

**Laboratory** Insulating Oil Testing Laboratory, Power Grid Corporation of India Limited, 400/220kV Misa Sub-Station, Veluguri, Post-Kathiatoli, District-Hojai, Assam

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

**Certificate Number** TC-7568

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**Validity** 12.07.2018 to 11.07.2020

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.	INSULATING MATERIALS & INSULATORS				
1.	New Insulating Oil & Mineral Insulating Oil	Dielectric Strength / Breakdown Voltage	IS 6792 IEC 60156	20 kV to 100 kV AC	
		Water Content	IS 13567/IEC 60814	0.96 mg/kg to 75 mg/kg	
		Dielectric Dissipation Factor /Tan Delta	IS 6262 IEC 60247	0.00001 to 1	
		Specific Resistance / Resistivity	IS 6103 IEC 60247	0.00001 TΩ-cm to 10 <sup>4</sup> TΩ-cm	
2.	Mineral insulating oil	Interfacial Tension	IS 6104/ASTM D 971 - 12	0.1 mN/m to 243.9 mN/m	
		Dissolved Gas Analysis	IS 9434 IEC 60567 ASTM D 3612 (Method C)	2.01 µl/l to 1000 µl/l 1 µl/l to 1000 µl/l 1 µl/l to 1000 µl/l 0.70 µl/l to 1000 µl/l 0.17 µl/l to 1000 µl/l 1 µl/l to 5000 µl/l 1 µl/l to 10000 µl/l 0.04 % to 10 % 0.25 % to 20 %	
		Furan Analysis	IEC 61198 ASTM D-5837	0.03 mg/kg to 25 mg/kg 0.01 mg/kg to 25 mg/kg 0.06 mg/kg to 25 mg/kg 0.01 mg/kg to 25 mg/kg 0.01 mg/kg to 25 mg/kg	
		Flash Point	ASTM 6450	30° C to 160° C	
		Density	ASTM D4052	0.0011 g/cm <sup>3</sup> to 1.5 g/cm <sup>3</sup>	
		Inhibitor content	IS13631 ASTM D 2668/IEC 60666	0.1 % to 0.5 %	

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		Carbon type composition	IS13155	Ca :1 % to 10 % C <sub>p</sub> :20 % to 75 % C <sub>n</sub> :20 % to 75 %

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