

Transformer Oil Diagnostics

Company: Company A
Date: 25/112016
Location: Location A
Substation: Sub 2
Transformer ID: Sub 2 Tx 2
Manufacturer: Manufacturer A

Job Number: A0000
Sample Number: A00000102
Serial Number: 123457
Voltage (kV): 33/11
Rating (MVA): 20

Diagnostic Results

Test	Result	Test	Result
Hydrogen H2 (ppm) IEC 60567	0	Particles 50 to 100 µm	N/A
Methane CH4 (ppm) IEC 60567	42	Particles >100 µm	N/A
Ethane C2H6 (ppm) IEC 60567	41	Moisture (ppm) IEC 60814	5.2
Ethylene C2H4 (pm) IEC 60567	2	Moisture @ 20C (ppm)	4.0
Acetylene C2H2 (ppm) IEC 60567	0	Diagnostic Breakdown Voltage (kV)	N/A
Carbon Monoxide Co (ppm) IEC 60567	244	IEC Breakdown Voltage (kV) IEC 60156	80.0
Carbon Dioxide CO2 (ppm) IEC 60567	1764	Acid Number (mgKOH/g) IEC 62021	0.029
Nitrogen N2 (ppm) IEC 60567	73488	Interfacial tension (dynes /cm) ASTM D971	N/A
Oxygen O2 (ppm) IEC 60567	8627	Power factor IEC 60247	N/A
Total (ppm)	84208	Power factor IEC 60247	N/A
TDCG (ppm)	329	5 hydroxymethyl-2-furaldehyde (ppm) IEC 61198	N/A
Viscosity (mm2/s)	N/A	2 furaldehyde (ppm) IEC 61198	<0.01
Density (g/ml)	N/A	2 acetylfuran (ppm) IEC 61198	N/A
Particles 5 to 15 µm	N/A	5 methyl-2-furaldehyde (ppm) IEC 61198	N/A
Particles 15 to 25 µm	N/A	2 furfurol (ppm) IEC 61198	N/A
Particles 25 to 50 µm	N/A	Estimated Degree of Polymerisation DP	1015

Retest: 3 months

Operational Status:

Heating is indicated repeat DGA in 3 months to confirm and trend.

Paper Condition:

The mechanical strength of the paper is indicated by the estimated degree of polymerisation (DP). New paper starts with a DP of 1000 or more, as the paper starts to age or is damaged by poor fluid management or operational events, so the DP reduces. A DP of 250 indicates end of life. The paper inside this transformer is in normal condition. No specific actions are advised.

Fluid Condition:

Acidity complies with IEC 60422.
Moisture complies with IEC 60422.
Breakdown voltage is acceptable and complies with IEC 60422.

Approved By:

