National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED (POWER OIL PETROLEUM PRODUCT DIVISION), SURVEY NO. 148/1 &148/3/1, KUDACHA VILLAGE, SILVASSA, DADRA AND NAGAR HAVELI, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-7135 **Page No** 1 of 9

Validity 04/05/2022 to 03/05/2024 **Last Amended on** 03/08/2022

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	Transformer Oi	Flash Point (PMCC)	ASTM D 93
2	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oi	Water Content	IS 13567
3	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Ageing Characteristics - Dielectric Dissipation Factor 90°C	IS 12177
4	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Ageing Characteristics - Specific Resistance at 27°C	ASTM D1934
5	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Ageing Characteristics - Specific Resistance at 27°C	IS 12177
6	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Ageing Characteristics - Specific Resistance at 90°C	ASTM D1934
7	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Ageing Characteristics - Specific Resistance at 90°C	IS 12177
8	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Ageing Characteristics - Tan Delta at 90°C	ASTM D1934
9	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Ageing Characteristics - Total Acidity	ASTM D1934
10	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Ageing Characteristics - Total Acidity	IS 12177
11	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Ageing Characteristics - Total Sludge, % wt.	ASTM D1934
12	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Ageing Characteristics d) Total Sludge, % wt.	IS 12177
13	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Antioxidant additives / Oxidation Inhibitor	ASTM D2668

SCOPE OF ACCREDITATION

Laboratory Name :	APAR INDUSTRIES LIMITED (POWER OIL PETROLEUM PRODUCT DIVISION), SURVEY NO. 148/1 &148/3/1, KUDACHA VILLAGE, SILVASSA, DADRA AND NAGAR HAVELI, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-7135	**Page No**	2 of 9
Validity	04/05/2022 to 03/05/2024	**Last Amended on**	03/08/2022

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
14	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Antioxidant additives / Oxidation Inhibitor	BS 5984
15	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Antioxidant additives / Oxidation Inhibitor	IEC 60666
16	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Antioxidant additives / Oxidation Inhibitor	IS 13631
17	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Appearance	IEC 60296
18	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Appearance	IS 335
19	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Break Down Voltage	ASTM D 1816
20	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Break Down Voltage	ASTM D877/ D877M
21	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Break Down Voltage	IEC 60156
22	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Break Down Voltage	IS 6792
23	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Carbon Type Analysis, Aromatic, %	IEC 60590
24	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Carbon Type Analysis, Aromatic, %	IS 12026 (Part 2)
25	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Colour	ASTM D 1500
26	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Colour	ISO 2049
27	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Corrosive Sulphur	Annexure B of IS :335

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Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-7135	**Page No**	3 of 9
Validity	04/05/2022 to 03/05/2024	**Last Amended on**	03/08/2022

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28	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Corrosive Sulphur	DIN 51353
29	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Corrosive Sulphur	ISO 5662
30	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Density	ASTM D1298
31	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Density	IS 1448 (Part 16)
32	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Density	ISO 3675
33	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Dibenzyldisulfide (DBDS)	IEC 62697-1
34	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Dibenzyldisulfide (DBDS)	IS 16497 (Part 1)
35	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Dielectric dissipation factor (tan delta)	ASTM D 924
36	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Dielectric dissipation factor (tan delta)	IEC 60247
37	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Dielectric dissipation factor (tan delta)	IEC 61620
38	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Dielectric dissipation factor (tan delta)	IS 6262
39	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Dielectric dissipation factor (tan delta)	IS: 16086
40	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Flash Point	IS 1448 : Part 69
41	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Flash Point (PMCC)	IS 1448 (Part 21)

SCOPE OF ACCREDITATION

Laboratory Name :	APAR INDUSTRIES LIMITED (POWER OIL PETROLEUM PRODUCT DIVISION), SURVEY NO. 148/1 &148/3/1, KUDACHA VILLAGE, SILVASSA, DADRA AND NAGAR HAVELI, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-7135	**Page No**	4 of 9
Validity	04/05/2022 to 03/05/2024	**Last Amended on**	03/08/2022

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42	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Flash Point (PMCC)	ISO 2719
43	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Flash Point (COC)	IS 1448 (Part 66)
44	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Gassing Tendency	ASTM D 2300
45	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Gassing Tendency	BS 5797
46	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Gassing Tendency	IEC 60628
47	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Gassing Tendency	IS 12475:Part 1
48	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Interfacial tension	ASTMD 971
49	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Interfacial tension	IEC 62961
50	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Interfacial tension	IS 6104
51	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Interfacial tension	ISO 6295
52	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Kinematic Viscosity at 0 to 100°C	ASTM D445
53	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Kinematic Viscosity at 0 to 100°C	IS 1448 (Part 25)
54	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Kinematic Viscosity at 0 to -40°C	IS 1448 (Part 25)
55	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Kinematic Viscosity at 100 to -40°C	IS 1448 (Part 25 sec 1)

SCOPE OF ACCREDITATION

Laboratory Name :	APAR INDUSTRIES LIMITED (POWER OIL PETROLEUM PRODUCT DIVISION), SURVEY NO. 148/1 &148/3/1, KUDACHA VILLAGE, SILVASSA, DADRA AND NAGAR HAVELI, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-7135	**Page No**	5 of 9
Validity	04/05/2022 to 03/05/2024	**Last Amended on**	03/08/2022

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56	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Kinematic Viscosity at 100 to -40°C	ISO 3104
57	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Metal Passivator	IEC 60666
58	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Metal Passivator	IS 13631
59	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Negative Impulse Test	ASTM D3300
60	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Negative Impulse Test	IEC 60897
61	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Negative Impulse Test	IS 11697
62	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation Stability - Neutralization Value	ASTMD 2440
63	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation stability - Neutralization value after oxidation	IS 12422
64	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation Stability - Sludge, % Weight	ASTMD 2440
65	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation stability - Sludge, % wt.	IEC 61125
66	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation stability - Total acidity (TA)	IEC 61125
67	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation stability - Total sludge, after oxidation, % wt.	IS 12422
68	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation stability - Total sludge, after oxidation, % wt.	IS 335 -Annex C
69	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation stability- Dielectric dissipation factor at 90°C	IEC 61125

SCOPE OF ACCREDITATION

Laboratory Name :	APAR INDUSTRIES LIMITED (POWER OIL PETROLEUM PRODUCT DIVISION), SURVEY NO. 148/1 &148/3/1, KUDACHA VILLAGE, SILVASSA, DADRA AND NAGAR HAVELI, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-7135	**Page No**	6 of 9
Validity	04/05/2022 to 03/05/2024	**Last Amended on**	03/08/2022

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
70	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation stability- Dielectric dissipation factor at 90°C	IS 12422
71	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation stability- Neutralization value after oxidation	IS 335 - Annex C
72	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation Stability of Inhibited Mineral Insulating Oil by Pressure Vessel (RPVOT/RBOT)	ASTMD 2112
73	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation Stability of Inhibited Mineral Insulating Oil by Pressure Vessel (RPVOT/RBOT)	ASTMD 2112
74	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Oxidation Stability of Inhibited Mineral Insulating Oil by Pressure Vessel (RPVOT/RBOT)	IS 12958
75	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Polychlorinated Biphenyls Content(PCB Content)	ASTMD 4059
76	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Polychlorinated Biphenyls Content(PCB Content)	IEC 61619
77	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Polychlorinated Biphenyls Content(PCB Content)	IS 16082
78	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Potentially Corrosive Sulphur	IEC- 62535
79	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Potentially Corrosive Sulphur	IS : 16310
80	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Pour Point	IS 1448 : Part 10 (Sec 2)
81	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Pour Point	ISO 3016
82	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Specific Resistance (Resistivity)	ASTM D1169
83	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Specific Resistance (Resistivity)	ASTM D1169

SCOPE OF ACCREDITATION

Laboratory Name :	APAR INDUSTRIES LIMITED (POWER OIL PETROLEUM PRODUCT DIVISION), SURVEY NO. 148/1 &148/3/1, KUDACHA VILLAGE, SILVASSA, DADRA AND NAGAR HAVELI, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-7135	**Page No**	7 of 9
Validity	04/05/2022 to 03/05/2024	**Last Amended on**	03/08/2022

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
84	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Specific Resistance (Resistivity)	IEC 60247
85	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Specific Resistance (Resistivity)	IEC 60247
86	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Specific Resistance (Resistivity)	IS 6103
87	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Specific Resistance (Resistivity)	IS 6103
88	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Total Acid Number / Neutralization Value	IEC 62021-1
89	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Total Acid Number / Neutralization Value	IEC 62021-2:
90	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Total Acid Number / Neutralization Value	IS 1448 (Part 2)
91	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Total Acid Number / Neutralization Value	ISO 6619
92	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Total Furans Content	ASTMD 5837
93	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Total Furans Content	IEC 61198
94	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Total Furans Content	IS 15668
95	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Water Content	IEC 60814
96	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/ I.O.	Viscosity Index from Kinematic Viscosity at 40°C and 100°C	ASTMD 2270
97	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/ I.O.	Viscosity Index from Kinematic Viscosity at 40°C and 100°C	IS 1448 (Part 56)

SCOPE OF ACCREDITATION

Laboratory Name :	APAR INDUSTRIES LIMITED (POWER OIL PETROLEUM PRODUCT DIVISION), SURVEY NO. 148/1 &148/3/1, KUDACHA VILLAGE, SILVASSA, DADRA AND NAGAR HAVELI, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-7135	**Page No**	8 of 9
Validity	04/05/2022 to 03/05/2024	**Last Amended on**	03/08/2022

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
98	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/ I.O.	Viscosity Index from Kinematic Viscosity at 40°C and 100°C	ISO 2909
99	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Aniline Point	ASTM D 611
100	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Aniline Point	IS 1448 :Part 3
101	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Aniline Point	ISO 2977
102	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Carbon Type Analysis, Aromatic, %	IS 13155
103	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Carbon Type Analysis, Naphthenic, %	IS 13155
104	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Carbon Type Analysis, Paraffinic, %	IS 13155
105	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Corrosive Sulphur	ASTM D130
106	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Corrosive Sulphur	ASTMD 1275
107	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Flash Point (COC)	ASTMD 92
108	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Flash Point (COC)	ISO 2592
109	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Kinematic Viscosity at 0 to 100°C	ASTM D445
110	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Kinematic Viscosity at 0 to -40°C	ASTM D445
111	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Polycyclic Aromatics (PCA), % by wt	BS 2000 Part : 346

SCOPE OF ACCREDITATION

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Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-7135	**Page No**	9 of 9
Validity	04/05/2022 to 03/05/2024	**Last Amended on**	03/08/2022

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
112	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Polycyclic Aromatics (PCA), % by wt	IP 346
113	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Pour Point	ASTM D97
114	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Total Acid Number / Neutralization Value	ASTMD 974
115	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Total Sulfur Content	ASTM D 2622
116	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Total Sulfur Content	ISO 20884
117	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil/RPO/I.O.	Water Content	ASTM D1533