



TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED
(An ISO 9001:2008 Certified Company)

OIL TESTING LABORATORY :: VIJAYAWADA
TRANSFORMER OIL TEST REPORT

SS Name : BRAHMADEVAM-132/33KV-SUBSTATION

OTR No: VJA10003026

Ref: OTLVJA23121106

Equipment: 50MVA 132/33KV POWER TRANSFORMER-III(BOTTOM)

Equipment Details		SAMPLE Details	
Make : BBL	Capacity : 50 MVA	Sample Dt : 01.12.2023	Oil Temp : 53.0°C
Sl.no : 5695 /27	Equipment : 10066710	Recpt Dt : 02.12.2023	Load@Sample : 12.3
YOM : 2020	HV level : 132KV	Test Dt : 02.12.2023	
Total Quantity of Oil in(Litres)		Equipment : 0.00	Container : 2.00

TEST RESULTS

Reference standard as per IS: 1866-2017

Sl.no	Parameter	Measured Value	UoM	Violation limit	Test method
01	Acidity	NT	mg/g	<0.200	
02	2-furfuryl (2FAL)	ND	ppb	<0.05	
03	5-hydroxymethyl-2-furaldehyde	ND	ppb	<0.05	
04	2-furaldehyde (2FOL)	ND	ppb	<0.05	
05	2-acetyl furan (2ACF)	ND	ppb	<0.05	
06	Hydrogen (H2)	ND	ppm		
07	Methane(CH4)	ND	ppm		
08	Ethane(C2H6)	ND	ppm		
09	Ethylene(C2H4)	ND	ppm		
10	Acetylene(C2H2)	ND	ppm		
11	Appearance & Colour	CLEAR			
12	B.D.V@ 61.8Hz,with stirrer)	72.7	kV	>40.00	
13	Water content	5.6	mg/kg	<30.00	
14	Oxygen (O2)	474.15	ppm		
15	Inter Facial Tension	38.02	mN/m	>22.00	
16	Resistivity @ 90 °C	357.64	GOM	>0.20	
17	Carbon Monoxide (CO)	236.32	ppm		
18	Carbon Dioxide(CO2)	2325.91	ppm		
19	5-methyl-2-furaldehyde (5MEF)	166.444	ppb	<0.05	
20	Flash point	160.1	°C	>135.00	
21	Nitrogen (N2)	1475.96	ppm		
22	Viscosity @ 40°C	10.758	mm ² /s	<12.00	
23	Density @20 °C	0.8344	g/cm ³	<0.895	
24	Tan Delta @ 90 °C, 55Hz	0.002700		<0.500	



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Environmental Conditions		Room temp	25.0°C	Rel Humidity	40
NT	NOT TESTED	ND	NOT DETECTED		
Test conditions for BDV: Oil Temp: 24.0°C freq: 61.8 Hz, Electrode type: Hemispherical brass, 6 test values: 86.0, 76.2, 74.9, 74.4, 72.8, 51.7		Test conditions for DDF: elec.stress: 1kv/mm, freq: 55 HZ. Test conditions for Resistivity: elec.stress: 250kv/mm, electrification time: 60 sec.			

Remarks : Test results are with in the specified limits.