

QUALITY PLAN FOR 36kV SWITCHGEAR (TYPE - VBF BREAKER)

SL. NO.	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORM	FORMAT OF RECORD	AGENCY	REMARKS
I) RAW MATERIAL INSPECTION										
1	Fabricated components (With painting.)	a) Dimensions. b) Finish c) Shade d) Thickness e) Adhesion	Major " " Major	Visual Measurement Visual Visual	a) 3 pcs.min. b) II AQL 1.5 c) 2 pcs./batch d) 2 pcs./batch e) 2 pcs./batch	Drawing " " " "	Drawing " " " "	Data in SAP for status " " "	Mfr. & QC " " "	
II) COMMON COMPONENTS										
1	Insulator	a) Dimension b) Mechanical strength c) Power frequency d) Surface finish	Major " " "	Measurement Measurement Measurement Visual	a) II AQL 1.5 b) 2 Pcs./Batch c) 2 Pcs./Batch d) 100 %	Drawing " " "	Drawing " " "	Data in SAP for status & TC	Mfr. & QC Mfr. Mfr. Mfr. & QC	
2	Stainless steel Hardwares / Galvanised Hardware	a) Dimension b) Threading c) Hardness	Major " "	Measurement Gauging Measurement	a) S4 AQL 1.5 b) S4 AQL 1.5 c) S4 AQL 1.5	Drawing " "	Drawing " "	Data in SAP for status	Mfr. & QC	
3	High tensile bolts - zinc electro plated	a) Dimension b) Threading c) Hardness	Major " "	Measurement Gauging Measurement	a) S4 AQL 1.5 b) S4 AQL 1.5 c) S4 AQL 1.5	Drawing " "	Drawing " "	Data in SAP for status	Mfr. & QC " "	
4	Wiring plate assy / harness assembly	a) Schematic wiring inspection b) Crimping quality. c) Tightness of wires with TBS. d) Visual for routing.	Major " " "	Measurement " " "	a) 100% with VC b) Sampling c) Sampling d) 100%	Std.drg. " " "	Std.drg. " " "	Data in SAP for status & TC	Mfr. & QC " Mfr. "	

For Customer:
Project :

Issued By :
Date :
Q.P.No :

Rev.No.

Page : 1 / 5

MANAGER -


Date :

CUSTOMER



BIHAR STATE POWER TRANSMISSION CO. LTD.

QUALITY PLAN FOR 36kV SWITCHGEAR (TYPE - VBF BREAKER)

SL. NO.	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORM	FORMAT OF RECORD	AGENCY	REMARKS
MANAGER - QC										
III) COMMON PROCESS										
1	Silver plating	a) Thickness b) Adhesion	Major Major	Measurement Measurement	a) 1 pc./batch b) II AQL 1.5	Drawings Drawings	Drawings Drawings	Data in SAP for status	Mfr & QC	
QUALITY PLAN FOR BREAKER										
I) POLE COMPONENTS										
1.	Vacuum bottle	a) Dimensions b) Finish	Major "	Measurement "	a) II AQL-1.5 b) 100 %	Drawing "	Drawings "	Data in SAP for status & TC	Mfr. & QC Mfr. & QC	
2	Crank housing	a) Dimensions b) Material c) Other checks	Major " "	Measurement Analysis Visual	a) III AQL1.5T b) 2pcs.batch c) 100%	Drawing " "	Drawings " "	Data in SAP for status & TC	Mfr. & QC	
3	Insulating rod	a) Dimensions b) Material c) Finish	Major " "	Measurement Analysis Visual	a) II AQL1.5 b) 2pcs.batch c) 100%	Drawing " "	Drawing " "	Data in SAP for status & TC	Mfr. & QC	
4	Crank shaft	a) Dimensions b) Material c) Other checks	Major " "	Measurement Analysis Visual	a) III AQL1.5T b) 2pcs.batch c) 100%	Drawing " "	Drawing " "	Data in SAP for status & TC	Mfr. & QC Mfr.	
5	Pole Lever	a) Dimensions b) Material c) Other checks	Major " "	Measurement Analysis Visual	a) III AQL1.5T b) 2pcs.batch c) 100%	Drawing " "	Drawing " "	Data in SAP for status & TC	Mfr. & QC Mfr. QC	
6	Terminal Plate	a) Dimensions b) Finish c) Material	Major " "	Measurement Visual Analysis	a) II AQL1.5 b) 100% c) 1pcs./batch	Drawing " "	Drawing " "	Data in SAP for status & TC	Mfr. & QC QC Mfr.	
For Customer: Project :			Issued By : Date Q.P.No:			Rev.No.			Page : 2 / 5	
			Date :			CUSTOMER  BIHAR STATE POWER TRANSMISSION CO. LTD.				

QUALITY PLAN FOR 36kV SWITCHGEAR (TYPE - VBF BREAKER)

SL. NO.	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORM	FORMAT OF RECORD	AGENCY	REMARKS
7	Terminal Plate	a) Dimensions b) Finish c) Material	Major " "	Measurement Visual Analysis	a) II AQL1.5 b) 100% c) 1pcs./batch	Drawing " "	Drawing " "	Data in SAP for status & TC	Mfr. & QC QC Mfr.	
II) OPERATING MECHANISM COMPONENTS										
1.	Operating Mech. Assly.	a) Dimension b) Finish	Major "	Measurement Visual	a) II AQL-1.5 b) 100%	Drawing "	Drawing "	Data in SAP for status	Mfr. & QC	
2.	Tripping Spring Mech.Assly.	a) Dimension b) Finish	Major "	Measurement Visual	a) II AQL-1.5 b) 100%	Drawing "	Drawing "	Data in SAP for status	Mfr. & QC	
4.	Shock Absorber	a) Dimension b) Finish	Major "	Measurement Visual	a) II AQL-1.5 b) 100%	Drawing "	Drawing "	Data in SAP for status	Mfr. & QC	
5.	Micro switch	a) NO+NC contact position & Dimn.	Major "	Visual & Measurement	a) II AQL1.5 b) II AQL 1.5	Drawing "	SWP "	Data in SAP for status	Mfr. & QC	
6.	Aux.switch	a) NO+NC contact position b) Terminal marking c) Dimension	Major " "	Test elec. Visual Measurement	a) S3 AQL 1.5 b) S3 AQL 1.5 c) S3 AQL 1.5	Drawing " "	SWP " "	Data in SAP for status & TC	Mfr. & QC " "	
7.	Motor with gear box	a) No load current b) RPM c) Load Test d) Dimension e) Insulation	Minor Major " Minor Major	Measurement " " " Electrical	a) S4 AQL 1.5 b) S4 AQL 1.5 c) 100 % d) S4 AQL 1.5 e) S4 AQL 1.5	Drawing " " " "	SWP " " " "	Data in SAP for status & TC	Mfr. & QC " Mfr. Mfr. & QC Mfr.	

For Customer:
Project :

Issued By :
Date :
Q.P.No. :

Date :


Page : 3 / 5

CUSTOMER



BIHAR STATE POWER TRANSMISSION CO. LTD.

QUALITY PLAN FOR 36kV SWITCHGEAR (TYPE - VBF BREAKER)

SL. NO.	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORM	FORMAT OF RECORD	AGENCY	REMARKS	
8	Trip / Close Coils	a) Resistance b) Insulation	Major "	Measurement Electrical	a) 1 AQL 1.5 b) 1 AQL 1.5	Drawing "	SWP "	Data in SAP for status & TC	Mfr. & QC "		
III	BREAKER SUB-ASSEMBLIES.										
1.	Breaker pole	Completeness	Major	Visual	100 %	Drawing	Drawing	Register	Self Insp.		
2.	Inter pole link Y - B	Completeness	Major	Visual	100 %	Drawing	Drawing	Register	Self Insp.		
3.	Inter pole link R - Y	Completeness	Major	Visual	100 %	Drawing	Drawing	Register	Self Insp.		
4.	Drive Link assly.	Completeness	Major	Visual	100 %	Drawing	Drawing	Register	Self Insp.		
5.	Crank housing assly.	Completeness	Major	Visual	100 %	Drawing	Drawing	Register	Self Insp.		
6.	Insulating Rod Assly	Completeness	Major	Visual	100 %	Drawing	Drawing	Register	Self Insp. & QC		
For Customer: Project :			Issued By : Date Q.P.No:				Rev.No.		Page : 4 / 5		
			Date :				CUSTOMER  BIHAR STATE POWER TRANSMISSION CO. LTD.				

QUALITY PLAN FOR 36kV SWITCHGEAR (TYPE - VBF BREAKER)

SL. NO.	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORM	FORMAT OF RECORD	AGENCY	REMARKS
IV	FINAL TESTING OF BREAKER									
1.	Vacuum breaker out door VBF	a) Measurement of resistance of main circuit.	Major	Electrical	100 %	SWP	IEC : 62271-100 & Approved Drg.	Test cert.	QC	Customer witness Inspection on sampling of 10% of the lot
		b) Operation test (on no load)	Major	Mechanical	100 %	IEC : 62271-100	"	Routine test cert.	QC	
		i) 5 closing & 5 opening operations at specified min. voltage.	"	"	"	"	drg.	"	"	
		ii) 5 closing & 5 opening operations at specified max. voltage.	"	"	"	"	"	"	"	
		iii) At rated volt. 5 close-open operation with tripping mech. energised by closing of main contacts.	Major	Routine	100 %	IEC : 62271-100	IEC : 62271-100	Routine test cert.	QC	
		iv) 5 Close & open operation at rated voltage.	"	"	"	"	"	"	"	
		c) One minute power freq. dry withstand test on main circuits.	"	"	"	"	"	"	"	
		d) One minute power freq. dry withstand test on aux. Circuit	"	"	"	"	"	"	"	

For Customer:
Project :

Issued By :
Date
Q.P.No:
Date :

Rev.No.

Page : 5 / 5

CUSTOMER



BIHAR STATE POWER TRANSMISSION CO. LTD.