

Laboratory **Power Testing Laboratory (Cable & Conductor Testing), 113, Ratanlok Colony, Scheme No. 53, Vijay Nagar, Indore, Madhya Pradesh**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-7022**

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Validity **25.02.2019 to 09.03.2020**

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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ELECTRICAL TESTING

I.	ELECTRICAL MATERIALS - CONDUCTORS			
1.	Aluminium Conductor for overhead Transmission Purpose:	Dimensional Measurement	IS 398 (Part 1), Cl. 12.2 IS 398 (Part 2), Cl. 13.3 IS 398 (Part 4), Cl. 3.1 IS 398 (Part 5), Cl. 13.3	0.01 mm to 150 mm
		Tensile Strength, Breaking Load	IS 398 (Part 1), Cl. 12.3 IS 398 (Part 2), Cl. 13.2 IS 398 (Part 4), Cl. 12.2 IS 398 (Part 5), Cl. 13.5	1 N to 5 kN
	Aluminium Stranded Conductors	Resistance	IS 398 (Part 1), Cl. 12.5 IS 398 (Part 2), Cl. 13.6 IS 398 (Part 4), Cl. 12.4 IS 398 (Part 5), Cl. 13.8	0.05 mΩ to 19.99 Ω
		Lay Ratio	IS 398 (Part 1), Cl. 12.7 IS 398 (Part 2), Cl. 13.8 IS 398 (Part 4), Cl. 9.2 IS 398 (Part 5), Cl. 10.3	1 mm to 50 mm
	Aluminium Alloy Stranded Conductors	Wrapping	IS 398 (Part-1), Cl. 12.4 IS 398 (Part-2), Cl. 13.8 IS 398 (Part-5), Cl. 13.7	(Diameter) 1.38 mm to 4 mm
		Elongation	IS 398 (Part-2), Cl. 13.3 IS 398 (Part-4), Cl. 12.2 IS 398 (Part-5), Cl. 13.6.2	Up to 1000 mm
	Aluminium Conductor - Galvanized Steel - Reinforced for Extra High Voltage	Mass of Zinc coating (by stripping method)	IS 6745, Cl. 13.7	10 g/m ² to 2000 g/m ²
		Uniformity of zinc coating	IS 2633 IS 10810 (Part 41)	Qualitative (Up to 6 Dips)

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II.	CABLES & ACCESSORIES			
1.	PVC Insulated Unsheathed & Sheathed Cables, Cords with Rigid & Flexible Conductors for Rated Voltages Up to & Including 450/750 V	Dimensional measurement	IS 694, Cl. 1.1, 4.2, 10 IS 1554 (Part 1), Cl. 15 c IS 1554 (Part 2), Cl. 15 c IS 7098 (Part 1), Cl. 15.1b IS 7098 (Part 2), Cl. 18.1b IS 14255, Cl. 7.2	0.01 mm to 150 mm
		Tensile Strength, Breaking Load of Aluminium Conductor & Armouring Wire	IS 10810 (Part 2) IS 10810 (Part 37)	1 N to 5 kN
		Wrapping of Aluminium Conductor & Armouring Wire	IS 10810 (Part 3) IS 10810 (Part 39)	(Diameter) 1.38 mm to 4 mm
		Resistance	IS 10810 (Part 5) IS 10810 (Part 42)	0.05 mΩ to 19.99 Ω
	PVC Insulated Heavy Duty Electrical Cables for Working Voltage Up to & Including 1100 V	Tensile Strength of Insulation & Sheath	IS 10810 (Part 7)	1 N to 5 kN
		Elongation at Break (%)	IS 10810 (Part 7)	Up to 1000 mm
		Ageing in Air Oven	IS 10810 (Part 11)	1 N to 5 kN
		Loss of Mass Test	IS 10810 (Part 10)	0.1 mg to 220 gm
		Shrinkage Test	IS 10810 (Part 12)	Up to 250 mm
		Heat Shock Test	IS 10810 (Part 14)	Up to 200 °C
		Hot Deformation Test	IS 10810 (Part 15)	Up to 25 mm 0 to 200 °C
	Crosslinked Polyethylene Insulated PVC Sheathed Cables for Working Voltage Up to &	Cold Bend Test	IS 10810 (Part 20)	0 to (-)15 °C
		Insulation Resistance, Volume Resistivity (Up to 120 mm ² size)	IS 10810 (Part 43)	Resistance: 1 to 100x10 ⁵ MΩ

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	Including 1100 V Cross Linked Polyethylene Insulated Thermoplastic Sheathed Cables for Working Voltage from 3.3 kV Up to & Including 33 kV Aerial Bunched Cables for working Voltages Up to & Including 1100 V	High Voltage (At room temp.) (Up to 120 mm ² size)	IS 10810 (Part 45) IS 694 IS 1554 (Part 1), Cl. 15.1 g IS 7098 (Part 1) IS 14255	AC: 1 kV to 10 kV
		Additional Ageing	IS 694	AC: 1 kV to 6 kV
		High Voltage (Water Immersion)	IS 10810 (Part 45) IS 694 IS 1554 (Part 1), Cl. 15.1 f	AC: 0 to 3 kV DC: 0.5 kV to 3 kV 0 to 90 °C
		Flammability (Upto 50 mm Diameter)	IS 10810 (Part 53)	1 mm to 500 mm 1 s to 900 s
		Thermal Stability	IS 10810 (Part 60)	1 minute to 300 minutes 0 to 250 °C
		Hot Set	IS 10810 (Part 30)	0 to 250 °C