

Date of Receipt: 12 July 2010

Date of Report:

21 July 2010

	AFTER	BEFORE	BS EN
Serial Number	PTE1710/03	PTE1710/03	60422:2006
Unit	Steam Gen Transformer	Transformer	Supervision and Maintenance Guidance
Rating	60 MVA		
Voltage	132/11 kV		
Volume	23500 Litres		
Sample Point	Main Tank		
Sample Date	11/07/2010		
Temperature (°C)	22.9		
Acidity (mg KOH/g)	0.01	0.01	0.20 max
Electric Strength (kV) (2.5mm gap)	75	40	40 min
Water Content (mg/Kg)	5	30	15 max
Colour	Pale Yellow	Light Yellow	Not Dark
Appearance	Clear	Clear	Clear
Odour	Satisfactory	Satisfactory	Not Acrid
Sediment	Clear	Clear	None
Fibres	Clear	Faint Trace	
Resistivity (giga ohm.m @ 20°C)	4400.00	2400.00	60 min
Dissipation Factor	0.023	0.028	0.5 max (@90°C)
Furans (mg/Kg)	<0.1	<0.1	0.1 max Per Annum
Estimated D.P.	1000	1000	300 min
Total PCB's (mg/Kg)	<1	<1	E.C. 50 max
Interfacial Tension (mN/m)			22 min
Corrosive Sulphur	Non-Corrosive	Corrosive	IEC62535
Hydrogen (µl/l)	0.60	1.10	
Methane (µl/l)	2.77	23.40	
Ethylene (µl/l)	0.19	1.06	
Ethane (µl/l)	0.52	21.20	
Acetylene (µl/l)	0.01	0.01	
Carbon Monoxide (µl/l)	1	28	
Carbon Dioxide (µl/l)	166	1393	
Oxygen (%)	0.36	1.32	
Nitrogen (%)	1.17	4.16	
Total Gas (%)	1.58	5.65	
Rogers Ratio	0.20	0.20	
Oxides	166.0	49.8	



Transformer Unit Hydrocarbon Gases: following treatment.

Oxides of Carbon Gases: following treatment.

Insulating Medium: resistivity, dissipation factor, acidity, electric strength, water content, colour appearance, odour and sediment, meet the requirements for the standard, Category 'B'. Furans not detected following treatment. Contamination from Polychlorinated Biphenyl (P.C.B.) not detected at <1 mg/Kg. Corrosive Sulphur now meets the standard.

Recommendations: sample represents insulating oil in satisfactory condition for service.

Date of Next Sample: ONE MONTH FOLLOWING ENERGISING ON-LOAD.

Date of Receipt: 14 June 2010

Date of Report:

21 July 2010

	AFTER	BEFORE	BS EN
Serial Number	PTE1710/02	PTE1710/02	60422:2006
Unit	Generator Transformer GT1	Transformer	Supervision and Maintenance Guidance
Rating	110 MVA		
Voltage	15/132 kV		
Volume	42000 Litres		
Sample Point	Main Tank		
Sample Date	11/06/2010		
Temperature (°C)	12		
Acidity (mg KOH/g)	0.01	0.04	0.20 max
Electric Strength (kV) (2.5mm gap)	75	40	40 min
Water Content (mg/Kg)	6	27	15 max
Colour	Pale Yellow	Yellow	Not Dark
Appearance	Clear	Clear	Clear
Odour	Satisfactory	Satisfactory	Not Acid
Sediment	Clear	Clear	None
Fibres	Clear	Faint Trace	
Resistivity (giga ohm.m @ 20°C)	3200.50	228.60	60 min
Dissipation Factor	0.011	0.134	0.5 max (@90°C)
Furans (mg/Kg)	<0.1	<0.1	0.1 max Per Annum
Estimated D.P.	1000	1000	300 min
Total PCB's (mg/Kg)	<1	<1	E.C. 50 max
Interfacial Tension (mN/m)			22 min
Corrosive Sulphur	Non Corrosive	Corrosive	IEC62535
Hydrogen (µl/l)	0.70	5.60	
Methane (µl/l)	2.67	22.70	
Ethylene (µl/l)	0.05	6.92	
Ethane (µl/l)	0.05	36.10	
Acetylene (µl/l)	0.01	0.01	
Carbon Monoxide (µl/l)	1	161	
Carbon Dioxide (µl/l)	137	1915	
Oxygen (%)	1.16	0.48	
Nitrogen (%)	3.34	51.90	
Total Gas (%)	4.52	5.88	
Rogers Ratio	1 2 1	0 2 0	
Oxides	137.0	11.9	



Transformer Unit Hydrocarbon Gases: following treatment.

Oxides of Carbon Gases: following treatment.

Insulating Medium: resistivity, dissipation factor, acidity, electric strength, water content, colour appearance, odour and sediment, meet the requirements for the standard, Category 'B'. Furans not detected following treatment. Contamination from Polychlorinated Biphenyl (P.C.B.) not detected at <1 mg/Kg. Corrosive Sulphur now meets the standard.

Recommendations: sample represents insulating oil in satisfactory condition for service.

Date of Next Sample: ONE MONTH FOLLOWING ENERGISING ON-LOAD.

Date of Receipt: 12 July 2010

Date of Report:

21 July 2010

	AFTER	BEFORE	BS EN
Serial Number	PTE1710/01	PTE1710/01	60422:2006
Unit	Unit Auxillary Transformer	Transformer	Supervision and Maintenance Guidance
Rating	12/24 MVA		
Voltage	132/11 kV		
Volume	15710 Litres		
Sample Point	Main Tank		
Sample Date	07/07/2010		
Temperature (°C)	25		
Acidity (mg KOH/g)	0.01	0.01	0.20 max
Electric Strength (kV) (2.5mm gap)	73	45	40 min
Water Content (mg/Kg)	8	21	15 max
Colour	Pale Yellow	Light Yellow	Not Dark
Appearance	Clear	Clear	Clear
Odour	Satisfactory	Satisfactory	Not Acrid
Sediment	Clear	Clear	None
Fibres	Very Faint Trace	Faint Trace	
Resistivity (giga ohm.m @ 20°C)	1700.00	201.60	60 min
Dissipation Factor	0.042	0.187	0.5 max (@90°C)
Furans (mg/Kg)	<0.1		0.1 max Per Annum
Estimated D.P.	1000		300 min
Total PCB's (mg/Kg)	<1		E.C. 50 max
Interfacial Tension (mN/m)			22 min
Corrosive Sulphur	Non-Corrosive	Corrosive	IEC62535
Hydrogen (µl/l)	0.60	2.60	
Methane (µl/l)	2.56	30.50	
Ethylene (µl/l)	0.13	4.33	
Ethane (µl/l)	0.28	28.70	
Acetylene (µl/l)	0.01	0.01	
Carbon Monoxide (µl/l)	1	114	
Carbon Dioxide (µl/l)	61	1075	
Oxygen (%)	1.14	0.24	
Nitrogen (%)	4.86	4.58	
Total Gas (%)	6.08	4.95	
Rogers Ratio	0 2 0	0 2 0	
Oxides	61.0	9.4	



Transformer Unit Hydrocarbon Gases: following treatment.

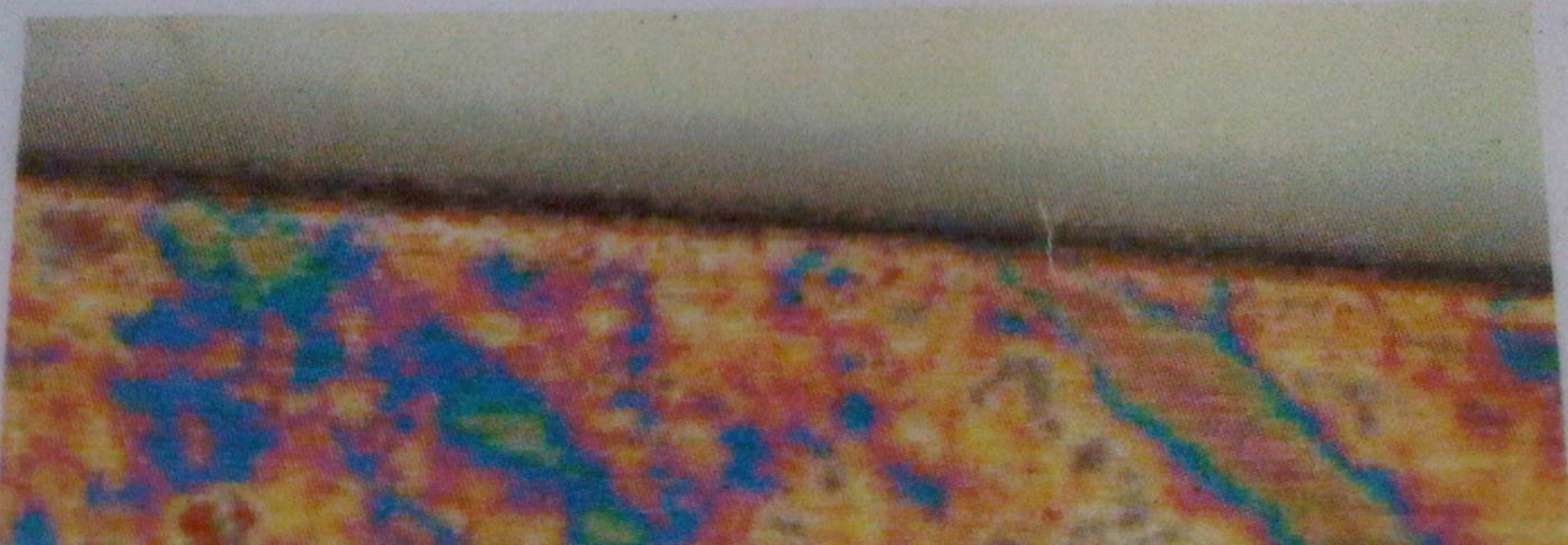
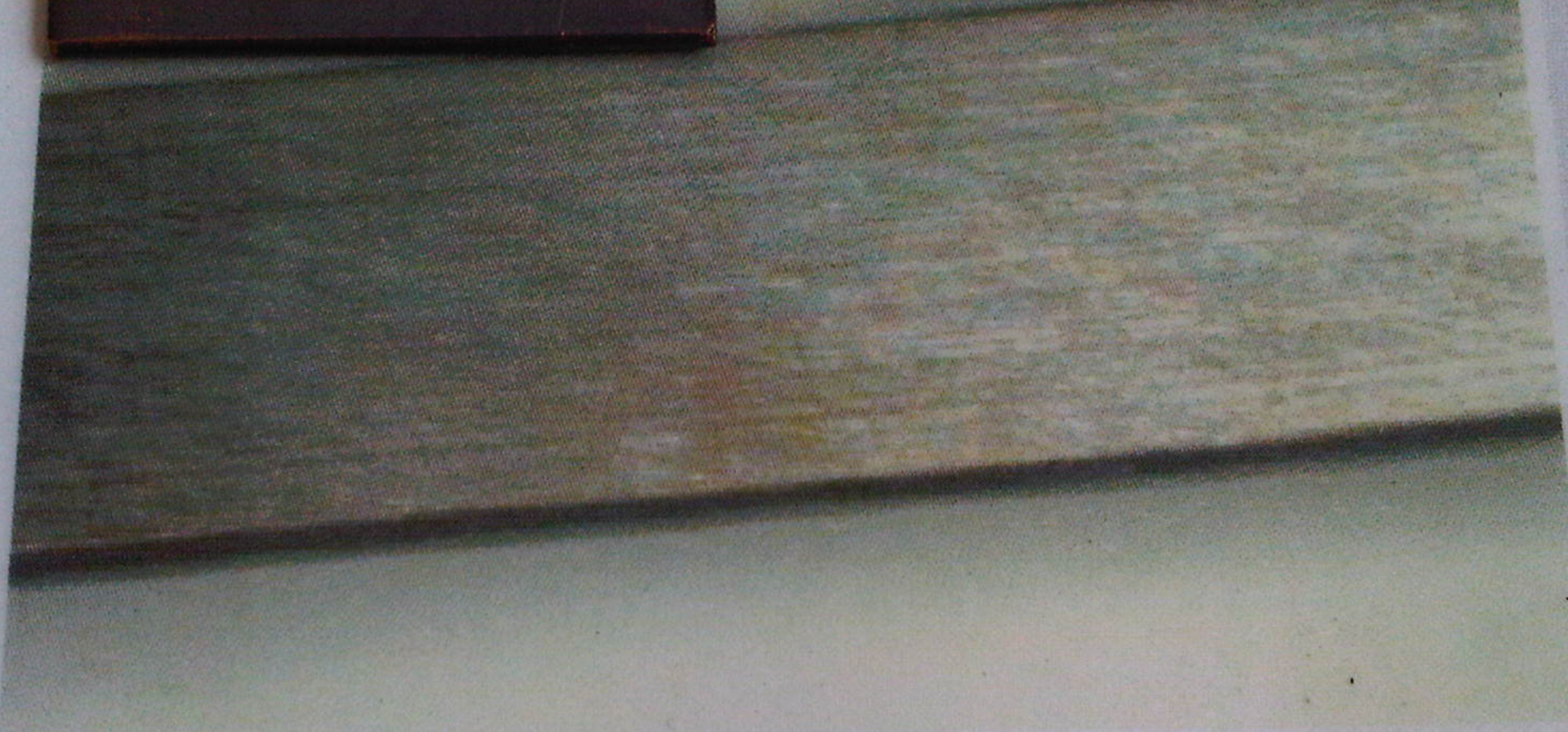
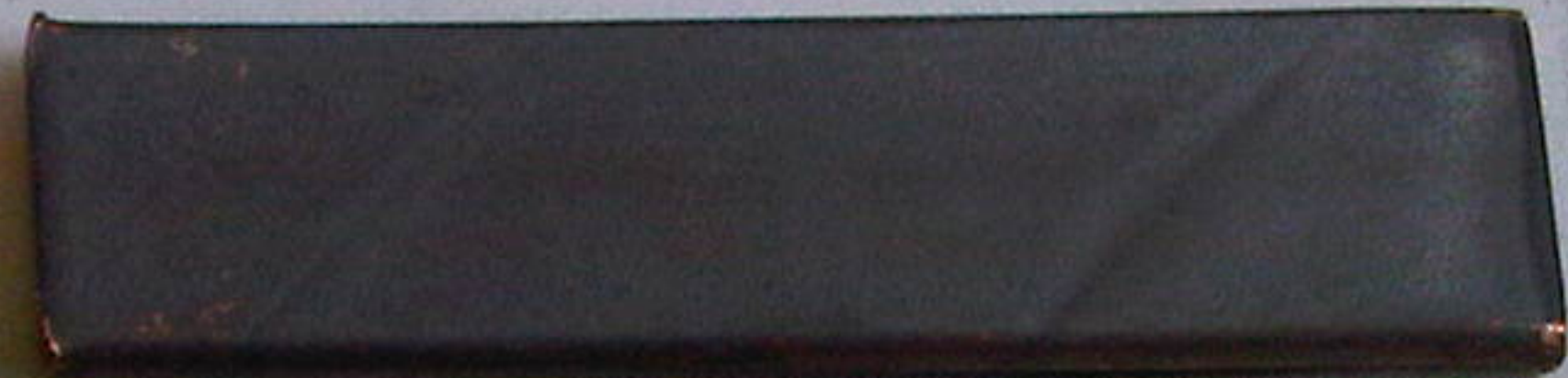
Oxides of Carbon Gases: following treatment.

Insulating Medium: resistivity, dissipation factor, acidity, electric strength, water content, colour appearance, odour and sediment, meet the requirements for the standard, Category 'B'. Furans not detected following treatment. Contamination from Polychlorinated Biphenyl (P.C.B.) not detected at <1 mg/Kg. Corrosive Sulphur now meets the standard.

Recommendations: sample represents insulating oil in satisfactory condition for service.

Date of Next Sample: ONE MONTH FOLLOWING ENERGISING ON-LOAD.

positive



negative

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