National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 1 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Polycyclic Aromatics, % by wt.	BS 2000 (Part 346)
2	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Oil	Apparent Viscosity of Engine Oils and Base Stocks Between –10°C to –35°C Using Cold-Cranking Simulator	ASTM D 5293
3	CHEMICAL- PETROLEUM AND PRODUCTS	Automotive Oil	Apparent Viscosity of Engine Oils and Base Stocks Between –10°C to –35°C Using Cold-Cranking Simulator	ASTM D 5293
4	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil	Corrosiveness to Copper from Petroleum Products by Copper Strip Test	ASTM D 130
5	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil	Oxidation Stability of Inhibited Mineral Insulating Oil by Pressure Vessel, Minutes	IS 12958 Amend.1
6	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil	Oxidation Stability of Inhibited Mineral Insulating Oil by Pressure Vessel, Minutes	IS 12958 Amend.1
7	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Acid Number of Petroleum Products by Potentiometric Titration,, mg/KOH/g	ASTM D 664
8	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Acid Number of Petroleum Products by Potentiometric Titration,, mg/KOH/g	ASTM D 664
9	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Appearance	ASTM D 4176A Procedure 1
10	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Calculating Viscosity Index from Kinematic Viscosity at 40°C and 100°C	IS 1448 (Part 56)
11	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Colour	ASTM D 6045
12	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Colour	ASTM D1500:2012
13	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Density	ASTM D1298-12b
14	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Density	IS 1448 (Part 16)

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 2 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
15	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Density of Liquids by Stabinger Viscometer	ASTM D 7042
16	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Determination of TBN by Potentiometric Titration, mg/KOH/g	IS 1448-Part 1: sec 2
17	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Determination of TBN by Potentiometric Titration, mg/KOH/g	IS 1448-Part 1: sec 2
18	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Dynamic Viscosity of Liquids by Stabinger Viscometer	ASTM D 7042
19	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Flash Point (COC),°C	ASTM D 92
20	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Flash Point (COC),°C	IS 1448 (P 69)
21	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Kinematic Viscosity at 100°C	ASTM D445
22	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Kinematic Viscosity at 100°C	ASTM D7042
23	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Kinematic Viscosity at 100°C	IS 1448 (Part 25:Sec 1)
24	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Kinematic Viscosity at 40°C	ASTM D445
25	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Kinematic Viscosity at 40°C	ASTM D7042
26	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Kinematic Viscosity at 40°C	IS 1448 (Part 25:Sec 1)
27	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Pour Point, °C	ASTM D 97
28	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Pour Point, °C	IS 1448 (Part 10):Sec 2
29	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Total Acid & Base number, mg/KOH/g	ASTM D 974
30	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Total Acid & Base number, mgmKOH/gm.	ASTM D 974
31	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Total Acid number / Neutralization Value, Mg KOH/g	IS 1448 (Part 2)
32	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Total Acid number / Neutralization Value, mgmKOH/gm.	IS 1448 (Part 2)

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 3 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
33	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Total Sulfur Content, % mass	ASTM D 4294
34	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Total Sulfur Content, % mass	ISO 20847
35	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil & Rubber Processing Oil	Viscosity Index	ASTM D2270:2010
36	CHEMICAL- PETROLEUM AND PRODUCTS	Industrial Oil / Rubber Processing Oil	Determination of Flash & Fire Point COC Method	ISO 2592
37	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Aniline Point, °C	ASTM D611:2012
38	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Aniline Point, °C	IS 1448 (Part 3)
39	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Aniline Point, °C	ISO 2977
40	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Carbon Type Analysis, Aromatic, %	ASTM D2140:2008
41	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Carbon Type Analysis, Aromatic, %	IEC 60590
42	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Carbon Type Analysis, Aromatic, %	IS 13155
43	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Carbon Type Analysis, Naphthenic, %	ASTM D2140:2008
44	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Carbon Type Analysis, Naphthenic, %	IS 13155
45	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Carbon Type Analysis, Paraffinic, %	ASTM D2140:2008
46	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Carbon Type Analysis, Paraffinic, %	IS 13155
47	CHEMICAL- PETROLEUM AND PRODUCTS	Rubber Processing Oil	Polycyclic Aromatics, % by wt	BS 2000 (Part 346)
48	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Acid and Base Number by Color-Indicator Titration, mgmKOH/gm.	ASTM D 974
49	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Acid and Base Number by Color-Indicator Titration, mgmKOH/gm.	ASTM D 974
50	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Acid and Base Number by Color-Indicator Titration, mgmKOH/gm.	ASTM D 974

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 4 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
51	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Acid Number of Petroleum Products by Potentiometric Titration,, mg/KOH/g	ASTM D 664
52	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Acid Number of Petroleum Products by Potentiometric Titration,, mg/KOH/g	ASTM D 664
53	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Acid Number of Petroleum Products by Potentiometric Titration,, mg/KOH/g	ASTM D 664
54	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Ageing Characteristics b) Dielectric Dissiption Factor 90°C	IS 12177:1987 Method-A Amend.1
55	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Ageing Characteristics c) Total Acidity,mgmKOH/gm	IS 12177:1987 Method-A Amend.1
56	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Ageing Characteristics d) Total Sludge, % wt.	IS 12177:1987 Method-A Amend.1
57	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Ageing Characteristics a) Specific Resistance at 27°C & 90°C, ohm.cm	IS 12177:1987 Method-A Amend.1
58	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Aniline Point, °C	ASTM D611:2012
59	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Aniline Point, °C	IS 1448 (Part 3)
60	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Aniline Point, °C	ISO 2977
61	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Antioxidant/Oxidation Inhibitor, %	ASTM D2668:2007
62	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Antioxidant/Oxidation Inhibitor, %	BS 5984
63	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Antioxidant/Oxidation Inhibitor, %	IEC 60666
64	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Antioxidant/Oxidation Inhibitor, %	IS 13631 Section I & II

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 5 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
65	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Appearance	ASTM D 4176-21a
66	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Break Down Voltage, kV	ASTM D 877
67	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Break Down Voltage, kV	IEC 60156
68	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Break Down Voltage, kV	IS 6792
69	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Carbon Type Analysis, Aromatic, %	ASTM D2140:2008
70	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Carbon Type Analysis, Aromatic, %	IS 13155
71	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Carbon Type Analysis, Aromatic, %(IEC 60590)	IEC 60590
72	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Carbon Type Analysis, Naphthenic, %	ASTM D2140:2008
73	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Carbon Type Analysis, Naphthenic, %	IS 13155
74	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Carbon Type Analysis, Paraffinic, %	ASTM D2140:2008
75	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Carbon Type Analysis, Paraffinic, %	IS 13155
76	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Colour	ASTM D 6045
77	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Colour	ASTM D1500:2012
78	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Colour	ISO 2049

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 6 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
79	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Corrosive Sulfur	ASTM D 1275 B
80	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Corrosive Sulfur	DIN 51353
81	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Corrosive Sulfur	IEC 62535
82	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Corrosive Sulfur	IS 16310
83	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Corrosive Sulfur	IS 335:2018 Annex B Amend 1
84	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Corrosive Sulfur	ISO 5662
85	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Density	ASTM D1298:2012
86	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Density	IS 1448 (Part 16)
87	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Density	ISO 3675
88	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Density of Liquids by Stabinger Viscometer	ASTM D 7042
89	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Determination of 2-furfural compounds, µg/L	IEC 61198
90	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Determination of 2-furfural compounds, µg/L	IS 15668
91	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Determination of Flash & Fire Point COC Method	ISO 2592
92	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Determination of sulfur content — Energy-dispersive X-ray fluorescence spectrometry	ISO 8754

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 7 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
93	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Determination of sulfur content of automotive fuels — Energy-dispersive X-ray fluorescence spectrometry, mg/kg	ISO 20847
94	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Determination of TAN by Potentiometric Titration, mg/KOH/g	IS 1448 (Part 2)
95	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Determination of TAN by Potentiometric Titration, mg/KOH/g	IS 1448 (Part 2)
96	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Determination of TAN by Potentiometric Titration, mg/KOH/g	IS 1448 (Part 2)
97	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Determination of TAN by Potentiometric Titration, mg/KOH/g	ISO 6619
98	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Determination of TAN by Potentiometric Titration, mg/KOH/g	ISO 6619
99	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Determination of TAN by Potentiometric Titration, mg/KOH/g	ISO 6619
100	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dibenzyldisulfide (DBDS), mg/kg	IEC 62697-1
101	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dibenzyldisulfide (DBDS), mg/kg	IS 16497 : Part 1
102	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dielectric Breakdown Voltage, kV	ASTM D1816:2012
103	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dielectric dissipation factor (tan delta) 25°C to 100°C	ASTM D 924
104	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Dielectric dissipation factor (tan delta) 25°C to 100°C	IEC 60247
105	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dielectric dissipation factor (tan delta) 25°C to 100°C	IEC 61620

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 8 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
106	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dielectric dissipation factor (tan delta) 25°C to 100°C	IS 16086
107	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dielectric dissipation factor (tan delta) 25°C to 100°C	IS 6262
108	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Dielectric dissipation factor (tan delta) 25°C to 100°C	IS 6262
109	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dissolved Gas Analysis (DGA) Ethylene-C2H4	ASTM D3612 Method C:2002
110	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dissolved Gas Analysis (DGA) Nitrogen-N2	ASTM D3612 Method C:2002
111	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dissolved Gas Analysis (DGA) Carbon monoxide-CO	ASTM D3612 Method C:2002
112	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dissolved Gas Analysis (DGA) Acetylene-C2H2	ASTM D3612 Method C:2002
113	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dissolved Gas Analysis (DGA) Carbon dioxide-CO2	ASTM D3612 Method C:2002
114	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dissolved Gas Analysis (DGA) Ethane-C2H6	ASTM D3612 Method C:2002
115	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dissolved Gas Analysis (DGA) Hydrogen (H2)	ASTM D3612 Method C:2002
116	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dissolved Gas Analysis (DGA) Methane-CH4	ASTM D3612 Method C:2002
117	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dissolved Gas Analysis (DGA) Oxygen-O2	ASTM D3612 Method C:2002
118	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dissolved Gas Analysis (DGA) Propane-C3H8	ASTM D3612 Method C:2002
119	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Dissolved Gas Analysis (DGA) Propylene-C3H6	ASTM D3612 Method C-02

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 9 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
120	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Flash Point (COC),°C	ASTM D 92
121	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Flash Point (COC),°C	IS 1448 (Part 66)
122	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Flash Point (PMCC),°C	ASTM D 93
123	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Flash Point (PMCC),°C	IS 1448 P:21
124	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Flash Point (PMCC),°C	ISO 2719
125	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Furanic Compounds in Electrical Insulating Liquids by High-Performance Liquid Chromatography (HPLC), µg/L	ASTM D 5837
126	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Gassing Tendency at 50 Hz after 120 Min., mm3/Min.	ASTM D2300-08
127	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Gassing Tendency at 50 Hz after 120 Min., mm3/Min.	ASTM D2300-08
128	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Gassing Tendency at 50 Hz after 120 Min., mm3/Min.	ASTM D2300-08
129	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Gassing Tendency at 50 Hz after 120 Min., mm3/Min.	BS 5797 Method A
130	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Gassing Tendency at 50 Hz after 120 Min., mm3/min.	IEC 60628 A
131	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Gassing Tendency at 50 Hz after 120 Min., mm3/Min.	IEC 60628 A
132	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Gassing Tendency at 50 Hz after 120 Min., mm3/Min.	IEC 60628 A

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 10 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
133	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Interfacial Tension at 25/27°C	IEC 62961
134	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Interfacial Tension at 25/27°C, dynes/cm	ASTM D 971
135	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Interfacial Tension at 25/27°C, dynes/cm	IS 6104
136	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Interfacial Tension at 25/27°C, dynes/cm	ISO 6295
137	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Kinematic Viscosity at - 40°C to 100°C	ASTM D 445
138	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Kinematic Viscosity at - 40°C to 100°C	ASTM D 445
139	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Kinematic Viscosity at - 40°C to 100°C	ASTM D7042
140	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Kinematic Viscosity at - 40°C to 100°C	IS 1448 (Part 25)
141	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Kinematic Viscosity at - 40°C to 100°C	IS 1448 (Part 25)
142	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Kinematic Viscosity at - 40°C to 100°C	ISO 3104
143	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Kinematic Viscosity at - 40°C to 100°C	ISO 3104
144	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Kinematic Viscosity at Minus 40°C to 100°C	ASTM D7042
145	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Metal passivator additives of IS 13631, mg/kg	IS 13631
146	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Metal passivator additives of IEC 60666, mg/kg	IEC 60666

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 11 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
147	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Neutralization number - Potentiometric titration method, mgm KOH/gm	IS 1448 (Part 2)
148	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Neutralization number - Potentiometric titration method, mgm KOH/gm.	IS 1448 (Part 2)
149	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Neutralization Number - Potentiometric titration method, mgm KOH/gm.	IS 1448 (Part 2)
150	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation stability b) Total sludge, after oxidation, % wt.	IS 335 Annex.C Amend
151	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation Stability a) Neutralization Value,mgmKOH/gm	ASTM D 2440
152	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation stability b) Sludge, % wt.	IEC 61125 Method A/B/C
153	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation stability a) Total acidity (TA) ,mgmKOH/gm	IEC 61125 Method A/B/C
154	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation Stability b) Sludge, % wt.	ASTM D 2440
155	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation stability c) Dielectric dissipation factor at 90°C	IEC 61125 Method A/B/C
156	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation stability a) Neutralization value after oxidation	IS 335 Annex.C Amend.
157	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation stability a) Total acidity (TA) ,mgmKOH/gm	IS 12422
158	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation Stability b) Sludge, % wt.	IS 12422
159	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation stability c) Dielectric dissipation factor at 90°C	IS 12422
160	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation Stability of Inhibited Mineral Insulating Oil by Pressure Vessel, Minutes	ASTM D 2112

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 12 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
161	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation Stability of Inhibited Mineral Insulating Oil by Pressure Vessel, Minutes	ASTM D 2112
162	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation Stability of Inhibited Mineral Insulating Oil by Pressure Vessel, Minutes	IS 12958 Amend.
163	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Oxidation Stability of Inhibited Mineral Insulating Oil by Pressure Vessel, Minutes	IS 12958 Amend.
164	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Polychlorinated Biphenyls Content, mg/kg	ASTM D4059-2000
165	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Polychlorinated Biphenyls Content,mg/kg	IEC 61619
166	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Polychlorinated Biphenyls Content,mg/kg	IS 16082
167	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Polycyclic Aromatics, % by wt	BS 2000 (Part 346)
168	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Polycyclic Aromatics, % by wt.	BS 2000 (Part 346)
169	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Pour Point, °C	ASTM D 97
170	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Pour Point, °C	IS 1448 (Part 10:Sec 1)
171	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Pour Point, °C	ISO 3016
172	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Specific Resistance (Resistivity), ohm.cm	ASTM D 1169
173	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Specific Resistance (Resistivity), ohm.cm	ASTM D 1169
174	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Specific Resistance (Resistivity), ohm.cm	IEC 60247

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 13 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
175	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Specific Resistance (Resistivity), ohm.cm	IS 6103
176	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Stray Gassing, Acetylene-C2H2	ASTM D7150-13
177	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Stray Gassing, Carbon dioxide-CO2	ASTM D7150-13
178	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Stray Gassing, Carbon monoxide-CO	ASTM D7150-13
179	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Stray Gassing, Ethane C2H6	ASTM D7150-13
180	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Stray Gassing, Ethylene-C2H4	ASTM D7150-13
181	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Stray Gassing, Hydrogen-H2	ASTM D7150-13
182	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Stray Gassing, Methane-CH4	ASTM D7150-13
183	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Stray Gassing, Nitrogen-N2	ASTM D7150-13
184	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Stray Gassing, Oxygen-O2	ASTM D7150-13
185	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Stray Gassing, Propane-C3H8	ASTM D7150-13
186	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Stray Gassing, Propylene-C3H6	ASTM D7150-13
187	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Sulfur in Petroleum and Petroleum Products by Energy Dispersive X-ray Fluorescence Spectrometry	ASTM D 4294

SCOPE OF ACCREDITATION

Laboratory Name : APAR INDUSTRIES LIMITED, 18, TTC, MIDC INDUSTRIAL AREA, RABALE, DISTRICT-THANE, NAVI MUMBAI, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5089 **Page No** 14 of 14

Validity 29/12/2021 to 28/12/2023 **Last Amended on** -

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
188	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Total Acid number / Neutralization Value, mgmKOH/gm.	IEC 62021-1/IEC 62021-2
189	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Total Acid number / Neutralization Value, mgmKOH/gm.	IEC 62021-1/IEC 62021-2
190	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Total Acid number / Neutralization Value, mgmKOH/gm.	IEC 62021-1/IEC 62021-2
191	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Water Content by automatic coulometric Karl Fischer titration	IEC 60814
192	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Water Content by automatic coulometric Karl Fischer titration	IEC 60814
193	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oil	Water Content by automatic coulometric Karl Fischer titration	IEC 60814
194	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Water Content by Automatic Coulometric Karl Fischer Titration	IS 13567
195	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Water Content by Automatic Coulometric Karl Fischer Titration	IS 13567
196	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Water Content by Automatic Coulometric Karl Fischer Titration	IS 13567
197	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Water Content in Insulating Liquids by Coulometric Karl Fischer Titration	ASTM D 1533
198	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer Oil	Water Content in Insulating Liquids by Coulometric Karl Fischer Titration	ASTM D 1533
199	ELECTRICAL- INSULATING MATERIALS & INSULATORS	Transformer oils	Dynamic Viscosity of Liquids by Stabinger Viscometer	ASTM D 7042