National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : RAJ PETRO SPECIALITIES PVT.LTD., LIQUID DIELECTRIC TESTING LABORATORY, 73/1B, VAIKKADU VILLAGE, MANALI, CHENNAI, TAMIL NADU, INDIA

Accreditation Standard ISO/IEC 17025:2017

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
Permanent Facility				
1	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Ageing characteristics-DDF	IS 12177(Method A)
2	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Ageing Characteristics-Specific resistance	IS 12177(Method A)
3	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Ageing characteristics-Total acidity	IS 12177(Method A)
4	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Ageing characteristics-Total sludge	IS 12177(Method A)
5	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Appearance	ASTM D 3487
6	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Appearance	IEC 60296
7	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Appearance	IS:335
8	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Carbon type composition (Aromatics, Ca)	ASTM D 2140
9	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Carbon type composition (Aromatics, Ca)	IEC 60590
10	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Carbon type composition (Aromatics, Ca)	IS 13155
11	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Carbon type composition (Naphtanic, Cn)	ASTM D 2140
12	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Carbon type composition (Naphtanic, Cn)	IEC 60590
13	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Carbon type composition (Naphtanic, Cn)	IS 13155

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14	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Carbon type composition (Paraffinic, Cp)	ASTM D 2140
15	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Carbon type composition (Paraffinic, Cp)	IEC 60590
16	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Carbon type composition (Paraffinic,Cp)	IS 13155
17	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Corrosive sulphur	ASTM D 1275
18	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Corrosive sulphur	DIN 51353
19	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Corrosive sulphur	IEC 62535
20	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Corrosive Sulphur	IS 16310
21	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Density	ASTM D 1298-12b
22	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Density	IS 1448(Part 16)
23	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Density	ISO 12185
24	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Density	ISO 3675
25	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dielectric dissipation factor (Tan delta)	IEC 60247
26	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dielectric dissipation factor (Tan delta)	IS 16086
27	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dielectric dissipation factor(Tan delta)	ASTM D 924

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28	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dielectric dissipation factor(Tan delta)	IS 6262
29	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Acetylene	ASTM D 3612
30	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Acetylene	IEC 60567
31	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Acetylene	IS 9434
32	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Carbon-di-oxide	ASTM D 3612
33	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Carbon-di-oxide	IEC 60567
34	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Carbon-di-oxide	IS 9434
35	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - CO	ASTM D 3612
36	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - CO	IEC 60567
37	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - CO	IS 9434
38	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Ethane	ASTM D 3612
39	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Ethane	IEC 60567
40	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Ethane	IS 9434
41	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Ethylene	ASTM D 3612

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42	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Ethylene	IEC 60567
43	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Ethylene	IS 9434
44	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Hydrogen	ASTM D 3612
45	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Hydrogen	IEC 60567
46	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Hydrogen	IS 9434
47	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Methane	ASTM D 3612
48	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Methane	IEC 60567
49	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Methane	IS 9434
50	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Nitrogen	ASTM D 3612
51	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Nitrogen	IEC 60567
52	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Nitrogen	IS 9434
53	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Oxygen	ASTM D 3612
54	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Oxygen	IEC 60567
55	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Dissolved Gas Analysis - Oxygen	IS 9434

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56	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Electric strength(BDV)	ASTM D 1816
57	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Electric strength(BDV)	ASTM D 877
58	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Electric strength(BDV)	IEC 60156
59	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Electric Strength(BDV)	IS 6792
60	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Electrostatic charging tendency (ECT)	IEC 60296
61	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Electrostatic charging tendency (ECT)	IS 335
62	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Flash point	ASTM D 93
63	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Flash point	IS 1448(Part 21)
64	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Flash point	ISO 2719
65	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Furfural and related compounds content	ASTM D 5837
66	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Furfural and related compounds content	IEC 61198
67	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Furfural and related compounds content	IS 15668
68	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Gassing tendency	ASTM D 2300
69	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Gassing tendency	IEC 60628 Method A

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70	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Interfacial tension	ASTM D 971
71	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Kinematic Viscosity	ASTM D 445
72	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Kinematic Viscosity	IS 1448(Part 25)
73	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Kinematic Viscosity	ISO 3104
74	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Metal Passivator	IEC 60666
75	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Metal Passivator	IS 13631
76	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Negative impulse	ASTM D 3300
77	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Negative impulse	IEC 60897
78	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Neutralization value	ASTM D 974
79	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Neutralization value	IEC 62021-1
80	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Neutralization value	IEC 62021-2
81	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability - DDF	ASTM D 2440
82	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability - DDF	IEC 61125
83	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability - DDF	IEC 61125 Method A & C

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84	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability - Total Acidity	ASTM D 2440
85	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability - Total Acidity	IEC 61125
86	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability - Total Acidity	IEC 61125 Method A & C
87	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability - Total Acidity	IS 12422
88	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability - Total Sludge	ASTM D 2440
89	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability - Total Sludge	IEC 61125
90	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability - Total Sludge	IEC 61125 Method A & C
91	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation stability (RVOT)	ASTM D 2112
92	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation stability (RVOT)	IS 12958
93	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability- Total Sludge	IS 12422
94	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Oxidation Stability-DDF	IS 12422
95	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Particle count	IEC 60970
96	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Particle count	IS 13236
97	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Particle count	NAS 1638

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98	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	PCA content	IP 346
99	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	PCB content	ASTM D 4059
100	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	PCB content	IEC 61619
101	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	PCB Content	IS 16082
102	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Pour point	ASTM D 97
103	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Pour point	IS 1448 (Part 10/Sec-2))
104	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Pour point	ISO 3016
105	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Specific resistance	IEC 60247
106	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Specific resistance	IS 6103
107	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Stray Gassing - DGA - Acetylene	ASTM D 7150(Method A)
108	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Stray Gassing - DGA - Carbon-di-oxide	ASTM D 7150(Method A)
109	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Stray Gassing - DGA - CO	ASTM D 7150(Method A)
110	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Stray Gassing - DGA - Ethane	ASTM D 7150(Method A)
111	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Stray Gassing - DGA - Ethylene	ASTM D 7150(Method A)

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112	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Stray Gassing - DGA - Hydrogen	ASTM D 7150(Method A)
113	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Stray Gassing - DGA - Methane	ASTM D 7150(Method A)
114	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Stray Gassing - DGA - Nitrogen	ASTM D 7150(Method A)
115	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Stray Gassing - DGA - Oxygen	ASTM D 7150(Method A)
116	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Total sulfur content	ASTM D 4294
117	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Water content	ASTM D 1533
118	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer Oil	Water content	IEC 60814
119	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer oils	DBDS	IEC 62697-1
120	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Insulating Transformer oils	DBDS	IS 16497(Part 1)