			BIHAR STATE POWER T	RANSMISS	ION COMPANY LI	MITED		
		МА	NUFACTURING QUALITY PLAN -	- ISOLATOR &	& EARTHING SWITCHES	UPTO 400kV		
Manufacti	urer's Logo	Customer	Item	Vendor's Code	Manufacturer,Name & Add.	MQP No: 021 Rev. No. 00	Valid from: 15.01.2016	
		BSPTCL	ISOLATOR & EARTHING SWITCHES UPTO 400kV			Date: 04.01.2016	Valid upto: Till Revision	
Code 1 A B C D E F	Indicates place when At Equipment Manuf At Component Manuf At Authorised Distrib At Independent Lab At Turn Key Contrac Not specified	acturer's works facturer's works utor's place	be performed i.e. Inspection location	Code 2 J K L M	Indicates who has to perfor The Equipment Manufacturer The Component Manufacture The Third Party The Turnkey Contractor	. Č	Agency	
Code 3 Indicates who shall witness the tests i.e. Witnessing Agency Code 4 Review of Test Reports/Certificates P Component Manufacturer itself W By Equipment manufacturer Q Component Manufacturer and Equipment Manufacturer X By Contractor during product/process inspection R Component Manufacturer itself Y By BSPTCL during product/process inspection S Equipment Manufacturer itself Z By Contractor and/or BSPTCL during product/process inspection T Equipment Manufacturer, Contractor and BSPTCL Y Third Party itself								
Code 5 E N	Whether specific app Envisaged Not Envisaged	proval of sub-vendor / Co	omponent make is envisaged?	Code 6 Y N	Whether test records require Dispatch Instructions/Clearar Yes No		nal inspection for issuance of	

Notes:

1. The MQP should be read in conjunction with BSPTCL specification and shall deem to include additional tests if any required as per the contract.

2. BSPTCL specification shall include provisions of letter of Award , BSPTCL approved drawings /technical data sheet / BOM / test schedule / test procedure applicable to the specific contract.

3. In case of any contradiction between the manufacturer's plant standards , this MQP and BSPTCL specification following precedence shall be followed :-

- a) BSPTCL specification .
- b) This Manufacturing Quality plan .
- c) Manufacturer's plant standards .

4. It is the responsibility of the manufacturer to ensure that this document is readily available at their works, as well as at the works of their sub vendors in order to avoid any delay at the time of inspection.

5. The manufacturer shall ensure that their as well as their sub vendors control, metering & testing instruments are duly calibrated and should have calibration certificates traceable. to Indian / International standards. Calibration records should be available during inspection by BSPTCL. Key testing instruments will be calibrated only by NABL accredited laboratories.

6. In case of any tests being carried out at third party lab , such lab / facility should be NABL accredited / accepted by BSPTCL.

7. Witnessing of Acceptance Tests by BSPTCL shall be on 10% of each type offered lot for acceptance test. The Contractor or Equipment Manufacturer will inform in advance the serial number of equipment/items being offered for inspection, so that BSPTCL can inform in advance to keep the selected samples ready for witnessing.

BSPTCL ISOLATOR & EARTHING SWITCHES UPTO 400kV Rev. No. 00 Valid upto: 1301.2016 Date: 04.01.2016 Valid upto: Till Revision	Manufacturer's Logo	Customer	Item	Vendor's Code	Manufacturer,Name & Add.	MQP No: 021	Valid from: 15.01.2016
Reput						Rev. No. 00	Valid Holli: 15:01:2010
		BSPTCL				Date: 04.01.2016	Valid upto: Till Revision

8. The manufacturer shall maintain the proper co-relation of test certificates from raw material stage to finished product stage and the records should be available during inspection . by BSPTCL.

9. Manufacturer shall show the approval of BSPTCL engineering for all contract specific type tests, including specific type tests if any as per the BSPTCL specification, at the time of final inspection.

10. All packing cases should be marked with BSPTCL LOA details , name of project , item description and Dispatch Instructions/Clearance number (by which material has been cleared for dispatch) .

11. One copy of test report, Dispatch Instructions/Clearance shall also be sent along with consignment.

12. Inspection of spare items ordered by BSPTCL shall also be governed by the provisions of this MQP. Items if not governed under MQP shall be offered for inspection as per BSPTCL specifications / Relevant-Indian / International Specification .

13. The manufacturer shall align their quality system and that of their sub-vendors to the requirements of latest ISO 9000 quality standards in a time bound manner .

14. The list of component manufacturers for which approval are envisaged is enclosed herewith.

15. BSPTCL may review the effective implementation of the processes during the product-inspection / process-inspection. In case any violation in process or process parameters are observed, the reason along with corrective & preventive measures shall be conveyed to BSPTCL within 2 weeks.

16. In case of any discrepency between TS/Approval drawing and MQP, details mentioned in TS/approved drawing shall prevail.

17. Any addition change in new vendor/design/process shall call for review by BSPTCL and change in MQP, if necessary.

EM : Equipment Manufacturer CMTC : Component Manufacturer's Test Certificate



BIHAR STATE POWER TRANSMISSION COMPANY LIMITED

MANUFACTURING QUALITY PLAN -- ISOLATOR & EARTHING SWITCHES UPTO 400kV

Customer : BIHAR STATE POWER TRANSMISSION COMPANY LIMITED

Manufacturer :

MQP No: 021

Item: DISCONNECTORS / ISOLATORS

SI. No	INDEX SHEET	Page No.
1	Cover Sheet with Notes and Codes	1 & 2
2	Process Flow Chart	1
3	Raw Material Inspection	1 to 4
4	In - Process Inspection	4 to 5
5	Final Acccceptance Inspection & Testing	5 to 6
6	Packing & Despatch	6
7	List of Component Manufacturer	1 to 5

		BI	HAR STATE POW	'ER TRANSMI	SSION COMPAN	Y LIMITEI)								
		MANUE	MANUFACTURING QUALITY PLAN ISOLATOR & EARTHING SWITCHES UPTO 400kV												
Manufacture	er's Logo	Customer	Item	Vendor's Code	Manufacturer Name	MQP No: 021									
	Address:	BSPTCL	ISOLATOR & EARTHING			Rev. No. 00			Vali	id froi	n: 18	5.01.2	016		
		BOFICE	SWITCHES UPTO 400kV			Date: 04.01.20	016		Vali	id upt	o: Ti	ll Rev	ision		
S.No	Components / Operations & Description of Test	Type of Check	Quantam of Check / Sampling with basis	Reference Document for Testing	Acceptance Norms	Format of Record		Appli	cable	e Coo	les		Remarks		
							1	2	3	4	5	6			
	SECTION - 1: RAW MATERIAL I	NSPECTION													
Α	ELECTRICAL ITEMS														
1.1	CONTACTORS										Е				
а	Appearance	Visual					А	J	s	W		N			
b	Operation test at rated voltage	Electrical	S&S Sampling Plan	IS 13947	IS 13947	ONTO	В	ĸ	P	W		N			
с	Verification of limits of Voltage	Electrical	IS 2500 Pt - 1	(Part 4 / Sec4)	(Part 4 / Sec4)	CMTC	В	К	Р	W		Ν			
d	H.V Test	Electrical		IS 6875	IS 6875		в	к	Р	W		Ν			
1.2	OVER LOAD RELAYS										Е				
а	Appearance	Visual	S&S Sampling Plan	IS 13947	IS 13947		Α	J	S			Ν			
b	H.V Test	Electrical	IS 2500 Pt - 1	(Part 4 / Sec1)	(Part 4 / Sec1)	CMTC	В	К	Ρ	W		Ν			
1.3	PUSH BUTTONS					-					E				
1.3 a	Appearance	Visual	S&S Sampling Plan				A	J	S	W	E	N			
b	H.V Test	Electrical	IS 2500 Pt - 1	IS 6875	IS 6875	CMTC	B	ĸ	P	W		N			
5	1.0 1630	Liectrical	18 2300 1 1 - 1				0	N	<u> </u>	vv					
1.4	TERMINAL BLOCKS										Е				
а	Appearance	Visual					А	J	s	W		Ν			
b	I R Value	Electrical					В	K	Р	W		Ν			
С	Continuity Check	Electrical	S&S Sampling Plan IS 3669	IS 3669	IS 3669	CMTC	Α	J	S	W		Ν			
d	H.V.Test	Electrical					В	K	Ρ	W		Ν			
е	Check for wire grip	Mechanical					Α	J	S	W		Ν			
4 -						+					-				
1.5	AUXILIARY SWITCHES	\/:	0.000			+		<u> </u>	-	144	Е				
a b	Appearance I R Value	Visual Electrical	S&S Sampling Plan IS 2500 Pt - 1				AB	J K	S P		<u> </u>	N N			
D C	I R Value H V test	Electrical	15 2000 Pt - 1	IS 6875	IS 6875	CMTC	В	ĸ	P	W	-	N			
d	Verification of NO & NC Contacts	Electrical					A	J	S		\vdash	N			
u	Volinication of NO & NO Colliacts	LIGUIIUAI				+	~	J	3	**	-	IN I			
1.6	HEATERS					1			1	1	Е				
a	Appearance	Visual	S&S Sampling Plan			1	А	J	S	W	Ē	N			
b	I R Value	Electrical	IS 2500 Pt - 1	100440	100440	ONTO	В	K	P		1	N			
С	H V test	Electrical		IS6446	IS6446	CMTC	В	К	Р			Ν			
d	Functional check	Mechanical					Α	J	S	W		Ν			

		BI	HAR STATE POW	ER TRANSMI	SSION COMPAN	Y LIMITEI)							
		MANUF		PLAN ISOLATO	R & EARTHING SWIT	CHES UPTO	400kV							
Manufacture	r's Logo	Customer	Item	Vendor's Code	Manufacturer Name	MQP No: 021								
	Address:		ISOLATOR & EARTHING			Rev. No. 00			Valio	d from: 15.01.2016				
		BSPTCL	SWITCHES UPTO 400kV			Date: 04.01.20)16		Valio	d upto	o: Till	Revisi	ION	
S.No	Components / Operations & Description of Test	Type of Check	Quantam of Check / Sampling with basis	Reference Document for Testing	Acceptance Norms	Format of Record	A	pplic	able	Cod	es		Remarks	
							1 :	2	3	4	5	6		
1.7	FUSE Fittings & Fuse links										Е			
а	Appearance	Visual	S&S Sampling Plan					J	S	W	L T	Ν		
b	Verification of amper range of Fuse Link	Electrical	IS 2500 Pt - 1					J	S	W		Ν		
С	Dimensional Check	Mechanical		IS 9224 (Pt 1 & 2)	IS 9224 (Pt 1 & 2)	CMTC		J	S	W		Ν		
d	I R Value	Electrical						K	Р	W		Ν		
e	H V test	Electrical					B	K	Р	W		Ν		
1.8	INTERLOCK COILS										Е			
а	Appearance	Visual	S&S Sampling Plan					J				Ν		
b	I R Value	Electrical	IS 2500 Pt - 1					K	Ρ	W		Ν		
С	H V test	Electrical		QP/D/E/019	QP/D/E/019	CMTC		K	Р	W		Ν		
d	Operation Check	Mechanical						J	S	W		Ν		
e	Limits of Operation	Mechanical					A	J	S	W		Ν		
											_			
1.9	CIRCUIT BREAKER (MCBs)					-			_		Е			
a	Appearance	Visual	S&S Sampling Plan	IEC 60898-1-2002/	IEC 60898-1-2002/			J	S	W		N		
b	Dimensional Check	Electrical	IS 2500 Pt - 1	IS 8828-1996	IS 8828-1996	CMTC		J		W		N		
c	I R Value	Electrical						K	Р	W		N		
d	H V test	Electrical					В	K	Ρ	W		Ν		
4 40	MOTORS										Е			
1.10		Visual	CRC Compling Dir-						S	W		N		
a b	Appearance Dimensional check	Electrical	S&S Sampling Plan IS 2500 Pt - 1					J J	S		\vdash	N		
D C	I R Value	Electrical	13 2000 Pt - 1					J K	P	W		N		
c d	H V test	Electrical	4	IS 325	IS 325	CMTC		n K	P	W		N		
-	No load operation	Electrical	4	13 323	10 323	CIVITO		n J	P S	W		N		
e f	Blocked Rotor Test	Electrical	4					J	S	W		N		
g	Verification of limits of operation	Electrical	4					J	S	W		N		
у	vermeation of innits of operation	Electrical					~ ·	J	3	vv	\vdash	IN		
1. 11	GASKET (EPDM) / Neopherne						1 1				Е			
a. 11	Shore Hardness	Mechnical	1	<u> </u>			В	ĸ	Р	W		N		
b	Aging test	Mechnical	S&S Sampling Plan	Manufacturer std/	Manufacturer std/	СМТС		ĸ	P	W		N		
c	Dimensional check	Mechnical	IS 2500 Pt - 1	ASTMD - 1171	ASTMD - 1171	00		J	S	W		N		
d	Appearance	Visual						ĸ	P	W		N		
e	Chemical Composition	Chemical		<u> </u>		1		ĸ	P	W		N		
-			1	1										
1.12	THERMOSTATS						1 1				Е		-	
a	Appearance	Visual	S&S Sampling Plan	10.0017	10.0017	01/70	A	J	S	W		N		
b	Verification of limits of operation	Electrical	IS 2500 Pt - 1	IS 3017	IS 3017	CMTC		J	S	W		N		

		BI	HAR STATE POW	ER TRANSMI	SSION COMPAN	Y LIMITEI)									
		MANUF		PLAN ISOLATO	R & EARTHING SWIT	CHES UPTO	400k\	/								
Manufacture	er's Logo	Customer	Item	Vendor's Code	Manufacturer Name	MQP No: 021			1							
	Address:	DODTO	ISOLATOR & EARTHING			Rev. No. 00			Vali	d froi	m: 15	5.01.2	016			
		BSPTCL	SWITCHES UPTO 400kV			Date: 04.01.20	016		Vali	d upt	o: Til	l Revi	sion			
S.No	Components / Operations & Description of Test	Type of Check	Quantam of Check / Sampling with basis	Reference Document for Testing	Acceptance Norms	Format of Record		Appli	icable	able Codes			able Codes			Remarks
							1	2	3	4	5	6				
1. 13	CASTLE LOCKS										Е					
	1) Appearance	Visual	100%	Manufacturer' s	Manufacturer' s	CMTC	Α	J	S			N				
	2) Dimension	Mechanical	S&S Sampling Plan	Catalogue	Catalogue		А	J	S	W		Ν				
1, 14	ROTARY SWITCHES AND										Е					
1.14	TOGGLE SWITCHES										E					
а	Appearance	Visual	S&S Sampling Plan	S&S Sampling Plan	Manufacturer' s		А	J	S	W		N				
b	Sequence test	Electrical	IS 2500 Pt - 1	IS 2500 Pt - 1	Catalogue	CMTC	A	.1	S			N				
c	H V test	Electrical	10 2000 1 1 1	10 2000 1 1	oddalogdo		B	ĸ	P			N				
d	Functional Check	Mechanical					A	J	S			N				
1. 15	LIMIT SWITCHES										Е					
а	Appearance	Visual	S&S Sampling Plan	IS 6875	IS 6875	СМТС	Α	J	S	W		Ν				
b	H V test	Electrical	IS 2500 Pt - 1			CIVITO	В	K	Р			Ν				
С	Functional Check	Mechanical					Α	J	S	W		Ν				
В	OTHER ITEMS															
1.16	MS STRUCTURAL STEEL	Mechanical									Е					
	(Chennels, sheets, plates,															
	rods & flats)		S&S Sampling Plan	IS 2062, IS 1079	IS 2062, IS 1079	01/70			-							
a	Appearance	Visual	IS 2500 Pt - 1	IS 1570, 9550	IS 1570, 9550	CMTC	A	J	S			N				
b	Dimensional Check	Mechanical		IS 1852	IS 1852		A	J	S			N				
c d	Chemical Compostion Physical Properties	Mechanical Mechanical					B	K K	P P	W	-	N N				
u	Filysical Flupetties	wechanical		+			D	r.	F	vv		IN				
1.17	TUBES (STEEL & G.I)						+				Е					
a	Appearance	Visual	S&S Sampling Plan	IS 1239 PT 1 &	IS 1239 PT 1 &		А	J	s	w	-	N				
b	Dimensional Check	Mechanical	IS 2500 Pt - 1	IS 4736	IS 4736	01/70	A	J	S	Ŵ		N				
c	Chemical Compostion	Mechanical				CMTC	B	ĸ	P			N				
d	Physical Properties	Mechanical					B	K	P			N				
1.18	ALUMINIUM TUBES, FLATS								1							
	PROFILES / 63401 WP										Е					
а	Appearance	Visual	S&S Sampling Plan	IS 2678 / IS 3965	IS 2678 / IS 3965		Α	J	S			Ν				
b	Dimensional Check	Mechanical	IS 2500 Pt - 1	IS 5082 / IS 733	IS 5082 / IS 733	СМТС	Α	J	S			Ν				
С	Chemical Compostion	Mechanical				00	В	K	Ρ	W		Ν				
d	Physical Properties	Mechanical					В	Κ	Р	W		Ν				

		BI	HAR STATE POW	ER TRANSMI	SSION COMPANY	Y LIMITEI)						
V		MANUF	ACTURING QUALITY	PLAN ISOLATO	R & EARTHING SWIT	CHES UPTO	400k\	/					
Manufacture	er's Logo	Customer	Item	Vendor's Code Manufacturer Name		MQP No: 021							
	Address:	BSPTCL	ISOLATOR & EARTHING			Rev. No. 00			Vali	d fror	n: 15	.01.2	016
		BSFICE	SWITCHES UPTO 400kV			Date: 04.01.20	16		Valid upto:			l Revi	sion
S.No	Components / Operations & Description of Test	Type of Check	Quantam of Check / Sampling with basis	Reference Document for Testing	Acceptance Norms	Format of Record		Appli	cable	e Cod	es		Remarks
							1	2	3	4	5	6	
1.19	COPPER RODS, PROFILES,												
	FLATS / PIPES								_		Е		
a	Appearance	Visual	S&S Sampling Plan	IS 613 / IS 191	IS 613 / IS 191		A	J	S	W		N	
b	Dimensional Check	Mechanical	IS 2500 Pt - 1	IS 2501 / IS 1897	IS 2501 / IS 1897	01/70	A	J	S	W		N	
c	Chemical Compostion	Mechanical		IS 2826, IS 5493	IS 2826, IS 5493	CMTC	В	K	Р	W		N	
d	Physical Properties	Mechanical					В	ĸ	P	W		N	
е	Conductivity	Mechanical					A	J	S	VV		Ν	
1.20	SILVER PLATED COMPONENTS										Ν		
	Appearance	Visual	5% per lot	As par approved dra			А	-	S	W	IN	N	
a b	Coating Thickness	Mechanical	2 per lot	As per approved drg	As per approved drg	CMTC	A	J	S			N	
D	Coating mickness	Wechanical	2 per lot			OMITO	A	J	3	VV/Z		IN	
	SECTION 2: INPROCESS INSPE	CTION											
2.1	DRIVE ASSY	Operation	IS 9921/	IS 9921/	IS 9921/								
		Check	IEC - 62271 - 102	IEC - 62271 - 102	IEC - 62271 - 102							F	
				Apprd. Drgs	Apprd. Drgs							Ī	
				11 - 5-	11 3							Ī	
a)	Operation test (Close & Open)	Electrical	100%	IS 9921/	IS 9921/							Ē	
,		Mechanical			IEC - 62271 - 102							Ē	
					Approved drg							Ē	
												Ē	
b)	IR Value Check	Electrical	100%	More than 2 mega								Ī	
6)	In value check	Liectrical	100 %	Ohms	To be withstood							-	
												-	
c)	High Voltage test	Electrical	100%	1.75 kV / 1 min	To be withstood								
N			100/	10 0001/	10.0001/	CMTC	А	J	s	w	Ν	Ν	
d)	Dimensional Check	Mechanical	10%	IS 9921/	IS 9921/			-					
			-	IEC - 62271 - 102	IEC - 62271 - 102							-	
0)	Appo2r2020	Visual	100%	Apprd. Drgs do	Apprd. Drgs Free From Damage							-	
e)	Appearance	visuai	100%	ao	Free From Damage							-	
f)	Check for Manual operation interlock	Electrical	100%	do	OK/NOT OK							-	
1)	O/L, Relay operation	Electrical	100%	uu	OK/NOT OK							-	
	Degree of rotation	Mechanical	100%		OK/NOT OK OK/NOT OK								
	Current Drawn by motor	Electrical	100%		Not more than rated current							-	
	Powder coating thickness	Mechanical	5%		60 Microns min							-	
g)	Check for Pick-up & Drop out	Electrical	10%	IS 13947	OK/NOT OK				1				
y/	voltage on contactors	Electrical	10 /0	(Part 4 / Sec4)								-	
	voltage on contactors			(1 all 4 / 0004)	1	1	1		1			I L	

0		BI	HAR STATE POW	'ER TRANSMI	SSION COMPAN	Y LIMITEI)								
D		MANUFACTURING QUALITY PLAN ISOLATOR & EARTHING SWITCHES UPTO 400kV													
nufacture	er's Logo	Customer	Item	Vendor's Code	Manufacturer Name	MQP No: 021									
	Address:	DODTO	ISOLATOR & EARTHING			Rev. No. 00			Vali	d fror	n: 15	.01.2	016		
		BSPTCL	SWITCHES UPTO 400kV			Date: 04.01.20		Vali	d upt	o: Till	sion				
S.No	Components / Operations & Description of Test	Type of Check	Quantam of Check / Sampling with basis	Reference Document for Testing	Acceptance Norms	Format of Record		Appli	cable	e Cod	es		Remarks		
							1	2	3	4	5	6			
2.2	BASE CHANNEL				Apprd. Drgs										
	Including rotor bearing housing			Apprd. Drgs	Specn. / Apprd. Drgs /										
	assembly / Main frame structure				Apprd. Data sheet										
	assembly.														
	a) Appearance	Visual	100%	do	do				<u> </u>						
			50/						~	w					
	b) Dimensional Check	Mechanical	5%	do	do		A	J	S	vv		Ν			
	c) Check for thickness of Zinc	Mechanical	One sample per lot	86 microns / min	86 microns / min										
	coating														
2.3	Male & Female														
	Contact assembly														
	a) Appearance	Visual	100%	IS 9921 / IEC 129	IS 9921 / IEC 129										
				Apprd. Drgs	Apprd. Drgs										
	b) Dimensional Check	Mechanical	5%	do	Specn. / Apprd. Drgs / Apprd. Data sheet										
										I					-
	c) Contact Resistance/ MV drop	Electrical	100%	1.2 Times Type Test	1.2 Times Type Test		А	J	s	w		N			
	test			value Max.	value Max.		A	J	3	vv					
2.4	EARTH SWITCH														
2.7	a) Appearance	Visual	100%	IS 9921 / IEC 129	IS 9921 / IEC 129	-									
	b) Dimensional Check	Mechanical	5%	Apprd. Drgs	Apprd. Drgs		1		1						
	.,		270			1	1								
3	SECTION 3: FINAL INSPECTION	1	•												
3.1	ACCEPTANCE TEST ON	Visual	10% of each	IS 9921 / IEC 129 /	IS 9921 / IEC 129										
	COMPLETE ISOLATOR ASSEMBLY	Mechanical	type per lot	IEC - 1129 /	IEC - 1129 /				Ι						
	& ALL ACCESSORIES AS PER	Electrical	(To the nearest whole no.)	IEC 62271-102	IEC 62271-102		A	J	U	W/Z		Y			
	BSPTCL SPECN. / APPRD.		(Minimum one)	Apprd. Drgs	Apprd. Drgs		1								
	DRGS.								1						
	With available standard insulator									1					
	and support structure can be used														
	for acceptance test minimum 2 mt														
	height to the approved drawing														
	Forming part of the same Isolator with														
	MOM (All acceptance Test as per														
	contract to be conducted)								Г						

		BI	HAR STATE POW	'ER TRANSMI	SSION COMPAN	Y LIMITED)						
V		MANUFACTURING QUALITY PLAN ISOLATOR & EARTHING SWITCHES UPTO 400kV											
lanufacture	r's Logo	Customer	Item	Vendor's Code	Manufacturer Name	MQP No: 021							
	Address:	BSPTCL	ISOLATOR & EARTHING			Rev. No. 00			Vali	d from	n: 15.01	.2016	
		SWITC	SWITCHES UPTO 400kV	V	D	Date: 04.01.20		Vali	d upto	: Till R	evision		
S.No	Components / Operations & Description of Test	Type of Check	Quantam of Check / Sampling with basis	Reference Document for Testing	Acceptance Norms	Format of Record				e Code		Remarks	
							1	2	3	4	56		
3.2	Operation test			4					1				
	Witness 50 operation in high voltage & 5					_	L	L	<u> </u>				
	operation in low voltag at rated motor	Mechnical		IEC 62271-102	IEC 62271-102	Routine	А	J	U	W/Z	Y		
	votage.MV drop test will be checked	Electrical		Apprd. Drgs	Apprd. Drgs	Test report	<u> </u>		_				
	before & after operation (Contact Resistance					D. C.	<u> </u>		_				
	i) Check for current drawn by motor	Electrical	-	4		Routine			1				
	& operating time Test on Motor Drive Assembly a) Main Stroke b) Motor Drive Starting Current c) Continous Current d) Moving Time Switching Device d) Test on Control Circuit with dif. Voltages			do	do	Test report	A	J	U	W/Z	Ň		
	ii) Check for manual (Mech)).	Electrical				Routine						_	
	operation & interlock (electrical &	Mechanical		do	do	Test report	Α	J	U	W/Z	Y	-	
	mechanical)	Mechanica				restreport						_	
	iii) Vertically Alignment	Electrical	-			Routine			-				
	Check & Clearance Check	Mechanical		do	do	Test report	Α	J	U	W/Z	Y	-	
	Check & Clearance Check	Wechanica				reatreport						-	
	iv) General assembly	Electrical				Routine			1			_	
	Dimensional Check & Aux. Switch	Mechanical		do	do	Test report	А	J	U	W/Z	Y	, ,	
	and Limit Switch Operation	Mechanica				reatreport			1			_	
												-	
	v) Appearance for Completeness	Visual		Apprd. Drgs	Apprd. Drgs				1			_	
		visual		Appld. Digo	Appid. Digo		A	J	U	W/Z	١	,	
	vi) Dimensional measurement	Mechanical		do	do	Routine	А	J	U	W/Z	Y	,	
	between					Test report		Ŭ	Ŭ				
	Phase to earth& between											_	
	conductive parts												
	vii) Dielectric test on aux. and control ckt	Electrical		do	do			do					
4	SECTION 4: PACKING & DESPA	ТСН							1	I T			
4.1	Verification of	Visual	100%	Apprd. Drgs	Apprd. Drgs		Α	J	S	W	Ν		
	completeness of												
	equipment & accessories												
									1				
4.2	Check for soundness	Visual	100%	DO	DO		Α	J	S	W	Ν		
	packing												
4.2	Verification of Dispatch					-			<u> </u>		_		
4.3	Verification of Dispatch Instructions/Clearance Reference on Packing / Crates	Visual	100%	DO	DO		A	J	s	w	Ν	L L	

Notes:

1. Mechanical Operation Tests in Acceptance Testing as mentioned above shall be applicable as per the effective TS of a particular Project/Package. Sampling plan shall be 10% each type each lot or otherwise specified in the TS of BSPTCL.

2. If Insulators are in the scope of Isolator Manufacturer then the same shall be inspected separately (being a separate CIP item) for which separate MQP shall be followed.

3. Approval of Type Test Reports of Auxiliary Switches shall be applicable as per the effective GTR of a particular Project/Package.



BIHAR STATE POWER TRANSMISSION COMPANY LIMITED

MANUFACTURING QUALITY PLAN -- ISOLATOR & EARTHING SWITCHES UPTO 400kV

MQP No: 021



PROCESS FLOW DIAGRAM FOR ISOLATOR MANUFACTURING

