		I	BIHAR STATE	POWER TRAN	SMISSION COMPANY I	LIMITED									
			MANUFAC	TURING QUALITY	PLAN PVC CONTROL CAB	BLE									
	MANUFACTURERS	Customer	Vendor's	Item:	MQP No: 007	Valid 15.01.2016									
	DETAILS		Code			From: 15.01.2016									
				1.1 KV GRADE PVC	Rev. No. 00	Valid Till Revision									
		BSPTCL		CONTROL CABLE		Upto:									
					Date 02.01.2016	Page: 1 of 27									
					Date 02.01.2010	1 ago: 1 or 11									
	Indicates place where testing is	s planned to be				•									
Code 1	performed i.e. Inspection Location	on		Code 2	Indicate who has to perform the tes	sts i.e. Testing Agency									
					The Equipment										
Α	At Equipment Manufacturer's wo	orks		J	Manufacturer										
8.4				IS:5831 & BSPTCL	IS:5831 & BSPTCL										
В	At Component Manufacturer's w	vorks		Specification.	Specification.										
С	At Authorised Distributor's place)		L	The Third Party										
D	At Independent Lab			M	The Turnkey Contractor										
Е	At Turn Key Contractor's locatio	n													
F	Not specified				IS:209 & BSPTCL										
				IS:5831 & BSPTCL	specification										
	Indicates place who shall witne	ess tests i.e. Witn	essing	Specification.	Review of Test										
Code 3	Agency			Code 4	Reports/Certificates										
				IS:613 & BSPTCL	IS:613 & BSPTCL										
	Component Manufacturer itself			Specification	Specification										
Q	Component Manufacturer and E			X	By Contractor during product/process	s inspection									
	Component Manufacturer, Equip	pment Manufactui	er and												
R	Contractor			Y	BY BSPTCL during product/process	inspection									
					By Contractor and/or BSPTCL during	product/process									
	Equipment Manufacturer itself			Z	inspection.										
	make is envisaged?			Code 6	for issuance of Dispatch Instrcutions/	/Clearance									
	Envisaged			Y	Yes										
N	Not Envisaged				IS:5831 & BSPTCL										
				Specification	Specification										
				IS:5831 & BSPTCL											
				Specification.	IS:5831 & BSPTCL Specification.										

		Е	BIHAR STAT	TE POWER TRAN	SMISSION COMPAN	Y LIMITED								
			MANUF	ACTURING QUALITY	PLAN PVC CONTROL	CABLE								
	MANUFACTURERS	Customer	Vendor's	Item:	MQP No : 007	Valid	15.01.2016							
	DETAILS	+	Code			From:								
		BSPTCL		1.1 KV GRADE PVC CONTROL CABLE	Rev. No. 00	Valid Upto:	Till Revision							
	Date 02.01.2016 Page: 2 of 27													
_	The MOD about the condition of the	-tiith DODT	01:6:4:	d aball dages to be dead and		the anatom of								
a.	The MQP should be read in conju	ction with BSP10	CL specification an	a shall deem to include add	ditional tests if any required as pe	er the contract.								
b.	BSPTCL specification shall includ	e provisions of le	etter of Award, BSF	PTCL approved drawings /te	echnical data sheet / BOM / test	schedule /								
	test procedure applicable to the s			то предоставления		,								
C.	In case of any contracdiction betw	veen the manufa	cturer's plant stand	ards, this MQP and BSPTC	CL specification following precede	ence shall be followed :-								
	i) BSPTCL specification													
	ii) This MANUFACTURING QUA		C CONTROL CAE	BLE PVC CONTROL CAE	BLE.									
	iii) Manufacturer's plant standard	is												
d.	It is the responsibility of the manu	facturer to ensur	re that this docume	nt is readily available at the	ir works as well as at the works	of their sub vendors in								
u.	order to avaoid any delay at the ti			TIT IS TEadily available at the	works, as well as at the works	of their 3db vehicors in								
	order to avadia arry aciay at the tr	ino or mopositori												
e.	The manufacturer shall ensure that	at their as well as	s their sub vendors	control, metering & testing	instruments are duly callibrated	and should have								
	calibration certificates traceable to	Indian/Internati	onal standards. Ca	aibration records should be	available during inspection by B	SPTCL.								
	available during inspection by BS	PTCL.												
h.	Manufacturer shall show the appro		engineering for all	contract specific type tests,	including specific type tests if a	ny as per the BSPTCL								
	specification at the time of final in:	spection.												
-	All packing cases should be mark	ad with DCDTCI	LOA dotaile name	of project item description	and Dispatch Instrautions/Class	rance number by which material ha	s hoop cloared							
1.	for dispatch.	eu WILLI DOFTCL	LOA uetalis, name	e or project, item description	i and Dispatch instrutions/Clear	ance number by which material ha	s been dealed							
	Tor Giopatori.													
i.	One copy of test report, Dispatch	Instrcutions/Clea	arance shall also be	e sent along with consignment	ent.									

k	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 specification / Relevant-Indian / International Specification
ı	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.
m	All raw materials where vendor approval is envisaged to be supplied from BSPTCL approved vendors.
n	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.
0	The manufacturer shall adopt such a quality system/practice so as to ensure 100% conformity of all the input material as per technical specification/ standard requirements.

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED MANUFACTURING QUALITY PLAN -- PVC CONTROL CABLE Vendor's Item: MQP No: 007 MANUFACTURERS Customer Valid 15.01.2016 **DETAILS** Code From: 1.1 KV GRADE PVC Rev. No. 00 Valid Till Revision Upto: **BSPTCL** CONTROL **CABLE** Date 02.01.2016 Page: 4 of 27 p) All the Copper wire strands and galvanized steel wire/strips are required to be tested for each sample drawn for acceptance tests g) Strips/ wire armouring following method (a) mentioned in relevant IS 1554(I) shall not be acceptable to BSPTCL. r) For single core armoured cables, armouring should be of aluminium wire instead of galvanised steel wire/ strip. s) The filler and innersheath shall be of non-hygroscopic fire retardant materials and shall be softer than insulation. t) The manufacturer shall not offer repaired cables for inspection under no circumstances. u) The contractor shall obtain the following test certificates from their subvendor for various raw materials for review by BSPTCL i) Chemical composition of Copper wire/rod. ii) Purity of Zinc iii) All the test results of the tests carried out by their sub vendor on copper wire rod/ copper wire/XLPE Compound for insulation, PVC Compound. for inner and outer sheath and galvanised steel wire/ strips. v) The cable ends shall be properly sealed with PVC/ rubber caps and secured with the help of U nails on the side of one of the flange using galvanised steel wire at three locations 75mm apart or more covered with PVC Adhesive tape. w) The following test facilities/ calibration certificates shall be available at contractors work. Calibration of all testing and measuring equipments. Standard Resistance.

In addition to the requirement indicated at serial no 14.1.1 (v) the manufacturer shall get verified the length of 10% of the drums offered by rewinding

conductor line with clause 6.1.2.2 of IS 8130-1984.

irrespective of the sizes at the time of final inspection. If by rewindin Specification Specification

otherwise the lot will be accepted with the modification of declared length of original drums.

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Ap	plical	ble Co	des		Remarks
No.	Description of Test		Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
	RAW MATERIAL INSPECTION			IS:5831 & BSPTCL	IS:5831 & BSPTCL								
				Specification.	Specification.								
1.0	COPPER ROD/WIRE BAR				i i								
											Е		
1.1	Chemical Analysis	Chem	One Sample per	IS:191(Part-IV) and	IS:209 & BSPTCL	Manuf.	Α	J	S	W		N	Review of manufacturer's TCs
			heat per lot	IS:5831 & BSPTCL	specification	T.C./RM							or TRs from 3 rd party
			•	Specification.	(Cu+Ag) 99.90%	TEST							recognized lab at the time of
				Min. Bismuth-0.001	Min. Bismuth-0.001	REPORT							final inspection.
				IS:613 & BSPTCL	IS:613 & BSPTCL	İ							
				Specification	Specification								
				impurties excluding	impurties excluding								
				silver 0.03 Max.	silver 0.03 Max.								
1.2	Dimensions	Meas.	One sample from	IS:613, IS:2826 &	IS:613, IS:2826 &	Manuf.	Α	J	S	W		N	Review of manufacturers TCs
			each coil	BSPTCL Specn.	BSPTCL Specn.	T.C./RM							or the records of the
				T.S. 210 N/mm2	T.S. 210 N/mm2								contractor at the time of
				(Min.)	(Min.)	Ī							final inspection.
				IS:5831 & BSPTCL	IS:5831 & BSPTCL	Ī							
				Specification	Specification								
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
				Specification.	Specification.								

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Ap	plical	ole Co	des		Remarks
No.	Description of Test		Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
1.3	Resistivity/ Conductivity	Elect.	One sample from	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Manuf.	Α	J	S	W		N	Review of manufacturer's TCs
	j		each coil	Specification.	Specification.	T.C./RM							or the records of the
				Max. resistivity	Max. resistivity	TEST							contractor at the time of final
				0.01737 ohm x	0.01737 ohm x	REPORT							inspection.
				mm2/Meter at 20	mm2/Meter at 20								
				deg C. Min.	IS:209 & BSPTCL								
				IS:5831 & BSPTCL	specification								
				Specification.	of IACS.								
1.4	Cleanliness & Surface	Visual	100% on each	IS:613 & BSPTCL	IS:613 & BSPTCL	Manuf.	Α	J	S	W		N	Review of manufacturers TCS
	Smoothness (Visual Check)		coil	Specification	Specification	T.C./RM							or the records of the
				The rods shall	The rods shall	TEST							Contractor at the time of
				be bright and clean.	be bright and clean.	REPORT							final inspection.
				It shall be free from	It shall be free from								
				blisters, scale, fins,	blisters, scale, fins,								
				spills cracks and	spills cracks and								
1.5	Type / Specific Gravity	Meas.	One sample per	IS:5831 & approved	IS:5831 & approved	Manuf.	Α	J	S	W		N	Review of manufacturer's TCs
			lot of 5 MT or	data sheets	data sheets	T.C./RM							or the records of the
			part thereof	IS:5831 & BSPTCL	IS:5831 & BSPTCL	TEST							contractor at the time of final
				Specification	Specification	REPORT							inspection.
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
				Specification.	Specification.								

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Ap	plical	ole Co	des		Remarks
No.	Description of Test	Samp	Sampling with basis	s document for Testing		Record	1	2	3	4	5	6	
1.6	Visual Check for PVC	Visual	One sample per	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Manuf.	Α	J	S	W		N	Review of manufacturer's TC
	granules i.e. burns etc		lot of 5 MT or part	Specification.	Specification.	T.C./RM							or the records of the
			thereof	be generally free	be generally free	TEST							contractor at the time of final
				from burn particles	from burn particles	REPORT							inspection.
1.7	Tensile strength and	Mech	One sample per	IS:5831 & Approved	IS:209 & BSPTCL	Manuf.							Review of manufacturer's TC
	elongation before aging		lot of 5 MT or part	IS:5831 & BSPTCL	specification	T.C./RM	Α	J	S	W		N	or the records of the
			thereof	Specification.	TS-12.5 N/mm2	TEST							contractor at the time of fina
				Elongation 150%	Elongation 150%	REPORT							inspection.
				IS:613 & BSPTCL	IS:613 & BSPTCL	İ							
				Specification	Specification								
1.8	Tensile strength and	Mech	One sample per	IS:5831 & Approved	IS:5831 & Approved	Manuf.							Review of manufacturer's TO
	elongation after aging		lot of 5 MT or part	Data Sheets. Min.	Data Sheets. Min.	T.C./RM	Α	J	S	W		N	or the records of the
			thereof	TS-12.5 N/mm2	TS-12.5 N/mm2	TEST							contractor at the time of fina
				Max. variation ± 20%	Max. variation ± 20%	REPORT							inspection.
				from the actual	from the actual	Ī							
				aging.	aging.								
1.9	Loss of Mass in air oven	Therm	One sample per	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Manuf.							Review of manufacturer's TO
			lot of 5 MT or part	Specification	Specification	T.C./RM	Α	J	S	W		N	or the records of the
			thereof	IS:5831 & BSPTCL	IS:5831 & BSPTCL	TEST							contractor at the time of fina
				Specification.	Specification.	REPORT							inspection.

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Ар	plicat	ole Co	des		Remarks
No.	Description of Test		Sampling with basis	document for		Record	1	2	3	4	5	6	7
				Testing									
1.10	Thermal Stability	Therm	One sample per	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Manuf.							Review of manufacturer's TCs
			lot of 5 MT or part	Specification.	Specification.	T.C./RM							or the records of the
			thereof	The indicating paper	The indicating paper	TEST	Α	J	S	W		N	contractor at the time of final
				shall not change	shall not change	REPORT							inspection.
				colour when the	colour when the								
				insulation is kept at	IS:209 & BSPTCL								
				IS:5831 & BSPTCL	specification								
				Specification.	deg C for a period of								
				Min. 80 Minutes.	Min. 80 Minutes.								
				IS:613 & BSPTCL	IS:613 & BSPTCL								
1.11	Volume Resistivity	Elect	One sample per	Specification	Specification	Manuf.							Review of manufacturer's TCs
			lot of 5 MT or part	Data Sheets. Min.	Data Sheets. Min.	T.C./RM	Α	J	S	W		N	or the records of the
			thereof	at 27 deg C -1x10 ¹³	at 27 deg C -1x10 ¹³	TEST							contractor at the time of final
				Ohm.cm. Min. at	Ohm.cm. Min. at	REPORT							inspection.
				70 deg C -1x10 ¹⁰	70 deg C -1x10 ¹⁰								
				Ohm.cm.	Ohm.cm.								
			lot of 5 MT or part	data sheet	data sheet	T.C./RM	Α	J	S	W		N	or the records of the
			thereof			TEST							contractor at the time of final
				IS:5831 & BSPTCL	IS:5831 & BSPTCL	REPORT							inspection.
				Specification	Specification	Ī							
1.12	Visual Check for PVC	Visual	One sample per	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Manuf.							Review of manufacturer's TCs
	granules i.e. burns etc.		lot of 5 MT or part	Specification.	Specification.	T.C./RM	Α	J	S	W		N	or the records of the
			thereof	Should be generally	Should be generally	TEST							contractor at the time of final
				free from burn	free from burn	REPORT							inspection.
				particles	particles	Ī							

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference document	Acceptance Norms	Format of		Ар	plicat	ole Co	des		Remarks
No.	Description of Test		Sampling with basis	for Testing		Record	1	2	3	4	5	6]
1.13	Tensile strength and	Mech	One sample per	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Manuf.	Α	J	S	W		N	Review of manufacturer's TCs
	elongation before aging		lot of 5 MT or part	Specification.	Specification.	T.C./RM							or the records of the
			thereof	Min.TS 12.5 N/mm2	Min.TS 12.5 N/mm2	TEST							contractor at the time of final
				Elongation 150%	Elongation 150%	REPORT							inspection.
				(min.)	(min.)								
					IS:209 & BSPTCL								
1.14	Tensile strength and	Mech	One sample per	IS:5831 & BSPTCL	specification	Manuf.	Α	J	S	W		N	Review of manufacturer's TCs
	elongation after aging		lot of 5 MT or part	Specification.	Specification.	T.C./RM							or the records of the
			thereof	Min.TS 12.5 N/mm2	Min.TS 12.5 N/mm2	TEST							contractor at the time of final
				IS:613 & BSPTCL	IS:613 & BSPTCL	REPORT							inspection.
				Specification	Specification								
				value before aging	value before aging								
				Elongation 150%	Elongation 150%								
				(min.) Max. variation	(min.) Max. variation								
				± 20% from the	± 20% from the								
				actual values before	actual values before								
													inspection.
1.15	Thermal Stability	Therm	One sample per	IS:5831 & BSPTCL	IS:5831 & BSPTCL		Α	J	S	W		N	Review of manufacturer's TCs
			lot of 5 MT or part	Specification	Specification	T.C./RM							or the records of the
			thereof	IS:5831 & BSPTCL	IS:5831 & BSPTCL	TEST							contractor at the time of final
				Specification.	Specification.	REPORT							inspection.
				when the Sample	when the Sample								
				of Sheath is kept at	of Sheath is kept at								
					200 deg.C for a								
				period of min. 40	period of min. 40								
				minutes	minutes								

Sr.	Components / Operations &	Type of	Quantum of Check /	Reference	Acceptance Norms	Format of		Ар	plica	ble Co	des		Remarks
No.	Description of Test	Check	Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
1.16	Oxygen Index Test on PVC	Envir.	One sample per	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Manuf.	Α	J	S	W		N	Review of manufacturer's TCs
	for outer sheath only.		lot of 5 MT or part	Specification.	Specification.	T.C./RM							or the records of the
			thereof	sheets Min. 29%	sheets Min. 29%	TEST							contractor at the time of final
						REPORT							inspection.
1.17	Temperature Index Test	Envir.	One sample per	ASTM-D-2863 &	IS:209 & BSPTCL	Manuf.	Α	J	S	W		N	Review of manufacturer's TCs
	on PVC for Outer Sheath		lot of 5 MT or part	IS:5831 & BSPTCL	specification	T.C./RM							or the records of the
	only.		thereof	Specification.	sheets Min. 250	TEST							contractor at the time of final
	•			Deg.C	Deg.C	REPORT							inspection.
				IS:613 & BSPTCL	IS:613 & BSPTCL								
2.0	ARMOUR WIRE/STRIP			Specification	Specification						Е		
2.1	DIMENSION	Meas.	One Sample for	IS:3975 & Approved	IS:3975 & Approved	Manuf.	Α	l.J	S	W		N	Review of manufacturer's TCs
			every 10 coils	Data Sheets	Data Sheets	T.C./RM		Ť	_	1		 	or the records of the
		-	overy re come	2 4.4 5.100.0	2 4.4 51.5515	TEST							contractor at the time of final
						REPORT							inspection.
		ļ., .							_			ļ.,	
2.2	Elongation	Mech	One Sample for	IS:3975 & Approved		Manuf.	Α	J	S	W		N	Review of manufacturer's TCs
			every 10 coils	IS:5831 & BSPTCL	IS:5831 & BSPTCL	T.C./RM							or the records of the
				Specification	Specification	TEST							contractor at the time of final
				IS:5831 & BSPTCL	IS:5831 & BSPTCL	REPORT							inspection.
				Specification.	Specification.								
2.3	Torsion/Winding	Mech	One Sample for	IS:3975 & Approved		Manuf.	Α	J	S	W		N	Review of manufacturer's TCs
		1	every 10 coils	Data Sheets	Data Sheets	T.C./RM			1	<u> </u>	ļ	ļ	or the records of the
						TEST			<u> </u>	<u> </u>	ļ	ļ	contractor at the time of final
						REPORT							inspection.

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Аp	plicat	ole Co	des		Remarks
No.	Description of Test	S	Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
2.4	Wrapping test	Mech	One Sample for	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Manuf.	A	J	S	W		N	Review of manufacturer's TC
			every 10 coils	Specification.	Specification.	T.C./RM							or the records of the
				Unwrap-6 & Wrap-6	Unwrap-6 & Wrap-6	TEST							contractor at the time of final
				on a mandrel as per	on a mandrel as per	REPORT							inspection.
				above IS. The wire	above IS. The wire] [
				shall not crack or	IS:209 & BSPTCL								
				IS:5831 & BSPTCL	specification								
				Specification.									
2.5	Uniformity of Zinc coating	Chem.	One Sample for	IS:4826, IS:3975 &	IS:4826, IS:3975 &	Manuf.	Α	J	S	W		N	Review of manufacturer's TO
	(Preece Test)		every 10 coils	IS:613 & BSPTCL	IS:613 & BSPTCL	T.C./RM							or the records of the
				Specification	Specification	TEST							contractor at the time of fina
				of specified number	of specified number	REPORT							inspection.
				of dips as per IS,the	of dips as per IS,the] [
				specimen shall not	specimen shall not								
				show any red	show any red								
				deposit of copper	deposit of copper								
													inspection.
26	Adhesion Test	Mech.	One Sample for	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Manuf.	A	LI	S	W		N	Review of manufacturer's TO
2.0	, taribolori Toot		every 10 coils	Specification	Specification	T.C./RM				1			or the records of the
			overy to come	IS:5831 & BSPTCL	IS:5831 & BSPTCL	TEST							contractor at the time of fina
				Specification.	Specification.	REPORT					1		inspection.
				the steel wire.	the steel wire.						1		

Sr.	Components / Operations &	Type of Check	Quantum of Check /		Acceptance Norms	Format of		Аp	plicat	ole Co	des		Remarks
No.	Description of Test		Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
2.7	Resistivity	Elect	One Sample for	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Manuf.	Α	J	S	W		N	Review of manufacturer's TCs
			every 10 coils	Specification.	Specification.	T.C./RM							or the records of the
						TEST							contractor at the time of final
						REPORT							inspection.
2.8	Check for Purity of Zinc	Chem	One Sample for	IS:209 & POWER	IS:209 & BSPTCL	Manuf.	Α	J	S	W		N	Review of Lab's test
	·		every lot of 50 MT	IS:5831 & BSPTCL	specification	T.C./RM							certificates at the time of
			or part thereof	Specification.	Min. purity of Zinc	TEST							final inspection. The supplier
			•	99.95%	99.95%	REPORT							of GS wire/strip shall furnish
				IS:613 & BSPTCL	IS:613 & BSPTCL								an undertaking regarding the
				Specification	Specification								purity of Zinc used in
													galvanizing.

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of							Remarks
No.	Description of Test		Sampling with basis	document for	-	Record	1	2	3	4	5	6	
				Testing									
	INPROCESS INSPECTION												
В	INPROCESS INSPECTION			IO-FOOA O DODTOL	IO-EOOA O DODTOI						-		
	CORRED DRAWN			IS:5831 & BSPTCL	IS:5831 & BSPTCL								
3.0	COPPER DRAWN			Specification.	Specification.								
	WIRE												
0.4	Overfree finish and winding	\ /:I	4000/	10.0400 0	10.0400 0		^		S	W		N	Deview of the seconds of the
3.1	Surface finish and winding	Visual				1111 100033	Α	J	১	VV		IN	Review of the records of the
	(Visual check)			data sheet. The	IS:209 & BSPTCL	Log Sheet							contractor at the time of final
				IS:5831 & BSPTCL	specification						<u> </u>		inspection.
				Specification.	and free from								
				scratches.	scratches.								
				IS:613 & BSPTCL	IS:613 & BSPTCL								
3.2	Diameter of drawn copper	Meas.	One Sample from	Specification	Specification	In Process	Α	J	S	W		Ν	Review of the records of the
	wire		each spool	data sheet.	data sheet.	Log Sheet							contractor at the time of final
													inspection.
3.3	Annealing Test	Mech		IS:8130 & approved	IS:8130 & approved	In Process	Α	J	S	W		N	Review of the records of the
					data sheet Min. 18%	Log Sheet							contractor at the time of final
			the beginning	Outer most layer	Outer most layer								contractor at the time of final
				shall be right hand	shall be right hand								inspection.
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
				Specification	Specification								
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
				Specification.	Specification.								

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Аp	plicat	ole Co	des		Remarks
lo.	Description of Test		Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
3.4	Smoothness/Surface	Visual	100%	IS:5831 & BSPTCL	IS:5831 & BSPTCL	In Process	Α	J	S	W		N	Review of the records of the
	scratches (Visual check)			Specification.	Specification.	Log Sheet							contractor at the time of final
				from Scratches	from Scratches								inspection.
3.5	Resistance /Km at 20° C	Elect	One Sample from	IS:8130 & approved	IS:8130 & approved	In Process	Α	J	S	W		N	Review of the records of the
			each spool	data sheet.	IS:209 & BSPTCL	Log Sheet							contractor at the time of final
			'	IS:5831 & BSPTCL	specification	J							inspection.
				Specification.									·
3.6	Dimensions	Meas.	One Sample from	•		In Process	Α	J	S	W		N	Review of the records of the
			each spool	IS:613 & BSPTCL	IS:613 & BSPTCL	Log Sheet							contractor at the time of final
				Specification	Specification								inspection.
4.0	INSULATED CORE												
4.1	Thickness of Insulation		Each setting	IS:1554(Part-1)Table	IS:1554(Part-1)Table	In Process	Α	J	S	W		N	Review of the records of the
	Average	Meas.	during running of	2 & approved data	2 & approved data	Log Sheet							contractor at the time of final
4.2	Surface finish	Meas.	Each setting	IS:1554(Part-1) The	IS:1554(Part-1) The	In Process	Α	J	S	W		N	Review of the records of the
				IS:5831 & BSPTCL	IS:5831 & BSPTCL	Log Sheet							contractor at the time of final
			machine	Specification	Specification								inspection.
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
				Specification.	Specification.								
4.3	Spark Test	Elect.	100%	min. 6	min. 6	In Process	Α	J	S	W		N	Review of the records of the
				KV (r.m.s.)	KV (r.m.s.)	Log Sheet							contractor at the time of final
													inspection.

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Ap	plicat	ole Co	des		Remarks
No.	Description of Test		Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
4.4	Core Identification/Colour of	Visual	100%	IS:5831 & BSPTCL	IS:5831 & BSPTCL	In Process	Α	J	S	W		N	Review of the records of the
	cores			Specification.	Specification.	Log Sheet							contractor at the time of final
													inspection.
4.5	Eccentricity	Meas.	100%	Max. 10%/ approved	Max 10%/ approved	In Process	Δ	.1	S	W		N	Review of the records of the
7.0	Localitions	Mous.	10070		IS:209 & BSPTCL	Log Sheet		-	1	**		1	contractor at the time of final
				IS:5831 & BSPTCL	specification	Log Sneet							inspection.
				Specification.									
	LAID UP CORES			IS:613 & BSPTCL	IS:613 & BSPTCL								
5.0	LAID UP CORES			Specification	Specification				-				
5.1	Direction of Lay	Visual	Each setting	The outer most	The outer most	In Process	Δ		S	W		N	Review of the records of the
5.1	Direction of Lay	Visuai			layer shall be right	Log Sheet		3		V V		IN	contractor at the time of final
			· ·	hand and other	hand and other	209 011001							inspection.
					layers opposite to								
				previous one.	previous one.								
5.2	Sequence of laying	Visual	Each setting			In Process	Α	J	S	W		N	Review of the records of the
				approved data sheet	approved data sheet	Log Sheet							contractor at the time of final
			-	IS:5831 & BSPTCL	IS:5831 & BSPTCL								inspection.
				Specification	Specification								
5.3	Tightness of cores	Visual	Each setting	IS:5831 & BSPTCL	IS:5831 & BSPTCL	In Process	Α	J	S	W		N	Review of the records of the
			during Process	Specification.	Specification.	Log Sheet							contractor at the time of final
													inspection.

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Ap	plical	ble Co	des		Remarks
No.	Description of Test		Sampling with basis	document for Testing		Record	1	2	3	4	5	6	-
5.4	Diameter	Meas.	Each setting	IS:5831 & BSPTCL	IS:5831 & BSPTCL	In Process	Α	J	S	W		N	Review of the records of the
			during Process	Specification.	Specification.	Log Sheet							contractor at the time of final
					,								inspection.
6.0	INNER SHEATHING BY												
	EXTRUSION				IS:209 & BSPTCL								
				IS:5831 & BSPTCL	specification								
6.1	Thickness of inner sheath	Meas.	Each setting	Specification.	IS:1554(Part-1)	In Process	Α	J	S	W		Ν	Review of the records of the
			during Process	Table-4 & approved	Table-4 & approved	Log Sheet							contractor at the time of final
				IS:613 & BSPTCL	IS:613 & BSPTCL								inspection.
				Specification	Specification								
6.2	Dia over Inner Sheath	Meas.	Each setting			In Process	Α	J	S	W		N	Review of the records of the
			during Process	Approved data sheet	Approved data sheet	Log Sheet							contractor at the time of final
													inspection.
6.3	Type of Sheathing Material	Visual	Each setting	IS:1554(Part-1) &	IS:1554(Part-1) &	Log Sheet	Α	J	S	W		N	Review of the records of the
	71			smooth & free from	smooth & free from	<u> </u>							inspection.
				any defects.	any defects.								·
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
7.0	ARMOURING			Specification	Specification								
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
7.1	No. of armour wires &	Meas.	Starting of M/C	Specification.	Specification.	In Process	Α	J	S	W		N	Review of the records of the
	construction		and during	approved data sheet	approved data sheet	Log Sheet							contractor at the time of final
			running										inspection.

BIHAR STATE POWER TRANSMISSION COMPANY LIMITED

MANUFACTURING QUALITY PLAN -- PVC CONTROL CABLE

				ORING GOALITT									
	MANUFACTURERS	Customer	Vendor's	Item:	MQP No: 007					Valid	ı		15.01.2016
	DETAILS		Code							From	1:		13.01.2010
				1.1 KV GRADE PVC	Rev. No. 00					Valid		1	Till Revision
		BSPTCL		CONTROL CABLE						Upto	:		
					Date 02.01.2016					Page	e: 17 c	of 27	
Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Δn	nlicak	ole Co	dos		Remarks
No.	Description of Test	Type of Officer	Sampling with basis		Acceptance Norms	Record	1	2	3	4	5	6	Remarks
140.	Description of Test		Camping with basis	Testing		Record		_	3	4	3	0	
7.2	Dimensions of Armour Wire/	Meas.	Starting of M/C	IS:5831 & BSPTCL	IS:5831 & BSPTCL	In Process	Α	J	S	W		N	Review of the records of the
	strip		and during	Specification.		Log Sheet			_				contractor at the time of final
			running			3							inspection.
7.0	Surface Finish	Visual	Ctarting of M/C	Should be	Should be		^		S	W		N.I	Review of the records of the
7.3	Surface Finish	visuai	Starting of M/C			In Process	Α	J	٥	VV		IN	contractor at the time of final
			and during	reasonably IS:5831 & BSPTCL		Log Sheet						-	
			running	Specification.	specification								inspection.
7.4	Lay Direction	Visual	Starting of M/C	Left hand lay	Left hand lay	In Process	Α	J	S	W		N	Review of the records of the
			and during	IS:613 & BSPTCL	,	Log Sheet			_				contractor at the time of final
			running	Specification	Specification								inspection.
7.5	Gap between two wires/strip	Meas.	Starting of M/C	Not more than	Not more than	1111100000	Α	J	S	W		N	Review of the records of the
			and during	one wire dia. / width		Log Sheet					<u> </u>	<u> </u>	contractor at the time of final
			running	of strip.	of strip.								inspection.
			and during	No face bend	No face bend								contractor at the time of final
			running										inspection.
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
7.6	Dia over Armour	Meas.	Starting of M/C	Specification	Specification	In Process	Α	J	S	W		N	Review of the records of the
			and during	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Log Sheet							contractor at the time of final
			running	Specification.	Specification.								inspection.
			-	, <u>-</u>									

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Ap	plicat	ole Co	des		Remarks
No.	Description of Test		Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
8.0	FINISHED CABLES			IS:5831 & BSPTCL	IS:5831 & BSPTCL								
	(Outer Sheathing)			Specification.	Specification.								
8.1	Thickness of Outer Sheath	Meas.	Starting of M/C	IS:1554 (Part-1)	IS:1554 (Part-1)	In Process	Α	J	S	W		N	Review of the records of the
			and during	Table-7 and	Table-7 and	Log Sheet							contractor at the time of final
					IS:209 & BSPTCL								inspection.
8.2	Type of Sheathing material	Visual		IS:5831 & BSPTCL Specification.	specification IS:1554 (Part-1) &	In Process	Δ		S	W		N	Review of the records of the
0.2	Type of effecting material	Viouai			approved data sheet	Log Sheet				1		1.	contractor at the time of final
			running	IS:613 & BSPTCL	IS:613 & BSPTCL								inspection.
				Specification	Specification								
8.3	Surface finish	Visual	Starting of M/C	The surface shall be	The surface shall be	In Process	Α	J	S	W		N	Review of the records of the
			and during	smooth and free	smooth and free	Log Sheet							contractor at the time of final
			running	from any defects.	from any defects.								inspection.
8.4	Overall Dia	Meas.	Starting of M/C	Approved data	Approved data	Log Sheet	Α	J	S	W		N	Review of the records of the
			running										inspection.
8.5	Embossing	Visual	Starting of M/C	IS:5831 & BSPTCL	IS:5831 & BSPTCL	In Process	Α		S	W		N	Review of the records of the
0.0	Linbossing	Vioudi	and during	Specification	Specification	Log Sheet	,,		_	**		1.4	contractor at the time of final
			running		IS:5831 & BSPTCL	Log Cricot							inspection.
				Specification.	Specification.								
8.6	Progressive Sequential	Visual	Starting of M/C	BSPTCL	BSPTCL	In Process	Α	J	S	W		N	Review of the records of the
	marking		and during running	Specification	Specification	Log Sheet							contractor at the time of final
													inspection.

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Аp	plicat	ole Co	des		Remarks
No.	Description of Test		Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
9.0	DRUM WINDING			IS:5831 & BSPTCL	IS:5831 & BSPTCL								
				Specification.	Specification.								
9.1	Drum Condition	Visual	100%			In Process	Α	J	S	W		N	Review of the records of the
				BSPTCL	BSPTCL	Log Sheet							contractor at the time of final
				Specification	Specification								inspection.
					IS:209 & BSPTCL								
				IS:5831 & BSPTCL	specification								
9.2	Bituminized Water proof	Visual	100%	Specification.		In Process	Α	J	S	W		N	Review of the records of the
	Paper Covering			BSPTCL	BSPTCL	Log Sheet							contractor at the time of final
	-			IS:613 & BSPTCL	IS:613 & BSPTCL								inspection.
				Specification	Specification								
9.3	Cable Length in Meters	Meas.	100%	Approved data	Approved data	In Process	Α	J	S	W		N	Review of the records of the
				sheets 500/1000	sheets 500/1000	Log Sheet							contractor at the time of final
				+/- 5%	+/- 5%								inspection.

Sr.	Components / Operations &	Type of	Quantum of Check /	Reference	Acceptance Norms	Format of		Αp	plical	ble Co	des		Remarks
No.	Description of Test	Check	Sampling with basis	document for Testing		Record	1	2	•		5	6	
10.0	FINAL INSPECTION &			IS:5831 & BSPTCL	IS:5831 & BSPTCL								
	TESTING			Specification.	Specification.								
11.0	ROUTINE TESTING												
11.1	Conductor resistance at 20°C	Elect	100% Drums	IS:8130 Table-2 /	IS:209 & BSPTCL	Routine	Α	J	U	Υ		N	Review of the records of the
				IS:5831 & BSPTCL	specification	Test							contractor at the time of final
				Specification.		Certificate							inspection.
11.2	High Voltage Test at room	Elect	100% Drums	IS:613 & BSPTCL	IS:613 & BSPTCL	Routine	Α	J	U	Υ		N	Review of the records of the
	temperature			Specification	Specification	Test							contractor at the time of final
				(r.m.s.) for 5 Minute	(r.m.s.) for 5 Minute	Certificate							inspection.
12.0	ACCEPTANCE TESTS												
12.1	FINISHED CABLE												
	of sequential marking check												
	Surface finish												
	Top & Bottom sequential			IS:5831 & BSPTCL	IS:5831 & BSPTCL								
	marking check			Specification	Specification								
	Length Measurement	Verification thre	ough rewinding, 10%of t	IS:5831 & BSPTCL	IS:5831 & BSPTCL								
				Specification.	Specification.								
12.2	High Voltage test at room	Elect	100% Drums	IS:1554(Part-1)/	IS:1554(Part-1) /	Acceptance Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
	temperature			BSPTCL Specifi-	BSPTCL Specifi-	Certificate							
				cation shall with-	cation shall with-	22: Modio							
				stand 3 KV (r.m.s.)	stand 3 KV (r.m.s.)								
				for 5 minutes.	for 5 minutes.								

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Ap	plica	ble Co	odes		Remarks
No.	Description of Test		Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
12.3	Conductor Resistance at 20°C	Elect	10% Drums	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Acceptance	Α	J	U	Υ		Υ	Dispatch
			(value to tally with	Specification.	Specification.	Test							Standard resistance to be
			routine test reports			Certificate							kept available for equipment
			of same drum no)										callibration verification.
12.4	Insulation Resistance Test	Elect	1 sample for	IS:5831 / approved	IS:209 & BSPTCL	Acceptance	A	J	U	Υ		Υ	Dispatch Instructions/Clearance.
	modiation recordance rect	2.001		IS:5831 & BSPTCL	specification	rest		Ť		1		1	
			· · / · · · · · ·	Specification.	at 27°C 36.7 M Ohm	Certificate							
			· · · · · · · · · · · · · · · · · · ·	Km	Km					1			
			0.20	IS:613 & BSPTCL	IS:613 & BSPTCL								
12.5	Flamability Test	Thermal	1 sample per lot	Specification	Specification	Acceptance Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
			for each size	BSPTCL Specn.	BSPTCL Specn.	Certificate							
13.0	COPPER CONDUCTOR												
13.1	PVC INSULATION &							1	1	1		1	
	SHEATH			IS:5831 & BSPTCL	IS:5831 & BSPTCL						<u> </u>		
	SHEATH			Specification	Specification			1		1	1		
	Thickness of insulation of	Meas.	1 sample for	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Acceptance	A	J	U	_		Y	Dispatch Instructions/Clearance.
	core	ivieas.		Specification.	Specification.	Lest	Α	J	U	1	1	ı	instructions/Clearance.
i \	Average			data sheets.	data sheets.	Certificate		+	1	+	\vdash	+	
ii)	Minimum		size	data sileets.	data sileets.		1	1	1	+	1	1	
	- Inniningin		0120								1		
							<u> </u>	 	t	+	1	1	
						†	†	1	1	+	1	1	

Sr.	Components / Operations &	Type of	Quantum of Check /	Reference	Acceptance Norms	Format of		Ap	plical	ole Co	des		Remarks
No.	Description of Test	Check	Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
13.2	Thickness of Inner Sheath	Meas.	1 sample for	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Acceptance	Α	J	U	Υ		Υ	Dispatch
			every 10 drums or	Specification.	Specification.	Test							
			part thereof per	data sheets.	data sheets.	Certificate							
			size										
													Dispatch
13.3	Thickness of Outer Sheath	Meas.	1 sample for	IS:1554(Part-1)	IS:209 & BSPTCL	Acceptance	Α	J	U	Υ		Υ	Instructions/Clearance.
			every 10 drums or	IS:5831 & BSPTCL	specification	Test Certificate							
			part thereof per	Specification.	data sheets.	Certificate							
			size										
				IS:613 & BSPTCL	IS:613 & BSPTCL								
13.4	Tensile Strength &	Mech	1 sample for	Specification	Specification	Acceptance	А	J	U	Υ		Υ	Dispatch Instructions/Clearance.
10.1	Elongation for Insulation	Widom	every 10 drums or	Approved data	Approved data	Test		_	_			<u>'</u>	mon donorio, Giodianos.
	Liongation for insulation		part thereof per	sheets. Min. TS	sheets. Min. TS	Certificate							
			size	12.5 N/mm2.	12.5 N/mm2.								
			5120	Elongation 150%	Elongation 150%								
				(Min.)	(Min.)								
				Elongation 150%	Elongation 150%								
				(Min.)	(Min.)								
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
				10.0001 & BOI 102	10.0001 0 001 102								Dispatch
13.5	Cold Bend Test for all diameter	Mech	1 sample of any	Specification	Specification	Acceptance	Α	J	U	Υ		Υ	Instructions/Clearance.
. 5.0	Cables		size per order	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Test Certificate		_		i -		†	
			0.00 por 0.00	Specification.	Specification.	Certificate							
13.6	Cold Impact test for diameter	Mech	1 sample of any	IS:1554(Part-1). No	IS:1554(Part-1). No	Acceptance	А	J	U	Υ		Υ	Dispatch Instructions/Clearance.
	more than 12.5 mm		size per order	signs of cracks or	signs of cracks or	Test Certificate							
	-			scales	scales	Certificate							

Sr.	Components / Operations &	Type of	Quantum of Check /	Reference	Acceptance Norms	Format of		Ар	plical	ole Co	des		Remarks
No.	Description of Test	Check	Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
13.7	Oxygen Index test on outer	Envir.	1 sample per lot	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Acceptance	Α	J	U	Υ		Υ	Dispatch
	sheath		for each size	Specification.	Specification.	Test							
				Min. 29%	Min. 29%	Certificate							
13.8	Temperature Index test on	Envir.	1 sample per lot	ASTMD-2863 /	ASTMD-2863 /	Acceptance Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
	outer sheath		for each size	approved data sheet	IS:209 & BSPTCL	Certificate							
				IS:5831 & BSPTCL	specification	Certificate							
				Specification.									
13.9	Flame Retardant test on	Thermal	1 sample per lot	IS:1554 Cl. 16.6	IS:1554 Cl. 16.6	Acceptance Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
	single core cables		for each size	IS:613 & BSPTCL	IS:613 & BSPTCL	Certificate							
				Specification	Specification	Continuato							
				specimen within 300	specimen within 300								
				mm from its upper	mm from its upper								
				end	end								
14.0	ADDITIONAL TESTS FOR												
14.1	Acid Gas Generation	Envir.	1 sample per lot		IEC-754-1 /Power	Acceptance Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
			for each size	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Certificate							
				Specification	Specification								
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
14.2	Flamability Test	Thermal	1 sample per lot	Specification.	Specification.	Acceptance Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
			for each size	Chimney SS-424-14	Chimney SS-424-14	Certificate							
				-75 class-F3 /	-75 class-F3 /	30.10010							
				approved data sheet	approved data sheet								

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Ар	plical	ole Co	des		Remarks
No.	Description of Test		Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
15.0	ARMOURING			IS:5831 & BSPTCL	IS:5831 & BSPTCL								
15.1	Resistivity for Armour wire	Elect	1 sample per	Specification.	Specification.	Acceptance Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
			every 10 drums or	data sheets Max.	data sheets Max.	Certificate							
			part thereof per	14.5 x 10 ⁻⁶ Ohm.cm	14.5 x 10 ⁻⁶ Ohm.cm								
			size	at 20 Deg.C	at 20 Deg.C								
					IS:209 & BSPTCL								
15.2	Tensile Strength	Mech	1 sample per	IS:5831 & BSPTCL	specification	Acceptance Test	A	J	U	Υ		Υ	Dispatch Instructions/Clearance.
			every 10 drums or	Specification.	data sheets	Certificate							
			part thereof per										
			size	IS:613 & BSPTCL	IS:613 & BSPTCL								
				Specification	Specification								
15.3	Closeness	Visual		IS:3975 /approved	IS:3975 /approved	Acceptance Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
			,	data sheets. Gap	data sheets. Gap	Certificate							
				between two wires	between two wires								
				shall not be more	shall not be more								
				than one wire dia/	than one wire dia/								
				of specified number	of specified number								
				of dips as per IS,	of dips as per IS,								
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
				Specification	Specification								
				IS:5831 & BSPTCL	IS:5831 & BSPTCL								
				Specification.	Specification.						<u> </u>	<u> </u>	
											<u> </u>	<u> </u>	
											<u> </u>	<u> </u>	

Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of		Ap	plicab	ole Co	des		Remarks
No.	Description of Test		Sampling with basis	document for Testing		Record	1	2	3	4	5	6	
						Accentance							Dispatch
15.4	Weight of Zinc Coating	Chem	1 sample per	IS:5831 & BSPTCL	IS:5831 & BSPTCL	Acceptance Test	Α	J	U	Υ		Υ	Instructions/Clearance.
			every 10 drums or	Specification.	Specification.	Certificate							
			part thereof										
													Diamatah
15.5	Torsion/Winding	Mech	1 sample per	IS:3975 / approved	IS:3975 /approved	Acceptance	Δ	.1	U	Υ		Υ	Dispatch Instructions/Clearance.
10.0	Toroidi, Williamig	Widom		data sheets.	IS:209 & BSPTCL	Test						i e	mon delicine, chedi direci
				IS:5831 & BSPTCL	specification	Certificate							
			size	Specification.	ороспісаціон								
			0120	Оробиновноги.									
16	DRUMS			IS:613 & BSPTCL	IS:613 & BSPTCL								
				Specification	Specification								
16.1	Visual check for defects	Visual	100%	BSPTCL	BSPTCL	Acceptance	А	J	U	Υ		Υ	Dispatch Instructions/Clearance.
				Specification	Specification	Test Certificate							
				•	•	Certificate							
16.2	Dimensions	Meas.	1 sample per	Approved drawings	Approved drawings	Acceptance Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
			every 10 drums or	-		Certificate							
	Physical test for insulation and outer	sheath											
16.3	Shrinkage Test	Meas.	1 Sample/Lot/Type	BSPTCL specs/As	BSPTCL specs/As	Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
				Per IS 1554(Part-1)	Per IS 1554(Part-1)	Report							
16.4	Hot Deformation Test	Meas.	1 Sample/Lot/Type			Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
				Specification	Specification	Report							
16.5	Heat Shock Test	Meas.	1 Sample/Lot/Type			Test	Α	J	U	Υ		Υ	Dispatch Instructions/Clearance.
			. ,	Specification.	Specification.	Report							
16.6	Thermal Stablity	Meas.		BSPTCL specs/As	BSPTCL specs/As	Test	Α	J	U	Υ		Υ	Dispatch
	ĺ			Per IS 1554(Part-1)	Per IS 1554(Part-1)	Report				l –			

	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED													
	MANUFACTURING QUALITY PLAN PVC CONTROL CABLE													
	MANUFACTURERS	Customer	Vendor's	Item:	MQP No : 007						Valid		15.01.2016	
	DETAILS	BSPTCL	Code	1.1 KV GRADE PVC						Fron	า:	<u> </u>		
					Rev. No. 00 Date 02.01.2016						Valid Upto:		Till Revision	
		25: 152		CONTROL CABLE							e: 26 d	of 27		
		PVC CONTROL CABLE												
	MANUFACTURERS DETAILS	Customer	Vendor's	Item:	MQP No : 007					Valid		4	15.01.2016	
	DETAILS	-	Code	-						FIOII	<u>. </u>			
		BSPTCL		1.1 KV GRADE PVC CONTROL CABLE	Rev. No. 00						Valid Upto:		Till Revision	
					Date 02.01.2016				Page	e of				
													Remarks	
Sr.	Components / Operations &	Type of Check			Acceptance Norms					ble Co			Remarks	
Sr. No.	Components / Operations & Description of Test	Type of Check	Quantum of Check / Sampling with basis		Acceptance Norms	Format of Record	1	Ap 2	plical 3		des 5	6	Remarks	
No.	Description of Test		Sampling with basis	document for	Acceptance Norms	Record	1	2	3	4			Dispatch Instructions/CI	
No.	Description of Test High Volatge Test(Water	Type of Check Meas.		document for Testing		Record Test						6 Y	Dispatch	
No.	Description of Test High Volatge Test(Water Imersion Test only AC Test as		Sampling with basis	document for	Acceptance Norms IS:5831 & BSPTCL	Record	1	2	3	4			Dispatch Instructions/CI	
No.	Description of Test High Volatge Test(Water		Sampling with basis	document for Testing		Record Test	1	2	3	4			Dispatch Instructions/CI	
No.	Description of Test High Volatge Test(Water Imersion Test only AC Test as per clause no.16.3.1		Sampling with basis	document for Testing		Record Test	1	2	3	4			Dispatch Instructions/CI	
No.	Description of Test High Volatge Test(Water Imersion Test only AC Test as per clause no.16.3.1 TYPE TESTS	Meas.	Sampling with basis 1 Sample/Lot/Type	document for Testing IS:5831 & BSPTCL	IS:5831 & BSPTCL	Record Test	1	2	3	4			Dispatch Instructions/CI	
No.	Description of Test High Volatge Test(Water Imersion Test only AC Test as per clause no.16.3.1 TYPE TESTS All type tests to be carried out as per	Meas.	Sampling with basis 1 Sample/Lot/Type tions by BSPTCL	document for Testing IS:5831 & BSPTCL IS:5831 & BSPTCL		Record Test	1	2	3	4			Dispatch Instructions/CI	
No.	Description of Test High Volatge Test(Water Imersion Test only AC Test as per clause no.16.3.1 TYPE TESTS All type tests to be carried out as per Engineering Deptt. Approval of ty	Meas. BSPTCL specification for the state of	1 Sample/Lot/Type tions by BSPTCL Deptt. Or waiver there	document for Testing IS:5831 & BSPTCL IS:5831 & BSPTCL of to be	IS:5831 & BSPTCL	Test Report	1	2	3	4			Dispatch Instructions/CI	
No.	Description of Test High Volatge Test(Water Imersion Test only AC Test as per clause no.16.3.1 TYPE TESTS All type tests to be carried out as per	Meas. BSPTCL specification for the state of	1 Sample/Lot/Type tions by BSPTCL Deptt. Or waiver there	document for Testing IS:5831 & BSPTCL IS:5831 & BSPTCL of to be	IS:5831 & BSPTCL	Test Report Type Test	1	2	3	4			Dispatch Instructions/CI	
No.	Description of Test High Volatge Test(Water Imersion Test only AC Test as per clause no.16.3.1 TYPE TESTS All type tests to be carried out as per Engineering Deptt. Approval of ty	Meas. BSPTCL specification for the state of	1 Sample/Lot/Type tions by BSPTCL Deptt. Or waiver there	document for Testing IS:5831 & BSPTCL IS:5831 & BSPTCL of to be	IS:5831 & BSPTCL	Test Report Type Test	1	2	3	4			Dispatch Instructions/CI	
No.	Description of Test High Volatge Test(Water Imersion Test only AC Test as per clause no.16.3.1 TYPE TESTS All type tests to be carried out as per Engineering Deptt. Approval of ty	Meas. BSPTCL specification for the state of	1 Sample/Lot/Type tions by BSPTCL Deptt. Or waiver there	IS:5831 & BSPTCL IS:5831 & BSPTCL Of to be IS:613 & BSPTCL	IS:5831 & BSPTCL IS:209 & BSPTCL IS:613 & BSPTCL	Test Report Type Test	1	2	3	4			Dispatch Instructions/CI	
No.	Description of Test High Volatge Test(Water Imersion Test only AC Test as per clause no.16.3.1 TYPE TESTS All type tests to be carried out as per Engineering Deptt. Approval of ty	Meas. BSPTCL specification for the state of	1 Sample/Lot/Type tions by BSPTCL Deptt. Or waiver there	IS:5831 & BSPTCL IS:5831 & BSPTCL Of to be IS:613 & BSPTCL	IS:5831 & BSPTCL IS:209 & BSPTCL IS:613 & BSPTCL	Test Report Type Test	1	2	3	4			Dispatch Instructions/CI	
No.	Description of Test High Volatge Test(Water Imersion Test only AC Test as per clause no.16.3.1 TYPE TESTS All type tests to be carried out as per Engineering Deptt. Approval of ty	Meas. BSPTCL specification for the state of	1 Sample/Lot/Type tions by BSPTCL Deptt. Or waiver there	IS:5831 & BSPTCL IS:5831 & BSPTCL Of to be IS:613 & BSPTCL	IS:5831 & BSPTCL IS:209 & BSPTCL IS:613 & BSPTCL	Test Report Type Test	1	2	3	4			Dispatch Instructions/CI	



BIHAR STATE POWER TRANSMISSION COMPANY LIMITED

MANUFACTURING QUALITY PLAN -- PVC CONTROL CABLE

The same of the sa														
	MANUFACTURERS	Customer	Vendor's	Item:	MQP No : 007 Rev. No. 00					Valid From: Valid Upto:			15.01.2016	
	DETAILS		Code											
													Till Revision	
		BSPTCL		1.1 KV GRADE PVC										
		BSFICE		CONTROL CABLE										
					Date 02.01.2016					Page : 27 of 27				
Sr.	Components / Operations &	Type of Check	Quantum of Check /	Reference	Acceptance Norms	Format of	Applicable			le Codes			Remarks	
No.	Description of Test		Sampling with basis	document for		Record	1 2 3		4 5 (6	<i>i</i>		
				Testing										
18.0	PACKING & DISPATCH													
	(Check for identification &													
	packing)													
18.1	Application of bituminized)											
	water proof paper)											
18.2	Space between outer most)											
	layer & drum edge)											
	Proper Packing)											
18.4	Sealing of ends)											
	Manufacturer's name)											
18.6	Name & adddress of the)											
	consignee)											
	Contract number	Visual) 100%	BSPTCL	BSPTCL	Check	Α	J	S	W		Ν	Review of the records of the	
	Drum Number)	Specification	Specification	List							contractor at the time of final	
	Type,Size and length of the)										inspection.	
	cable)	Process of Sealing of	drums as per attached	annexure								
	Gross weight)											
	Tare Weight)											
18.12	Nett Weight)											
18.13	Arrow marking for unwinding)											
	Dispatch Instrcutions/Clearance N	los Marking)											
18.15	IS Marking on drums)											
									ļ					
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