

The Motwane Manufacturing Company Private Limited

REGD.OFF. & FACTORY | CIN No U32109MH 1960 PTC 011827

Mobile: +91 8801208570, +91 8669621139

Email: oiltestlab@motwane.com | Website: motwane.com

NABL Accredited Transformer Oil Testing Laboratory as per IS/ISO/IEC 17025:2017



TC 6358

TEST REPORT

Customer Name & address			
Customer Work Order Number			
Discipline/Group	Condition of Sample on Receipt		
Sampling Plan			
Serial Number	Sample Code No & Date	-	
Customer Identification	Test Requested By		
Make	Date of Sample Collection		
Capacity	Date of receipt of Sample		
Voltage(HV/LV)	Sample Tested on	-	
Year of Manufacturer	Identification of Sample		
Last date of Filtration			

TEST RESULTS

SI	Test as per IS:1866:2017	Limits	Results	Condition of Oil
1	Interfacial tension at _____ mN/m			
2	Flash Point °C			
	i) Ambient Barometric Pressure _____ kpa,Hg			
3	Acidity (Neutralization Value) mgKOH/g			
4	Breakdown Voltage (BDV) kV		- - -	
	i) Type of Electrodes : Brass Spherical		- - -	
	ii) Oil temperature		Average -	
	iii) Frequency of the test voltage		Reported 0.0	
5	Dielectric Dissipation Factor (Tan δ) at _____ 90° C			
	i) Electric Stress AC 250V/mm			
	ii) Frequency of the applied voltage			
	iii) Dielectric Constant of the sample			
6	Specific Resistance (Resistivity) _____ 20° C G Ohm m	**	**	**
	Specific Resistance (Resistivity) _____ 90° C G Ohm m			
	i)Electrical Stress DC 250V/mm,Time of Electrification:60Sec			
7	Moisture Content			
8	Sediment & Sludge Content % by weight			
9	Colour and Appearance			

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10	Density of oil g/ml					
11	Dissolved Gas Analysis (DGA) μl/l as per IS:10593:2018			Typical Values	Test Result	Comments
	1 Carbon Dioxide	CO2	ppm	3800 - 14000		Dissolved gas analysis indicates normal/ healthy equipment.
	2 Ethylene	C2H4	ppm	60 - 280		
	3 Ethane	C2H6	ppm	20 - 90		
	4 Acetylene	C2H2	ppm	0.2 - 20		
	5 Methane	CH4	ppm	30 - 130		
	6 Carbon monoxide	CO	ppm	400 - 600		
	7 Hydrogen	H2	ppm	50 - 150		
	8 Oxygen	O2	ppm	-		
	9 Nitrogen	N2	ppm	-		

(ND): None Detected, (--): Not Furnished, (**): Tests not requested, Fair: More Frequent sampling, Poor: Recondition of Oil

Remarks:

- Interfacial Tension: -
- Flash point: -
- Acidity: -
- Breakdown Voltage Test(BDV): -
- Dielectric Dissipation Factor (DDF): -
- Resistivity: -
- Moisture Content: -
- Sediment And Sludge: -
- Dissolved Gas Analysis(DGA): -

Health Card

Asset Name

Location

Rating

Last Date of Test Conducted

Paper DP

Action Recommended

* as per IEEE Std C57.104™-2019 HI ≤ 0.5 is Healthy, HI > 0.5 and ≤ 2 is Moderate, HI > 2 and ≤ 5 is Poor, HI > 5 is Severe



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Reporting Details

Sl	Tests	Remarks	
1	Interfacial Tension (IFT)	Reference to this Indian standard	IS:6104:1971 Ring Method @ 27°C+1°C Reaffirmed 2016
2	Flash Point	Reference to this Indian standard	IS:1448 (P:21):2019 Pensky Martens closed cup Test Method
3	Acidity mg KOH/g oil	Reference to this Indian standard	IS:1448 (P:2):2007 Reaffirmed 2018
4	Breakdown Voltage Test (BDV) in KV (rms)	Reference to this Indian standard	IS: 6792:2017
		Type of Electrodes	Brass spherical
		Frequency of the test voltage	50Hz
		Oil temperature, °C	20 + 5 °C
5	Dielectric Dissipation Factor(Tanδ)	Type of test cell used	Three terminal cell
		Method of measurement	IS:6262:1971 Reaffirmed 2016
		Average voltage gradient in the sample while under test, in volts(rms)per mm	250 V
		Frequency of applied voltage	50Hz
		Temperature & Humidity of the laboratory during test	Logsheet(23.4) <50% RH
6	Resistivity GΩm	Type of cell used	Three terminal cell
		Method of measurement	IS:6103:1971 Reaffirmed 2016
		Average voltage gradient in the sample while under test in V/mm	250 V DC Time of Electrification: 60 sec
		Temperature & Humidity of the laboratory during test	Logsheet(23.4) <50% RH
7	Moisture Content	Reference to this Indian standard	IS:13567:2018 Karl Fischer Titration Method
8	Sediment & Sludge Content	Reference to this Indian standard	IS:1866:2017 Annexure 'C'
9	Dissolved Gas Analysis	Reference to this Indian standard	IS:9434:2019 & IS:10593:2018 Toepler Extraction
10	Appearance	Reference to this Indian standard	IS:1448(P:12):2013 Reaffirmed 2018
11	Density	Reference to this Indian standard	IS:1448 (P:16) :2014

Disclaimer: The test results relate only to the sample(s) as received condition.

Note:

1	The test results relate only to the sample(s) tested.
2	Publication or reproduction of this test report in any form other than by complete set of the whole report and in the language written is not permitted without the written consent of the testing laboratory
3	Any correction/eraser invalidates this test report.
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