

Laboratory Sterlite Power Transmission Ltd., S.No. 99/P Madhuban Dam Road,
Rakholi, Silvassa, Dadra & Nagar Haveli
Location: 1 S.No. 99/P Madhuban Dam road, Rakholi, Silvassa, Dadra & Nagar Haveli
Location: 2 S.No. 209, Ph-II, Piparia Industrial Estate, Silvassa, Dadra & Nagar Haveli

Accreditation Standard ISO/IEC 17025: 2005

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Validity 27.03.2018 to 26.03.2020 **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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CHEMICAL TESTING

LOCATION-1				
I.	METALS & ALLOYS			
1.	Aluminum and Aluminum Alloy Conductor and Wire / Rod	Magnesium Silicon Ferrous Copper Titanium Vanadium	ASTM E 1251	0.005 % to 0.80 % 0.02 % to 0.80 % 0.03 % to 0.3 % 0.002 % to 0.04 % 0.001 % to 0.03 % 0.001 % to 0.01 %
2.	Galvanized Steel Wire	Mass of Zinc coating	IS 6745 IEC 60888 EN 50189 ASTM B 498	50 gm/m ² to 600 gm/m ²
3.	Galvanized Steel Wire	Uniformity of Zinc coating	IS 2633 EN 50189	1 dip of 1 Minute to 6 dips of 1 Minute

Naveen Jangra
Convenor

N. Venkateswaran
Program Director

Laboratory

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LOCATION-2				
I.	METALLIC COATINGS & TREATMENT SOLUTIONS			
1.	Galvanized Steel Wire of conductor	Mass of zinc coating	IS 6745 IEC 60888 EN 50189 ASTM B 498	50 gm/m ² to 600 gm/m ²
		Uniformity of Zinc coating	IS 2633 EN 50189	1 dip of 1 Minute to 6 dips of 1 Minute

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<u>ELECTRICAL TESTING</u>				
LOCATION-1				
I.	TRANSMISSION LINE EQUIPMENT & ACCESSORIES			
1.	Aluminum Conductors, Galvanized Steel Reinforced / Aluminum Alloy Stranded Conductors	DC Resistance/ Resistivity/ Resistance	IS 398 (Part 1)-Clause 12.5	0.35 mΩ to 19.999 mΩ
			IS 398 (Part 2)-Clause 13.6	
			IS 398 (Part 4)-Clause 12.4	
			IS 398 (Part-5)-Clause 13.8	
			IEC 61089-Clause 6.2.2	
			ASTM B 232-Clause 12	
			ASTM B 399-Clause 11	
			EN 50182-Clause 5.10	

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LOCATION-2				
I.	TRANSMISSION LINE EQUIPMENT & ACCESSORIES			
1.	Aluminum Conductors, Galvanized Steel Reinforced/ Aluminum Alloy Stranded Conductors	DC Resistance / Resistivity/ Resistance	IS 398 (Part 1)-Clause 12.5	0.35 mΩ to 19.999 mΩ
			IS 398 (Part 2)-Clause 13.6	
			IS 398 (Part 4)-Clause 12.4	
			IS 398 (Part-5)-Clause 13.8	
			IEC 61089-Clause 6.2.2	
			ASTM B 232-Clause 12	
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		EN 50182-Clause 5.10		

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<u>MECHANICAL TESTING</u>				
LOCATION-1				
I.	MECHANICAL PROPERTIES OF METALS			
1.	Aluminum and Aluminum Alloy Conductor and Wire / Rod	Diameter	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part 4) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	1 mm to 15 mm
		Breaking Load / Rated Strength	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part 4) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	0.5 kN to 5 kN
		Tensile Strength	EN 50182	60 MPa to 400 MPa
		Lay Ratio	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part 4) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	10 to 17

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Elongation	IS 398 (Part 4) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	0 % to 25 %
		Wrapping	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	Wrap on 1X diameter
		Mass per Unit Length of Conductor	IEC 61089 ASTM B 232 ASTM B 399 EN 50182	50 g/m to 3000 g/m
2.	Galvanized Steel wire	Diameter	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part 4) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	1 mm to 15 mm
		Tensile Strength	EN 50182	500 MPa to 2000 MPa
		Breaking Load / Rated Strength	IS 398 (Part-1) IS 398 (Part-2) IS: 398 (Part 4) IS: 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	2 kN to 30 kN

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		Lay Ratio	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part 4) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	13 to 30
		Torsion test	IS 398 (Part-2) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	Upto 50 turns
		Elongation test	IS 398 (Part-2) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	0.50 % to 8 %
		Wrapping	IS 398 (Part-2) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	Qualitative Mandrel Size 1 or 2 10.2 mm, 14.12 mm & 15.72 mm

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LOCATION-2				
I. MECHANICAL PROPERTIES OF METALS				
1.	Aluminum and Aluminum Alloy Conductor and Wire / Rod	Diameter	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part 4) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	1 mm to 15 mm
		Breaking Load / Rated Strength	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part 4) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	0.5 kN to 5 kN
		Tensile Strength	EN 50182	60 MPa to 400 MPa
		Lay Ratio	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part 4) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	10 to 17
		Elongation	IS 398 (Part 4) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	0 % to 25 %

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		Wrapping	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	Wrap on 1 x diameter
2.	Galvanized Steel wire	Diameter	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part 4) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	1 mm to 15 mm
		Breaking Load / Rated Strength	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part 4) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	2 kN to 30 kN
		Tensile Strength	EN 50182	500 MPa to 2000 MPa
		Lay Ratio	IS 398 (Part-1) IS 398 (Part-2) IS 398 (Part 4) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	13 to 30

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		Torsion test	IS 398 (Part-2) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	Upto 50 turns
		Elongation test	IS 398 (Part-2) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	0.50 % to 8 %
		Wrapping	IS 398 (Part-2) IS 398 (Part-5) IEC 61089 ASTM B 232 ASTM B 399 EN 50182	Qualitative Mandrel Size 1 or 2 10.2 mm, 14.12 mm & 15.72 mm

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