drg.	HC		P	V		HC - History card		
		b) NDT for Edge preparation	Minor	LPI	100%	10%/-	ASME Sec V / ASME B31.1 cl 136.4.4	Report	√	P	V		IR - Inspection Report		
2.4	Welding	a) Procedure & Performance Qualification details	Major	Verification	100%	100% / Random	ASME Sec. IX	WPS, PQR		P	V	V	WPS, PQR shall be approved by BHEL		
				LEGEND: * RECORDS, IDENTIFIED WITH "TICK" () SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: MANUFACTURER/SUB-SUPPLIER, C: BHEL / BHEL AUTHORISED AGENCY, N: NTPC, P: PERFORM W: WITNESS AND V: VERIFICATION CHP: NTPC SHALL IDENTIFY IN COLOUM 'N' AS 'W'						DOC. NO. 1240-110-QVM-W-801					
MAIN-SUPPLIER		MAIN-SUPPLIER													
SIGNATURE		PAGE 02 OF 04						FOR NTPC USE:		REVIEWED BY		APPROVED BY		APPROVAL SEAL	

		CONTRACTOR'S NAME & ADDRESS BHEL PIPING CENTRE, CHENNAI PROCUREMENT OF MATERIAL, FABRICATION & SUPPLY BY NTPC APPROVED SUB-VENDORS		MANUFACTURING QUALITY PLAN				PROJECT : RIHAND - STPP (2 X 500 MW) PACKAGE : TG Package CONTRACT.No.: CS-1240 - 110 - 2 MAIN-SUPPLIER : BHEL, Piping Centre							
				ITEM : SS PIPING FABRICATION (with Vendor Material) SUB-SYSTEM : Piping system upto 10 kg / sq cm BHEL Customer nos. : 7051, 7052.		Q.P. No.: 7051QPC14 REV-00 DT- 11.01.2011									
S.No	COMPONENT & OPERATIONS	CHARACTERISTICS	CLAS S	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS		
1	2	3	4	5	M	C/N	7 #	8	9	D*	** 10		11		
3.0		b) NDT for Edge preparation	Minor	LPI	100%	10%	ASME SecV / ASME B31.1 cl 136.4.4		Report	√	P	V	V	V*- Review of RT Films @ If rejections are observed in 10% sampling, another lot of 20% shall be taken. If there are rejections in 20% lot also, complete 100% lot shall be tested for respective NDE. RT films review by NTPC is CHP	
		c) Fit-up	Major	Dimension, Root gap	100%	- / -	As per drg.		HC		P	-	-		
		d) NDE for Butt joints	Major	RT	10% @	10%/10%	ASME SecV / ASME B31.1 cl 136.4.5		NDT	√	P	V*	V*		
		e) NDE for Fillet welds	Major	LPI	100%	100% / -	ASME SecV / ASME B31.1 cl 136.4.4		Report do	√	P	W			
	FINAL INSPECTION	a) Visual examination	Major	Visual	100%	10% / Random	BHEL Drawing		-		P	V	V		
		b) Dimensions	-do-	Measurement	100%	10%/10%	BHEL Drawing		I.R.	√	P	W	W		
		c) Surface condition	-do-	Visual	100%	100% / Random	BHEL Drawing		IR	√	P	V	V		
		d) Identification, Marking & Colour coding	-do-	Visual	100%	100% / Random	BHEL Drawing, PO Also refer Note 11		-		P	V	V		
		e) End protection	-do-	-do-	100%	100% / Random	BHEL Drawing, PO Also refer Note 12		-		P	V	V		
4.0	DOCUMENTATION														
4.1	Inspection clearance	Documentation	Critical	Verification	100%	100% / -	All reports as required in this QP			P	V				
4.2	Despatch Clearance	Despatch Clearance	Critical	Verification	100%	100% / -	Also refer Note 10	MDCC		P	V	CHP			
				LEGEND: * RECORDS, IDENTIFIED WITH "TICK" () SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: MANUFACTURER/SUB-SUPPLIER, C: BHEL / BHEL AUTHORISED AGENCY, N: NTPC, P: PERFORM W: WITNESS AND V: VERIFICATION CHP: NTPC SHALL IDENTIFY IN COLOUM 'N' AS 'W'						DOC. NO. 1240-110-QVM-W-801					
MAIN-SUPPLIER		MAIN-SUPPLIER													
SIGNATURE		PAGE 03 OF 04						FOR NTPC USE:		REVIEWED BY		APPROVED BY		APPROVAL SEAL	

		CONTRACTOR'S NAME & ADDRESS BHEL PIPING CENTRE, CHENNAI PROCUREMENT OF MATERIAL, FABRICATION & SUPPLY BY NTPC APPROVED SUB-VENDORS		MANUFACTURING QUALITY PLAN				PROJECT : RIHAND – STPP (2 X 500 MW) PACKAGE : TG Package CONTRACT No.: CS-1240 – 110 – 2 MAIN-SUPPLIER : BHEL, Piping Centre					
				ITEM : SS PIPING FABRICATION (with Vendor Material) SUB-SYSTEM : Piping system upto 10 kg / sq cm BHEL Customer nos. : 7051, 7052.			Q.P. No.: 7051QPC14 REV-00 DT- 11.01.2011						
S.No	COMPONENT & OPERATIONS	CHARACTERISTICS	CLAS S	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS
					M	C/N				M	C	N	
1	2	3	4	5	6	7 #	8	9	D*	**	10	11	
NOTES: 1) If the raw materials are received directly from RM Manufacturer's work, the material shall be accepted based on (a) correlation of Heat number on material with TC and (b) verification of TCs. If the materials are received from Dealers place, check test (Chemical and Mechanical tests on one sample per Heat/ size) shall be done in addition to the above for accepting the material BHEL shall identify and witness the sample for check test 2) ECT applicable for thk. < 6mm. 3) Fittings shall be procured only from BHEL & NTPC approved Manufacturers . All the requirements covered in slno 1.40 to 1.47 shall be taken care by Sub-vendor while ordering fittings on the manufacturer. 4) All SS fittings and flanges shall be supplied in pickled & passivated condition only. 5) Heat number transfer to cut piece (raw material) shall be done by Sub-Vendor in the presence of BHEL / BHEL Authorised Inspecting Agency. 6) The items shall be manufactured as per BHEL drawing . 7) Welding Electrodes and Paints used shall be of BHEL approved make 8) All items shall be inspected and cleared by BHEL / BHEL Authorised Inspecting Agency. NTPC inspection is applicable only for those PGMA's identified as Cat I in PGMA categorisation list approved by NTPC. 9) Loose items like fasteners, gaskets etc..covered in Cat-I PGMA shall be considered as Cat-III items and MDCC for these items also shall be obtained by Sub-Vendor from NTPC-RIO who is issuing MDCC for Cat-I items. 10) The Sub-Vendor shall co-ordinate with NTPC and obtain MDCC before despatch of finished material. 11) The finished components shall be engraved with DU code (14 digit work order details), Heat number, material specification, maker's emblem and Inspector's seal. In addition, the DU code, Heat no. and Material specification shall also be paint stencilled. Colour coding : SA312 Gr304 : Blue & Yellow. SA312 Gr316 : Black & Green. SA312 Gr321 : Blue & Brown. SA312 Gr347 : Blue, Red & White. 12) Machined ends shall be well protected using end caps and fittings shall be suitably packed in box / crate to avoid transit & other damages.													
\$ APPROVED VENDORS IOF SG PACKAGE ARE ACCEPTABLE FOR TG PACKAGE APPROVED IN CAT-I													
 DGM/RA		 AGM/RA		LEGEND: * RECORDS, IDENTIFIED WITH "TICK" () SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: MANUFACTURER/SUB-SUPPLIER, C: BHEL / BHEL AUTHORISED AGENCY, N: NTPC, P: PERFORM W: WITNESS AND V: VERIFICATION CHP: NTPC SHALL IDENTIFY IN COLOUR 'N' AS 'W'						DOC. NO. 1240-110-QVM-W-801			
MAIN-SUPPLIER		MAIN-SUPPLIER											
SIGNATURE		PAGE 04 OF 04						FOR NTPC USE:		REVIEWED BY		APPROVED BY APPROVAL SEAL	



Reference: CC:PERh:1240:110:11931

Date:08-02-11

From:	P K MONDAL CTF (SIPAT- RH-Vind TF)	To:	Mr.CS RAJA DGM BHEL PC CHENNAI
		CC:	
SUBJECT : RHTPP3, STEAM TURBINE GENERATOR Please find enclosed following drawings/documents for necessary action at your end as indicated in purpose code.			
VENDOR DRG NO:	null		
NTPC DRG NO:	1240-110-QVM-W-801		
REVISION NO:	00		
DRG TITLE:	QP FOR SS PIPING FAB WITH VENDOR MATL		
APP CATEGORY:	I		
RELEASE DATE:	08-02-11		
COMMENTS:	QAP APPROVED IN CAT-I		



Engineering Division
ISO 9001:2008 Certified

अभियांत्रिकी कार्यालय परिसर, प्लॉट नं.- ए 8ए, सेक्टर-24, पोस्ट बॉक्स नं.- 13, नोएडा (उ प्र) पिन-201 307
टेलिफोन नं.- 0120-2410333, 2410116 फैक्स-0120-2410136, 2410137

पंजीकृत कार्यालय: एनटीपीसी भवन, स्कोप कॉम्प्लेक्स, 7 इंस्टीट्यूशनल एरिया, लोधी रोड, नई दिल्ली-110 003

टेलिफोन नं.- 011-24361018 फैक्स-011-24361018, वेबसाइट: www.ntpc.co.in

ENGINEERING OFFICE COMPLEX, Plot No: A-8A, Sector-24, Post Box No: 13, Noida (UP), Pin-201 307

Telephone No: 0120-2410333, 2410116 Fax-0120-2410136, 2410137

Registered Office: NTPC Bhawan, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi-110 003

Telephone No: 011-24360100 Fax-011-24361018, Website: www.ntpc.co.in