



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

**OIL TESTING LABORATORY :: VIJAYAWADA**  
**TRANSFORMER OIL TEST REPORT**

**SS Name : NALLAPADU-132/33KV-SUBSTATION**

OTR No: VJA10002090

Ref: OTLVJA2303224

Equipment: 31.5 MVA 132/33KV PTR-II(BOTTOM)

**Equipment Details**

**SAMPLE Details**

Make : TR	Capacity : 31.5 MVA	Sample Dt : 13.03.2023	Oil Temp : 52.0°C
Sl.no : 20000/08	Equipment : 10041242	Recpt Dt : 14.03.2023	Load@Sample : 4.7
YOM : 2006	HV level : 132KV	Test Dt : 14.03.2023	
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	Appearance & Colour	YELLOW			
02	Acetylene(C <sub>2</sub> H <sub>2</sub> )	ND	ppm		
03	Ethane(C <sub>2</sub> H <sub>6</sub> )	82.215	ppm		
04	Methane(CH <sub>4</sub> )	70.247	ppm		
05	B.D.V@ 61.8Hz,with stirrer)	54.8	kV	>40.00	
06	Oxygen (O <sub>2</sub> )	535.272	ppm		
07	Carbon Dioxide(CO <sub>2</sub> )	5237.002	ppm		
08	Ethylene(C <sub>2</sub> H <sub>4</sub> )	410.972	ppm		
09	Resistivity @ 90 °C	314.26	GOM	>0.20	
10	Carbon Monoxide (CO)	241.903	ppm		
11	Hydrogen (H <sub>2</sub> )	14.257	ppm		
12	Nitrogen (N <sub>2</sub> )	1201.213	ppm		
13	Water content	12.1	mg/kg	<30.00	
14	Tan Delta @ 90 °C, 55Hz	0.001222		<0.500	

**Environmental Conditions**

Room temp

25.0° C

Rel Humidity

40

**NT** NOT TESTED

**ND**

NOT DETECTED

Test conditions for BDV:

Oil Temp: 26.0° C

freq:61.8 Hz,

Electrode type:Hemispherical brass,

6 test values: 71.0,65.6,60.2,54.4,48.6,28.9

Test conditions for DDF:

elec.stress: 1kv/mm,

freq: 55 HZ.

Test conditions for Resistivity:

elec.stress: 250kv/mm,

electrification time: 60 sec.

**Remarks :** BDV,water content test results are with in the specified limits.But DGA reveals the thermal fault (T3) ,severe over heating of solid core insulation.Explore the reason.

Approver ID :1029317

Name : VENKATA NAGESWARA RAO

Designation : EE/MRT&TRANSFORMERS/VIJAYAWADA

Appr. Dt : 15.03.2023