Laboratory	**Bureau of Indian Standards (Eastern Regional Office Laboratory) P-230, C.I.T Scheme, VII M, Block W, Kankurgachi, Kolkata,West Bengal**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Discipline	**Electrical Testing**	**Issue Date**	**18.09.2014**
Certificate Number	**T-0178**	**Valid Until**	**17.09.2016**
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	I. CABLES AND ACCESSORIES			
1.	**PVC Insulated cables for working voltage Upto & including 1100 V, Heavy Duty Cable** **Size: Upto 35mm^2** **IS 694 – 1990 (Reaffirmed 1995)** **IS 1554 (Part-1) - 1988 (RA 1999)&** **Short Firing Cables (Used other than Shaft)** **IS 5950-1984**	i) Conductor Resistance Test	IS 10810(Part-5):1984	Up to 11 Ω
		ii)Thickness of Insulation & Sheath.	IS 10810(Part-6) :1984	Caliper (0 to 150 mm) L.C. 0.01 mm
		iii) Loss of Mass Test.	IS 10810(Part-10) :1984	Upto 200°C L.C. 0.1 °C
		iv) Thermal Ageing in air oven.	IS 10810(Part-11) :1984	Upto 200 °C L.C. 0.1°C
		v) Shrinkage Test.	IS 10810(Part-12) :1984	Upto 200 °C L.C. 1 °C
		vi) Heat Shock Test.	IS 10810(Part-14) :1984	Upto 200 °C L.C.1 °C
		vii) Hot Deformation Test.	IS 10810(Part-15) :1984	Upto 110 °C L.C. 1 °C
		viii) Insulation Resistance Test.	IS 10810(Part-43) :1984	(10 to 100)X10^6 MΩ
		ix) High Voltage Test (water immersion Test) a) A.C	IS 10810(Part-45) :1984	Up to 7 kV LC 0.2 kV
		b) D.C		Up to 20 kV LC 0.2 kV
		x) Flammability Test	IS 10810(Part-53) :1984	Qualitative

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	PVC Insulated cables for working voltage Upto & including 1100 V, Heavy Duty Cable **Size: Upto 35mm^2** **IS 694 – 1990 (Reaffirmed 1995)** **IS 1554 (Part-1) - 1988 (RA 1999)&** **Short Firing Cables (Used other than Shaft) IS 5950-1984**	Tensile Test for Aluminium conductor	IS10810(Part-2)-1984	Upto 2500 N L.C. 5 N
		Annealing Test for copper conductor	IS10810(Part 1)-1984	Upto 1000 N
		Tensile strength	IS10810(Part 7)-1984	Upto 5 kN L.C. 0.01 N
		Elongation of insulation and sheath	IS10810(Part-7)-1984	0 to 30 cm L.C. 0.5 mm
2.	**PVC Insulated cables for working voltage up to & including 1100 V, Heavy Duty** **Size: Upto 35mm^2** **IS 1554 (Part-1)-1988 (Reaffirmed 1999)**	High Voltage Test at room temperature.	IS 10810(Part-45)-1984	Upto 7 kV AC L.C. 200 V
		Thermal stability Test	IS 10810(Part-60)-1984	Upto 200 $^{\circ}$C L.C. 0.1 $^{\circ}$C
		Tensile Test for Aluminium Conductor	IS 10810(Part-2)-1984	Upto 2000 N L.C. 5 N
		Annealing Test for Copper Conductor	IS 10810(Part-1)-1984	Upto 2500 N
		Tensile Test on insulation & sheath	IS 10810(Part -7)-1984	Upto 5 kN L.C. 0.01 N
		Elongation on insulation & sheath	IS 10810(Part -7)-1984	0 to 30 cm L.C.0.5 mm
		Test on Armouring wire & strips	IS 10810(Part -36 to 42)-1984	Qualitative

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	**Shot Firing Cable (Used other than Shaft) IS 5950 - 1984**	Annealing Test for Copper Conductor	IS 10810(Part-2)-1984	Upto 2500 N L.C. 5 N
		Tensile Strength of Insulation & Sheath	IS 10810(Part-7)-1984	Upto 5 kN L.C. 0.01 N
		Elongation of Insulation & Sheath	IS 10810(Part-7)-1984	0 to 30 cm Steel Scale L.C.0.5 mm
II. CONDUCTORS & CONDUCTING MATERIALS				
1.	**Aluminium Conductor for overhead Transmission Purposes, Aluminium Stranded Conductors**	Lay ratio.	IS 398(Part – 1) – 1996	Upto 150 mm
		Dimension of wires.	IS 398(Part 2)1996	Upto 25 mm
		Resistance Test.	IS 398(Part - 4) -1994	Upto 11 Ω
		Wrapping Test (AAC & ACSR only)		Qualitative
	Aluminium Stranded Conductor Galvanized Steel Reinforced & Aluminium Alloy Stranded Conductors	Weight of Zn-coating (ACSR only)		Upto 200 g
		Dip Test (ACSR only)		Qualitative

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
a.	**Aluminium Conductor for overhead Transmission Purposes, Aluminium Stranded Conductors**	Breaking Load	IS 398(Part-1) -1996	Up to 2000N
b.	**Aluminium Conductor for overhead Transmission Purposes, Aluminium Stranded Conductor Galvanized Steel Reinforced (upto 100 mm^2)**	Breaking load of 'Al.' Breaking load of steel Torsion test on steel wire	IS 398(Part-2)1996	Up to 2000 N 0 to 40000N weight load up to 35 kg
c.	**Aluminium Conductor for overhead Transmission Purposes, Aluminium Alloy Stranded Conductors**	Breaking load Elongation	IS 398(Part -4) -1994	Up to 5000 N (0 to30 cm)

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