

MAIN SUPPLIER BHEL-PIPING CENTRE 	MANUFACTURER'S NAME AND ADDRESS	MANUFACTURING QUALITY PLAN			
		ITEM : HC COMBINED PRDS CONTROL VALVE	QP NO. PC-TEL-PRDS-QP-00 REV.NO.:00 DATE: 10/05/2018	PROJECT : TELANGANA (2X800 MW)	
				CUSTOMER : NTPC	
				PAGE: 1 OF 3	

SL No	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT #	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
1	2	3	4	5	6	7	8	9	*	**			
									D	M	C	N	
1.0 MATERIAL (All material of construction shall be as per approved drawing/ datasheet and acceptance norms shall be as per relevant standards)													
1.1	BODY, BONNET – FORGING	CHEMICAL & MECHANICAL PROPERTIES, HT	B	REVIEW OF MTC	100 %	APPROVED DRAWING / DATASHEET / MATERIAL SPECIFICATION ASME B 16.34	MTC	√	P	V	V		Relevant IBR Forms shall be furnished
		SOUNDNESS		UT FOR BODY AND BONNET	100 %		IR	√	P	V	V		BODY : ONLY FOR RATING 900 & ABOVE BONNET: FOR DIA ≥ 50 mm
		HYDRO TEST		PRESSURE TEST	100%		IR	√	P	V	V		
1.2	STEM, DISC, SEAT, PLUG	CHEMICAL & MECHANICAL PROPERTIES	B	REVIEW OF MTC	100 %	APPROVED DRAWING / DATASHEET / MATERIAL SPECIFICATION	MTC	√	P	V	V		
1.3	INJECTION CHAMBER / PIPE DISTRIBUTION INLET PIPE ETC	CHEMICAL & MECHANICAL PROPERTIES, HT, HYDRO TEST	B	REVIEW OF MTC	100 %	APPROVED DRAWING / DATASHEET / MATERIAL SPECIFICATION	MTC	√	P	V	V		Relevant IBR Forms shall be furnished
1.4	NOZZLE	CHEMICAL & MECHANICAL PROPERTIES, HYDRO TEST	B	REVIEW OF MTC	100 %	APPROVED DRAWING / DATASHEET / MATERIAL SPECIFICATION	MTC	√	P	V	V		
1.5	FASTENERS	CHEMICAL & MECHANICAL PROPERTIES	B	CHEMICAL & MECHANICAL		APPROVED DRAWING / DATASHEET / MATERIAL SPECIFICATION	MTC	√	P	V	V		
1.6	ACTUATOR & ACCESSORIES	VERIFICATION OF TC, MODEL NO	B	TC REVIEW	100 %	APPROVED DRAWING / DATASHEET	TC	√	P	V	V		For Electrical Accessories, Degree of protection certificate issued by Statutory body shall be submitted.
2.0 INPROCESS INSPECTION													
2.1	MACHINING OF BODY INTERNALS	DIMENSION	B	MEASUREMENT	100 %	APPROVED DRAWING		IR	-	P	-	-	
		SURFACE DEFECTS	B	MT/PT ON MACHINED SURFACES	100% @	ASME SEC V	ASME SEC VIII – DIVISION 1	IR	√	P	-	-	@ ALL ACCESSIBLE AREAS
		HARDFACING (IF APPLICABLE)	B	HARDNESS MEASUREMENT		MANUFACTURER STANDARD		IR	√	P	V	V	
2.2	WELDING	a) WELDING PARAMETER - WPS, PQR	B	REVIEW OF RECORDS	100 %	ASME SEC IX	ASME SEC IX	WPS, PQR	√	P	V	V	

		LEGEND: * RECORDS, IDENTIFIED WITH “TICK” (√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. CLASS : A – CRITICAL, B - MAJOR, C -MINOR ** M: MANUFACTURER/SUB-SUPPLIER C: MAIN SUPPLIER(BHEL/BHEL AIA) N: NTPC P: PERFORM W: WITNESS V: VERIFICATION. AS APPROPRIATE CHP : CUSTOMER HOLD POINT	DOC. NO.:		REV..... CAT.....	
MANUFACTURER/ SUB-SUPPLIER	MAIN-SUPPLIER					
SIGNATURE			REVIEWED BY	APPROVED BY	APPROVAL SEAL	

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									D	M	C	N	
		b) WELDER PERFROMANCE - WPQ	B	REVIEW OF RECORDS	100 %	IBR	IBR	WPQ	√	P	V	V	
		c) NDT – RT/UT + MPI + HARDNESS ON BUTT WELD (AFTER PWHT)	B	NDE	100 %	ASME SEC V / VIII	ASME SEC VIII – DIVISION 1	IR	√	P	V	V	
		d) LPI ON FILLET WELD/ BRANCH/ ATTACHMENT WELD	B	NDE	100 %	ASME SEC V / VIII	ASME SEC VIII – DIVISION 1	IR	√	P	V	V	
2.3	PWHT	TIME & TEMP CONTROL	B	REVIEW OF HT CHART	100 %	HT PROCEDURE	RECORD	√	P	V	V		2.3

3.0 FINAL INSPECTION

3.1	BODY MOUNT LEAKAGE TEST	LEAKAGE TEST	A	HYDRO TEST	100 %	APPROVED DRAWING / DATASHEET /ASME B 16.34	IR	√	P	W	W		3.1
3.2	SEAT LEAKAGE TEST	LEAKAGE TEST	A	HYDRO TEST	100 %	APPROVED DRAWING / DATASHEET /FCI 70.2	IR	√	P	W	W		
3.3	SET PRESSURE TEST ON DSH ASSEMBLY	FUNCTIONAL TEST	A	MEASUREMENT	100 %	APPROVED DRAWING / DATASHEET							
3.4	FUNCTIONAL / PERFORMANCE TEST	STROKE TIME (OPEN / CLOSE), VALVE TRAVEL, HYSTERISIS, LINEARITY, REPEATABILITY, FAIL SAFE OPERATION	A	MEASUREMENT	100 %	APPROVED DRAWING / DATASHEET	IR	√	P	W	W		
3.5	CV TEST@	VALVE CHARACTERISTICS	A	TYPE TEST	ONE / TYPE	APPROVED DRAWING / DATASHEET / ISA 75.02	IR	√	P	W/V	W/V		@CHP. NOTE 1
3.6	ACTUATOR	MAKE, MODEL, TAG	A	VISUAL, PNEUMATIC TEST	100 %	APPROVED DATASHEET / MANUFACTURER STANDARD	TC	√	P	W	W		
3.7	FINAL INSPECTION	COMPLETENESS	B	VISUAL	100 %	APPROVED DRAWING / DATASHEET	IR	√	P	W	W		
		OVERALL DIMENSION	A	MEASUREMENT	100 %	APPROVED DRAWING / DATASHEET	IR						
		PMI CHECK	A	Verification	100% *	RELEVANT MATERIAL SPECIFICATION	IR	√	P	W	W		*On Alloy Steel
4.0	PAINTING												
	PAINTING	SURFACE PREPARATION, APPEARANCE, DFT	B	VISUAL & MEASUREMENT	100 %	NTPC APPROVED PAINTING SCHEME	IR	√	P	V	V		

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5.0 PACKING & PRESERVATION												
	PACKING & MARKING	SURFACE CONDITION, CLEANLINESS, MARKING, END CAP	B	VISUAL	100 %	MANUFACTURER'S STANDARD / PURCHASE SPECIFICATION/ PURCHASE ORDER	IR	-	P	V	-	
6.0 DOCUMENTATION												
	QUALITY DOCUMENTATION	COMPLETENESS OF RECORDS	B	REVIEW OF DOCUMENTS	100 %	TECH. SPEC / APPD. DRG / IBR FORM	DOC. PACKAGE, IBR FORM III C, TEST REPORTS	√	P	V	V	IBR FORM III C SHALL BE PROVIDED

NOTE : 1. REVIEW OF CV TYPE TEST CLEARANCE FROM NTPC ENGG. CV TYPE TEST REPORTS WILL BE SUBJECTED TO NTPC REVIEW. INCASE, TYPE TEST CERTIFICATE NOT FOUND VALID, SAME SHALL BE CONDUCTED IN FCRI/NABL ACCREDITED LAB/ANY GOVT APPVD LAB/SUPPLIER'S OWN LAB.

2. This document is an indicative list of tests/checks. The manufacturer has to furnish a detailed quality plan indicating the Practices and Procedure adopted along with relevant supporting documents after placement of PO.

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