

MANUFACTURER'S NAME AND ADDRESS			STANDARD QUALITY PLAN						TO BE FILLED BY BHEL			TO BE FILLED BY BHEL															
BHEL	VENDOR'S NAME	ITEM	DC STARTER CABINET		QP NO.	QA/BE/QP/304																					
			DRG. No. & Rev.		REV. NO.		03	Date: 11.04.2025																			
			SPEC.		TG60667																						
			Rev.		As per P.O.		Page 1 of 1																				
SL. NO.	COMPONENT & OPERATIONS		CHARACTERISTICS		CLASS	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		M	B	N	11												

1.0 RAW MATERIALS & BOI COMPONENTS														
1.1	CRCA sheet	Material properties	Major	Physical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	MTC	P	V	--			
1.2	Angle, channel, fittings, equipment, Instruments, gasket	Manufacturer TC	Major	Physical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	TC/C OC	P	V	--			
2.0 IN PROCESS INSPECTION														
2.1	Fabrication & assembly of cabinet/panel	Weld finish, layout of mounting of equipment, cable routing etc.	Major	Physical	100%	Manufacturer's STD	Manufacturer's STD	--	P	--	--			
3.0 FINAL INSPECTION														
3.1	Type test for degree of protection	Major	Electrical	-	Appd. Drg./Spec.	Appd. Drg./Spec.	TC	V	V	--	Note 2			
3.2	Routine test													
3.2.1	Starter cabinet visual & dimensional checks: Dimensional Conformity with GA Drg., Waviness, Straightness, Perpendicularity, earthing size	Major	Measurement	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.2.2	Starter cabinet operation: Manual Operation for its Moving Parts, Interlocking /Door Interlocking of Items, Location of Labels/Ferrule, Inspection of Wiring with Proper Size/ Type/ Grade of Power & Control Cables, Terminal blocks, Continuity of Panel Wiring, illumination, anti-vibration pad, proper earthing bus, name plate etc.	Major	Physical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W					
3.2.3	Starter cabinet components BOM (Make, type, rating)	Major	Physical	100%	Appd. Drg./Spec./BOM	Appd. Drg./Spec./BOM	IR	P	W	--				
3.2.4	Paint shade & paint thickness	Major	Physical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.2.5	I.R. before and after H.V. Test	Major	Electrical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.2.6	H.V. Test	Major	Electrical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.2.7	Functional checking of cabinet's various components, equipment, devices, interlock, protection circuits, indication feedback etc.	Major	Electrical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.3	Compliance of technical requirements	Major	Visual	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	COC	P	W	--				
3.4	Recommended or mandatory spares (if applicable)	Major	Visual	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.5	Identification and Marking	Major	Visual	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.6	Soundness of Packing against Transit Damage	Major	Visual	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	--	P	V	--				

Note: 1. Manufacturer to maintain calibrated instruments having better accuracy than the item under the test. Inspection Engineer shall check the same. 2. Type tests clearance from BHEL Engg. to be verified ( by inspection engineer) during inspection at vendor's works. 3. Vendor has to provide TC/IR mentioning above Q.P. clauses and also index/summary sheet for co-relation of TC/IR with QP clauses. TPIA to check the same.

MANUFACTURER/ SUBCONTRACTOR	LEGEND: DRG: BHEL APPROVED DRAWING, APPD.: BHEL APPROVED, SPEC: SPECIFICATION, BOM: BILL OF MATERIAL, MTC: MATERIAL TEST CERTIFICATE, T.C.: TEST CERTIFICATE, I.R.: INSPECTION REPORTS, COC: CERTIFICATE OF CONFORMANCE, M: MANUFACTURER / SUBCONTRACTOR, B: BHEL /BHEL NOMINATED INSPECTION AGENCY, N: END CUSTOMER, 'P': PERFORM, 'W': WITNESS, 'V': VERIFICATION, "V" RECORDS IDENTIFIED WITH 'TICK' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION. ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER	FOR CUSTOMER USE	APPROVED BY
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MANUFACTURER'S NAME AND ADDRESS			STANDARD QUALITY PLAN						TO BE FILLED BY BHEL			TO BE FILLED BY BHEL										
BHEL	VENDOR'S NAME	ITEM	GENERATOR INSTRUMENT CABINET		QP NO.	QA/BE/QP/305		REV. NO.	00	Date: 11.04.2025		TO BE FILLED BY BHEL	TO BE FILLED BY BHEL									
			DRG. No. & Rev.		As per P.O.																	
			SPEC.		TG60668																	
			Rev.		As per P.O.					Page 1 of 1												
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY		REMARKS	M	B	N								
1	2	3	4	5	6	7	8	9	D	10	11											

## 1.0 RAW MATERIALS & BOI COMPONENTS

1.1	CRCA sheet	Material properties	Major	Physical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	MTC	P	V	--			
1.2	Angle, channel, fittings, equipment, Instruments, gasket	Manufacturer TC	Major	Physical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	TC/C OC	P	V	--			

## 2.0 IN PROCESS INSPECTION

2.1	Fabrication & assembly of cabinet/panel	Weld finish, layout of mounting of equipment, cable routing etc.	Major	Physical	100%	Manufacturer's STD	Manufacturer's STD	--	P	--	--			
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## 3.0 FINAL INSPECTION

3.1	Type test for degree of protection	Major	Electrical	-	Appd. Drg./Spec.	Appd. Drg./Spec.	TC	V	V	--	Note 2			
3.2	Routine test													
3.2.1	Cabinet visual & dimensional checks: Dimensional Conformity with GA Drg., Waviness, Straightness, Perpendicularity, earthing size etc.	Major	Measurement	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.2.2	Cabinet operation: Manual Operation for its Moving Parts, Interlocking /Door Interlocking of Items, Location of Labels/Ferrule, Inspection of Wiring with Proper Size/ Type/ Grade of Power & Control Cables, Terminal blocks, Continuity of Panel Wiring, illumination, anti-vibration pad, proper earthing bus, name plate etc.	Major	Physical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W					
3.2.3	Cabinet components BOM (Make, type, rating)	Major	Physical	100%	Appd. Drg./Spec./BOM	Appd. Drg./Spec./BOM	IR	P	W	--				
3.2.4	Paint shade & paint thickness	Major	Physical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.2.5	I.R. before and after H.V. Test	Major	Electrical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.2.6	H.V. Test	Major	Electrical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.2.7	Functional checking of cabinet's various components, equipment, devices, interlock, protection circuits, indication feedback etc.	Major	Electrical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.2.8	Functional checking of level switch with probe	Major	Electrical	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.3	Compliance of technical requirements	Major	Visual	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	COC	P	W	--				
3.4	Recommended or mandatory spares (if applicable)	Major	Visual	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.5	Identification and Marking	Major	Visual	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	IR	P	W	--				
3.6	Soundness of Packing against Transit Damage	Major	Visual	100%	Appd. Drg./Spec.	Appd. Drg./Spec.	--	P	V	--				

Note: 1. Manufacturer to maintain calibrated instruments having better accuracy than the item under the test. Inspection Engineer shall check the same. 2. Type tests clearance from BHEL Engg. to be verified ( by inspection engineer) during inspection at vendor's works. 3. Vendor has to provide TC/IR mentioning above Q.P. clauses and also index/summary sheet for co-relation of TC/IR with QP clauses. TPIA to check the same.

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