

**Electrical, Mechanical & Chemical properties of various Materials as detailed below, are Tested.**

PRODUCTS	TYPE OF TESTS COVERED
<b>Electrical Testing :</b>	
➤ Current Transformer / Voltage Transformer	<ul style="list-style-type: none"> <li>➤ Accuracy Test - Ratio and Phase Displacement Error</li> <li>➤ Temperature Rise</li> <li>➤ Dry Power Frequency Voltage Withstand</li> <li>➤ Lightning Impulse Voltage Withstand</li> <li>➤ Partial Discharge Test</li> </ul>
➤ Alternating Current Disconnectors (Isolators/AB Switch) & Earthing Switches	<ul style="list-style-type: none"> <li>➤ Resistance of the Main Circuit by mV drop</li> <li>➤ Temperature Rise Test</li> <li>➤ Mechanical Endurance Test</li> <li>➤ Lightning Impulse Test</li> <li>➤ Power Frequency Voltage Withstand (Dry &amp; Wet)</li> </ul>
➤ Circuit Breaker (AC Metal enclosed Switch Gear and Control Gear)	<ul style="list-style-type: none"> <li>➤ Mechanical Endurance Test (Mechanical Characteristics)</li> <li>➤ Temperature Rise Test</li> <li>➤ Dry Power Frequency Voltage Withstand</li> <li>➤ Lightning Impulse Voltage Withstand</li> <li>➤ Measurement of Contact Resistance</li> </ul>
➤ High Voltage Fuse Explosion (Drop Out & Cut Out HG Fuse)	<ul style="list-style-type: none"> <li>➤ Temperature Rise Test</li> <li>➤ Lightning Impulse Test</li> <li>➤ Power Frequency Voltage Withstand (Dry &amp; Wet)</li> </ul>
➤ Discharge / Earthing /Rescue Rod	<ul style="list-style-type: none"> <li>➤ Lightning Impulse Voltage Withstand</li> <li>➤ Dry / Wet Power Frequency Voltage withstand</li> </ul>
➤ Wrought Al.Wire / ACSR/ACASR/AAC/AAAC / Aluminium Alloy Redraw Wire/ Cables and Accessories/ Copper rod/bar/strip/ Earth Wire/ EC Grade Al.Rod/ Wrought Al.Wire	<ul style="list-style-type: none"> <li>➤ Resistance / Conductivity /Resistivity / DC Resistance of Conductor/Armour</li> </ul>
➤ Ceramic / Glass Insulator	<ul style="list-style-type: none"> <li>➤ Lightning Impulse Voltage Withstand &amp; Flashover (Dry)</li> <li>➤ Dry &amp; Wet Power Frequency Voltage Withstand / Flashover / Routine test / Under Oil Puncture Withstand</li> <li>➤ Galvanizing (Uniformity / Mass of Zinc Coating)</li> <li>➤ Mechanical Performance Test/ Mechanical Test/ Residual Strength Test/ Mechanical Load/ Electromechanical failing</li> <li>➤ Visual Examination</li> <li>➤ Porosity</li> <li>➤ Thermal Mechanical Performance Test</li> <li>➤ Visible Discharge</li> <li>➤ Verification of Dimension</li> <li>➤ Temperature Cycle</li> </ul>
➤ Clamps and Connector	<ul style="list-style-type: none"> <li>➤ DC Resistance</li> <li>➤ Temperature Rise</li> <li>➤ Visual Examination and Dimension Check</li> </ul>
➤ Composite Polymeric Insulator (Disc/Pin/Post)	<ul style="list-style-type: none"> <li>➤ Water Diffusion Test/ Dye Penetration Test</li> <li>➤ Brittle Fracture Resistance Test</li> <li>➤ Assembled Core Load Time Test/ Damage Limit Proof Test</li> <li>➤ Dry &amp; Wet Power Frequency Voltage Withstand / Flashover</li> <li>➤ Galvanizing</li> <li>➤ Mechanical Load Test</li> <li>➤ Dry Lightning Impulse Withstand/Flashover voltage</li> <li>➤ Visual Examination and Dimension Verification</li> </ul>
➤ Distribution Box/ LT & HT Panel	<ul style="list-style-type: none"> <li>➤ Temperature Rise Test</li> <li>➤ HV Test</li> <li>➤ Creepage and Clearance (Dimension verification)</li> </ul>
➤ Insulated Cable Accessories (Insulation Piercing Connector/ Suspension Clamp/ Dead End Clamp etc.)	<ul style="list-style-type: none"> <li>➤ Electrical Ageing Test</li> <li>➤ Voltage Test</li> <li>➤ Visual and Dimensional Check</li> <li>➤ Water Tightness Test</li> <li>➤ Electrical Continuity Test</li> <li>➤ Mechanical Test</li> </ul>
➤ Interconnecting Bus Bars for AC Voltage	<ul style="list-style-type: none"> <li>➤ Lightning Impulse Voltage</li> <li>➤ Power Frequency Voltage Withstand</li> <li>➤ Temperature Rise Test</li> </ul>
➤ Metal Fitting / Accessories for Insulator / Conductor/Earth Wires for O.H Lines	<ul style="list-style-type: none"> <li>➤ Electrical Resistance/ Resistivity/ Conductivity/ Heating Cycle</li> </ul>

PRODUCTS	TYPE OF TESTS COVERED	
<b>Mechanical Testing :</b>		
➤ Cast iron, Structural Steel, Steel Tube & Al & Al alloy Sheet & strip, Deformed Steel Bars & Wires, Mild Steel Wire, Wrought Al, Al Alloy Wire, EC Grade Al Rod, Earth Wire, Barbed Wire Galvanized Stay Strand	➤ Bend	➤ Ultimate Tensile Strength
	➤ Yield Strength / Elongation% / % Reduction of area	
➤ AA Conductor/ AAA Conductors/ AAAC Conductor/ ACSR Conductor/	➤ Breaking Load of all Individual Al Wires	
	➤ Diameter of Individual Wire (Al.)	
	➤ Freedom from defects	➤ Measurement Lay Ratio
	➤ Measurement of Dia. Of Individual Wire (Al & Steel)	
	➤ Elongation	➤ Ductility (Elongation/Torsion)
➤ Chain Pulley Block/ Point Hook with Shank	➤ Surface Condition	
	➤ Ultimate Breaking Load	
➤ Conductor and Earth Wire Accessories	➤ Proof Load	
	➤ Bend/ Clamp Slip Strength	➤ Failing Load
	➤ Mechanical Strength	➤ Tensile Strength
	➤ Resilience	➤ Resilient
	➤ Verification of Dimension	➤ Visual Examination
➤ Couplers	➤ Wrapping	
	➤ Distortion	➤ Slip
➤ Danger Notice Plate / Danger Board	➤ Dimension Verification	➤ Visual Examination
➤ Deformed Steel Bars & Wires	➤ Mass/Meter	
➤ Earth Wire	➤ Breaking Force	➤ Diameter of Individual Wire
	➤ Elongation%	➤ Mass/Meter
	➤ Torsion	➤ Wrapping
➤ EC Grade Al Rod	➤ Dimension Verification	➤ Freedom From Defects
	➤ Tensile	
➤ Galvanized Barbed Wire / Earth Wire	➤ Dimension Verification	➤ Ductility (Wrapping)
	➤ Mass of Wire	➤ Freedom from Defects
➤ Galvanized Stay Strand / Earth Wire	➤ Diameter of Individual Wire	➤ Ductility/Wrapping
	➤ Freedom From Defects	➤ Lay Ratio
➤ Metal Fittings of Insulator	➤ Deflection	
	➤ Mechanical Strength	➤ Slip Strength
	➤ Verification of Dimension	➤ Visual Examination
➤ Mild Steel Wire	➤ Dimension Verification	➤ Freedom from Defects
	➤ Tensile	➤ Wrapping
➤ Power Connector	➤ Cantilever Strength Test	➤ Pull out test
	➤ Dimension Verification	➤ Freedom From Defects
➤ Spacer Damper	➤ Assembly Torque Test	➤ Clamp Bolt Torque Test
	➤ Verification of Dimension	➤ Visual Examination
➤ Steel Wire Rope	➤ Breaking Force	
➤ Vibration Damper	➤ Clamp Bolt Torque Test	➤ Clamp Slip Test
	➤ Attachment of clamp to messenger cable	➤ Mass Pull Off
	➤ Verification of Dimension	➤ Visual Examination
➤ Wrought Al, Al Alloy Wire	➤ Dimension Verification	➤ Freedom from Defects
	➤ Tensile	➤ Wrapping
<b>Chemical Testing :</b>		
➤ Coated Material	➤ Coating Thickness Measurement	
➤ Zinc Coated Steel	➤ Mass for Zinc Coating	➤ Adhesion Test
	➤ Uniformity of Zinc coating (Dip Test)	
➤ Ferrous & Non-Ferrous Materials	➤ <b>Chemical Analysis (By Emission Spectrometer) -</b> Chromium (Cr), Copper (Cu), Iron (Fe), Lead (Pb), Magnesium (Mg), Manganese (Mn), Nickel (Ni), Silicon (Si), Tin (Sn), Titanium (Ti), Zinc (Zn), Chromium, Molybdenum, Aluminium, Sulphur, Phosphorous, Vanadium	