

MAIN SUPPLIER BHEL-PIPING CENTRE 	MANUFACTURER'S NAME AND ADDRESS	MANUFACTURING QUALITY PLAN	
		ITEM : HC COMBINED PRDS CONTROL VALVE	QP NO. PC-ND-PRDS-QP-01 REV.NO.:00
		SUB-SYSTEM: POWER CYCLE PIPING	DATE: 18/12/2017
		PROJECT : NABINAGAR (3X660 MW) & DARLIPALLI (2X800 MW) CUSTOMER : NTPC PAGE: 1 OF 2	

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 – CASTING / FORGING, STEM, DISC, SEAT, PLUG	CHEMICAL & MECHANICAL PROPERTIES	B	REVIEW OF MTC	100 %	APPROVED DRAWING / DATASHEET / MATERIAL SPECIFICATION		MTC	√	P	V	V	ONLY FOR RATING 900 & ABOVE	
		SOUNDNESS		RT/UT FOR BODY, UT FOR BONNET	100 %	ASME B 16.34		IR	√	P	V	V		
				UT FOR DIA ≥ 50 mm	100 %	ASME B 16.34			√	P	V	-	Relevant IBR Forms shall be furnished	
				DIMENSION	B	MEASUREMENT	100 %	APPROVED DRAWING / DATASHEET		IR				
1.2	FASTENERS	CHEMICAL & MECHANICAL PROPERTIES	B	CHEMICAL & MECHANICAL		APPROVED DRAWING / DATASHEET / MATERIAL SPECIFICATION		MTC	√	P	V	V		
1.3	ACCESSORIES	VERIFICATION OF TC	B	TC REVIEW	100 %	APPROVED DRAWING / DATASHEET		TC	√	P	V	V		
2.0 INPROCESS INSPECTION														
2.1	MACHINING OF BODY INTERNALS	DIMENSION	B	MEASUREMENT	100 %	APPROVED DRAWING		IR	-	P	-	-	@ ALL ACCESSIBLE AREAS	
		SURFACE DEFECTS	B	MT/PT ON MACHINED SURFACES	100% @	ASME SEC V	ASME SEC VIII – DIVISION 1	IR	√	P	-	-		
		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		
		b) WELDER PERFROMANCE - WPQ	B	REVIEW OF RECORDS	100 %	IBR	IBR	WPQ	√	P	V	V		
		c) NDT – RT ON BUTT WELD	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		
3.0 FINAL INSPECTION														
3.1	BODY MOUNT LEAKAGE TEST	LEAKAGE TEST	A	HYDRO TEST	100 %	ASME B 16.34 / APPROVED DATA SHEET		TC	√	P	W	W		

		LEGEND: * RECORDS, INDENTIFIED 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	
3.3	SEAT LEAKAGE TEST	LEAKAGE TEST	A	HYDRO TEST	100 %	FCI 70.2 / APPROVED DATA SHEET		TC	√	P	W	W	
3.3	FUNCTIONAL / PERFORMANCE TEST	STROKE TIME (OPEN / CLOSE), VALVE TRAVEL, HYSTERESIS, LINEARITY, REPEATABILITY, FAIL SAFE OPERATION	A	MEASUREMENT	100 %	APPROVED DRAWING / DATASHEET, MANUFACTURER STANDARD		TC	√	P	W	W	
3.4	CV TEST@	VALVE CHARACTERISTICS	A	TYPE TEST	ONE / TYPE	APPROVED DRAWING / DATASHEET / ISA 75.02		TC	√	P	W/V	W/V	@CHP. NOTE 1
3.5	ACTUATOR	MAKE, MODEL, TAG	A	VISUAL, PNEUMATIC TEST	100 %	APPROVED DATASHEET / MANUFACTURER STANDARD		TC	√	P	W	W	
3.6	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% Alloy steel	RELEVANT MATERIAL SPECIFICATION		IR	√	P	W	W	
4.0	PAINTING												
	PAINTING	SURFACE PREPARATION, APPEARANCE, DFT, SHADE & ADHESION	B	VISUAL & MEASUREMENT	100 %	NTPC APPROVED PAINTING SCHEME		IR	√	P	V	V	
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 FCI/NABL ACCREDITED LAB/ANY GOVT APPVD LAB/SUPPLIER'S OWN LAB.

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