SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	1 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Permanent Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (at 50 Hz)	Using 6½ Precision Multimeter by Comparison/Direct Method	10 µA to 10 mA	1.4 % to 1.31 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (at 50 Hz)	Using Precision Multimeter 6½ by Comparison/Direct Method	10 mA to 10 A	1.31 % to 0.9 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage (at 50 Hz)	Using High Voltage Probe with DMM by Comparison/Direct Method	5 kV to 35 kV	5 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (at 50 Hz)	Using 6½ Precision Multimeter by Comparison/Direct Method	1 mV to 100 mV	1.06 % to 5.5 %

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	2 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (at 50 Hz)	Using 6½ Precision Multimeter by Comparison/ Direct Method	100 mV to 1000 V	5.5 % to 0.5 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @1 kHz	Using 6½ Precision Multimeter by Comparison/Direct Method	1 nF to 1 µF	0.5 % to 1.4 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (at 50 Hz)	Using Multifunction Calibrator by Direct Method	100 µA to 10 A	1.87 % to 1.89 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (at 50 Hz)	Using Multifunction Calibrator with Current Coil by Direct method	50 A to 900 A	0.5 % to 1 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage (at 50 Hz)	Using Multifunction Calibrator by Direct Method	5 mV to 1000 V	0.34 % to 0.8 %

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	3 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @1 kHz	Using Standard Capacitance Box By Direct Method	100 pF to 100 µ F	1.5 % to 3 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Energy (1Ø & 3Ø), 4 Wire, (0 to 6 A), (0 to 300 V), (45 Hz to 60 Hz), PF: 0.5 (Lag) to UPF to 0.5 (Lead)	Using 3-phase Energy Meter with Calibrator by Comparison Method	2W to 1800W (1Ø); 6W to 5400 W (3Ø)	0.46 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Frequency	Using Multifunction Calibrator By Direct Method	45 Hz to 1 kHz	0.6 % to 1.0 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @0.1 kHz	Using Decade Inductance Box by Direct Method	100 µH to 10 H	0.4 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Power (1Ø & 3Ø), 4 Wire, (0 to 6 A), (0 to 300 V), (45 Hz to 60 Hz), PF: 0.5 (Lag) to UPF to 0.5 (Lead)	Using 3 Phase Energy Meter with Calibrator by Comparison Method	2W to 1800W (1Ø); 6W to 5400 W (3Ø)	0.46%
15	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Precision Multimeter by Comparison/Direct Method	10 µA to 100 mA	4.7 % to 0.85 %

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 4 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
16	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Precision Multimeter by Comparison/Direct Method	100 mA to 10 A	0.85 % to 0.15 %
17	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using High Voltage Probe with DMM by Direct/Comparison Method	5 kV to 35 kV	6 %
18	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Precision Multimeter by Comparison/Direct Method	1 mV to 100 mV	2.34 % to 1.5 %
19	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Precision Multimeter by Comparison/Direct Method	100 mV to 1000 V	1.5 % to 0.08 %
20	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Precision Multimeter by Comparison/Direct Method	10 k ohm to 100 M ohm	0.04 % to 1.5 %
21	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Precision Multimeter by Comparison/Direct Method	10 ohm to 100 ohm	2.45 % to 0.07 %

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	5 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
22	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Precision Multimeter by Comparison/Direct Method	100 ohm to 10 k ohm	0.07 % to 0.04 %
23	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Precision Multimeter by Comparison/Direct Method	100 M ohm to 1 G ohm	1.5 % to 2..45 %
24	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multifunction Calibrator by Direct Method	100 µA to 10 A	0.78 % to 0.5 %
25	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Function Calibrator with Current Coil by Comparison/Direct method	50 A to 1000 A	0.8 %
26	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multifunction Calibrator with Current Coil by Direct Method	1 mV to 999 V	0.19 % to 0.5 %
27	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Standard Resistance Box by Direct Method	1 mohm to 10 mohm	1.2 %

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	6 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
28	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Standard Resistance Box by Direct Method	10 mohm to 100 mohm	1.5 %
29	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Standard Resistance Box by Direct Method	100 µohm to 1 mohm	1.5 %
30	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Standard Resistance Box by Direct Method	100 mohm to 1 ohm	1.5 %
31	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Standard Resistance Box by Direct Method	50 µohm to 100 µohm	1.55 %
32	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using High Resistance Box	1 Gohm to 1 Tohm	2.5 % to 7.5 %
33	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance Box by Direct Method	1 Mohm to 500 Mohm	1.5 %

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 7 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
34	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance Box by Direct Method	1 ohm to 1 Mohm	0.5 %
35	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance Box by Direct Method	500 Mohm to 1000 Mohm	2.5 %
36	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	B Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator /Multimeter by Direct Method	600 °C to 1750 °C	2°C
37	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	N Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	10 °C to 1000 °C	1.5°C
38	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	R Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	10 °C to 1750 °C	1.5°C
39	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	S Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator/Multimeter by Direct Method	50 °C to 1750 °C	1.5°C

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	8 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
40	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	B Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	600 °C to 1760 °C	1.5°C
41	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	E Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator/Multimeter by Direct Method	(-) 200 °C to 750 °C	1°C
42	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	E Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method.	(-)190 °C to 490 °C	0.8°C
43	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	J Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	(-) 200 °C to 690 °C	0.5°C
44	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	K Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	10 °C to 1200 °C	1.2°C
45	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	RTD (PT-100/ 50) Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	(-) 200 °C to 600 °C	1°C

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	9 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
46	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	T Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator/Multimeter by Direct Method	(-) 200 °C to 390 °C	1.2°C
47	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	K Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	10 °C to 1350 °C	1°C
48	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	N Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	10 °C to 1300 °C	1°C
49	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	R Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	10 °C to 1750 °C	1.5°C
50	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	S Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	10 °C to 1750 °C	1°C
51	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	J Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	(-) 200 °C to 750 °C	1°C

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 10 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
52	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD Type (PT 100) (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	(-) 150 °C to 800 °C	1°C
53	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	T Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	(-) 200 °C to 390 °C	1°C
54	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 6½ Precision Multimeter By Comparison Method	42 Hz to 1 kHz	1.0 %
55	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time Calibrator by Comparison Method	300 s to 24 hrs	10 s
56	MECHANICAL-ACCELERATION AND SPEED	Tachometer / RPM measurement - contact Type	Using Digital Tachometer (Non Contact Tachometer with RPM Source) by Comparison Method / by Using SANAS TR45-02	100 rpm to 1000 rpm	12rpm

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 11 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
57	MECHANICAL-ACCELERATION AND SPEED	Tachometer / RPM measurement - contact Type	Using Digital Tachometer (Non Contact Tachometer with RPM Source) by Comparison Method / by Using SANAS TR45-02	1000 rpm to 5000 rpm	28rpm
58	MECHANICAL-ACCELERATION AND SPEED	Tachometer / RPM measurement - Non contact Type	Using Digital Tachometer (Non Contact Tachometer with RPM Source) by Comparison Method / by Using SANAS TR45-02	1000 rpm to 10000 rpm	63.40rpm
59	MECHANICAL-ACCELERATION AND SPEED	Tachometer / RPM measurement - Non contact Type	Using Digital Tachometer (Non Contact Tachometer with RPM Source) by Comparison Method / by Using SANAS TR45-02	10000 rpm to 50000 rpm	71.65rpm
60	MECHANICAL-ACCELERATION AND SPEED	Tachometer / RPM measurement - Non contact Type	Using Digital Tachometer (Non Contact Tachometer with RPM Source) by Comparison Method / by Using SANAS TR45-02	100 rpm to 1000 rpm	5.28rpm
61	MECHANICAL-ACOUSTICS	Sound Level Meter @ 1kHz	Using Sound Level Calibrator by Direct Method	114 dB	1 dB

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	12 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
62	MECHANICAL-ACOUSTICS	Sound Level Meter @ 1kHz	Using Sound Level Calibrator by Direct Method	94 dB	1dB
63	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bevel Protractor/ Angel Protractor/ Combination Set/ Angle Gauge (L.C: 0.01°)	Using Profile Projector by Comparison Method	0° to 360°	6 minutes of arc
64	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bore Gauge (For Transmission Only)	Using Dial Calibration Tester by Comparison Method	0 to 2 mm	7µm
65	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (Vernier/ Dial/ Digital), L.C: 0.01 mm	Using Long Slip Gauge and Slip Gauge Accessories by Comparison Method	600 mm to 1000 mm	29µm
66	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (Vernier/ Dial/ Digital), L.C: 0.01 mm	Using Slip Gauge, Caliper Checker by Comparison Method	0 to 600 mm	15 µm

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 13 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
67	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating Thickness gauge (L.C: 0.01 mm)	Using Standard Foil by Comparison Method	0.01 mm to 3 mm	2.55µm
68	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Cube Mould	Using Digital Caliper by Comparison Method	(50 x 50 x 50) mm to (150 x 150 x 150) mm	94µm
69	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micro Meter (Least Count: 0.001 mm)	Using Caliper Checker, Gauge Block, Long Slip Gauge and Surface Plate by Comparison Method	0 to 300 mm	22µm
70	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micro Meter (Least Count: 0.01 mm)	Using Standard Surface Plate, Slip Gauge, Long Slip Gauge & Caliper Checker by Comparison Method	0 to 25 mm	10 µm
71	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micro Meter (Least Count: 0.01 mm)	Using Caliper Checker, Gauge Block, Long Slip Gauge and Surfce Plate by Comparison Method	25 mm to 300 mm	15µm

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	14 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
72	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial / Digimatic Indicator (Lever Type) (L.C: 0.001 mm)	Using Dial Calibration Tester by Comparison Method	0.001 mm to 2 mm	2µm
73	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial / Digimatic Indicator (Plunger Type) (L.C: 0.001 mm)	Using Slip Gauge Set/ Dial Calibration Tester by Comparison Method	0.001 mm to 25 mm	6µm
74	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial / Digimatic Indicator (Plunger Type) (L.C: 0.01 mm)	Using Slip Gauge Set by Comparison Method	0 to 100 mm	10µm
75	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Thickness Gauge (L.C: 0.01 mm)	Using Slip Gauge Set by Comparison Method	Up to 25 mm	8µm
76	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Diamond Indenter (Axis Angle)	Using Profiel Projector by Comparison Method	90° to 136°	11.8' of arc

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	15 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
77	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Elongation Gauge (Height & Gap)	Using Digital Caliper by Comparison Method	Up to 125 mm	74µm
78	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Engineering Square (Squareness of External and internal Square and parallelism of blade) Grade-A/B/C	Using Master Cylinder & Gauge Block, Dial Indecator by Comparison Method	Up to 300 mm	12µm
79	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Extensometer, Displacement Device (L.C.: 0.001 mm) & Gauge Length -25 mm, 50 mm, 100 mm.	Using Extensometer Calibration Fixture & Vernier Caliper by Comparison Method	0.001 mm to 2 mm	5µm
80	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer or Outside Micrometer (L.C: 0.0001 mm)	Using Siip Gauge Set (Grade-0) by Comparison Method	Up to 25 mm	4µm
81	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer or Outside micrometer (L.C: 0.001 mm)	Using Slip Gauge and Long Slip Gauge (Grade-0) by Comparison Method	25 mm to 150 mm	5µm

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	16 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
82	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer or Outside Micrometer (L.C: 0.001 mm)	Using Silp Gauge Set (Grade-0) by Comparison Method	Up to 25 mm	4µm
83	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer or Outside Micrometer (L.C: 0.01 mm)	Using Slip Gauge and Long Slip Gauge (Grade-0) by Comparison Method	150 mm to 500 mm	11µm
84	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer or Outside Micrometer (L.C: 0.01 mm)	Using Slip Gauge, Long Slip Gauge and Slip Gauge Accessories by Comparison Method	500 mm to 1000 mm	15µm
85	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Feeler Gauge	Using Digital Micrometer by Comparison Method	0.01 mm to 2 mm	3.23µm
86	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Flakiness Gauge	Using Digital Caliper by Comparison Method	1 mm to 125 mm	30µm

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	17 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
87	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Foil	Using Slip Gauge & Dial Indicator by Comparison Method	2 mm to 5 mm	5µm
88	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Hegman Gauge/Film Applicator	Using Dial Indicator (0.1µm) by Comparison Method	Up to 1 mm	2.15µm
89	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (L.C: 0.01 mm)	Using Caliper Checker, Gauge Block and Surface Plate By Comparison Method	0 to 600 mm	16µm
90	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (L.C: 0.01 mm)	Using Long Slip Gauge and Surface Plate by Comparison Method	600 mm to 1000 mm	20µm
91	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inside Micro Meter (L.C: 0.001 mm)	Using Slip gauge, Long slip gauge and Slip Gauge Accessories. by Comparison Method	50 mm to 1000 mm	12µm

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	18 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
92	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inside Micro Meter (L.C: 0.01 mm)	Using Slip Gauge, Long Slip Gauge and Slip Gauge Accessories by Comparison Method.	300 mm to 1000 mm	10µm
93	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inside Micro Meter (L.C: 0.01 mm)	Using Slip Gauge, Caliper Checker and Slip Gauge Accessories. by Comparison Method	50 mm to 300 mm	7µm
94	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Measuring Scale or steel Scale (L.C: 0.5 mm & coarser)	Using Scale and Tape Calibration Unit by Comparison Method	0 to 1000 mm	128µm
95	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Measuring Tape (L.C: 1 mm)/ Pie Tape (L.C: 0.1 mm)/ Fiber Tape (woven) Steel Tape	Using Scale and Tape Calibration Unit by Comparison Method	0 to 50 m	(128 sqrt (L)/ 1000)µm; where L is in mm
96	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Pistol Caliper (L.C.: 0.1 mm)	Using Slip Gauge Set by Comparion Method	0 to 100 mm	70 µm

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 19 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
97	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge	Using Slip Gauge and Dial Indicator by Comparison Method	100 mm to 250 mm	24µm
98	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge	Using Dial Indicator, Slip Gauge Set, Comparator Stand by Comparion Method	Up to 100 mm	7.3µm
99	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Porter Gauge (Length)	Using Digimatic Caliper by Comparison Method	0 to 100 mm	20µm
100	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Profile / Form Gauges (Angle Measurement)	Using Profile Projector by Comparison Method	Up to 360 °	3 minutes of arc
101	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Profile / Form Gauges (Linear Diameter)	Using Profile Projector by Comparison Method	0 to 200 mm	10µm

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	20 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
102	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Radius Gauge (Concave and convex)	Using Profile Projector by Comparison Method	1 mm to 40 mm	6.3µm
103	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge	Using Slip Gauge Set by Comparison Method	Up to 160 µm	5µm
104	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Mandrels (Straight)	Using Slip Gauge Set, Digital Indicator, Comparator Stand by Comparison Method	Up to 250 mm	10µm
105	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieve	Using Profile Projector by Comparison Method	25 µm to 5 mm	10.4µm
106	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieve	Using Profile Projector by Comparison Method	5 mm to 125 mm	20µm

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	21 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
107	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Pitch Gauge	Using Profile Projector by Comparison Method	0.25 mm to 6 mm	10.3µm
108	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Try Square (Squareness of External and internal Square and parallelism of blade) Grade-A/B/C	Using master cylinder & gauge block, Dial Indicator By comparison Method	Up to 300 mm	12 µm
109	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Ultrasonic Thickness Gauge	Using Slip Gauge Set by Comparison Method	100 mm to 200 mm	142µm
110	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Ultrasonic Thickness Gauge	Using Slip Gauge Set by Comparison Method	Up to 100 mm	187µm
111	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Vernier Depth Gauge (L.C: 0.02 mm)	Using Standard Surface Plate, Slip Gauge, Long Slip Gauge & Caliper Checke by Comparison Method	0 to 300 mm	15µm

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 22 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
112	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Welding Gauge	Using Profile Projector by Comparison Method	0 to 35 mm	0.57µm
113	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Welding Gauge	Using Profile Projector by Comparison Method	0° to 60 °	9Minutes of arc
114	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Wire Gauge	Using Profile Projector by Comparison Method	0.19 mm to 7.62 mm	20µm
115	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Brinell Microscope (L.C: 0.01 mm)	Using Glass Scale/Profile Projector by Comparison Method	0.01 mm to 7 mm	8µm
116	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Micrometer Setting Rod /Length Bar	Using Slip Gauge Set, Digital Indicator, Comparator Stand by Comparison Method	25 **mm** to 300 mm	3.27µm

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	23 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
117	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Micrometer Setting Rod/ Length Bar	Using Slip Gauge Set, Digital Indicator, Comparator Stand by Comparison Method	Up to 25 mm	3.2µm
118	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Microscope (Magnification)	Using Glass Scale and Slip Gauge by Comparison Method	10 x, 20 x, 100 x, 1000 x	0.43%
119	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Travelling Microscope	Using Glass Scale by Comparison Method	Up to 220 mm	10µm
120	MECHANICAL-DUROMETER	Rubber Hardness Tester (Shore-A Hardness Tester)	Using Dial Calibration Tester, By Depth of Indentation Method	0 to 100 Shore A	1Shore A
121	MECHANICAL-DUROMETER	Rubber Hardness Tester (Shore-D Hardness Tester)	Using Dial Calibration Tester, By Depth of Indentation Method	0 to 100 Shore D	1Shore D
122	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure Pressure Gauge / Pressure Switch / Pressure Transducer / Pressure Transmitter / Pressure Calibrator	Using Digital Pressure Gauge with Hydraulic Comparator/ DMM by Comparison Method, as per DKDR6-1	0 bar to 1000 bar	1%

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 24 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
123	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure Pressure Gauge / Pressure Switch / Pressure Transducer / Pressure Transmitter / Pressure Calibrator	Using Digital Pressure Gauge with Hydraulic Comparator /DMM by Comparison Method, as per DKDR6-1	0 bar to 400 bar	0.8%
124	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure Pressure Gauge / Pressure Switch / Pressure Transducer / Pressure Transmitter / Pressure Calibrator	Using Digital Pressure Gauge with Hydraulic Comparator/DMM by Comparison Method, as per DKDR6-1	0 bar to 70 bar	0.5%
125	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure Pressure Gauge / Pressure Switch / Pressure Transducer / Pressure Transmitter / Pressure Calibrator	Using Digital Pressure Gauge with Hydraulic Comparator/DMM by Comparison Method, as per DKDR6-1	0 bar to 7 bar	0.41%
126	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Low pressure/ Manometer/Magnehelli Gauge/ Tranasmitter/ Pressure Switch/ Pressure Calibrator	Using Digital Pressure Gauge with Pneumatic Comparator, DMM by Comparison Method as per DKDR6-1	0 mmWc to 200 mmWc	1.6%

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	25 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
127	MECHANICAL-VOLUME	Burette	Using E2 Class Weight and Analytical Balance, d=0.01 mg by Gravimetric Method.	1 ml to 100 ml	15µl
128	MECHANICAL-VOLUME	Measuring Cylinder and Volumetric Flask and Conical Flask and Beaker	Using F1 Class Weight and Digital Balance (Range=3000 g, d=10 mg) by Gravimetric Method.	1000 ml to 2000 ml	2.1ml
129	MECHANICAL-VOLUME	Measuring Cylinder and Volumetric Flask and Conical Flask and Beaker and Jar and Pycnometer	Using F1 Class Weight and Balance, d=10 mg by Gravimetric Method	100 ml to 1000 ml	1.25ml
130	MECHANICAL-VOLUME	Measuring Cylinder and Volumetric Flask and Conical Flask and Beaker and jar and Pycnometer.	Using E2 Class Weight and Analytical Balance (Range=250 g, d=0.01 mg) by Gravimetric Method	1 ml to 100 ml	50µl
131	MECHANICAL-VOLUME	Micropipette	Using E2 Class Weight and Analytical Balance, d=0.01 mg, by Gravimetric Method.	10 µl to 100 µl	1.20µl

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	26 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
132	MECHANICAL-VOLUME	Micropipette	Using E2 Class Weight and Analytical Balance, d=0.01 mg by Gravimetric Method.	100 µl to 1000 µl	2µl
133	MECHANICAL-VOLUME	Micropipette	Using E2 Class Weight and Analytical Balance, d=0.01 mg, by Gravimetric Method	1000 µl to 5000 µl	2µl
134	MECHANICAL-VOLUME	Pipettes (Graduated and Non Graduated)	Using E2 Class Weight and Balance, d=0.01 mg by Gravimetric Method	1 ml to 1 ml	15µl
135	MECHANICAL-VOLUME	Pipettes (Graduated and Non Graduated)	Using E2 Class weight and Balance ,d=0.1 mg and 0.1 mg by Gravimetric Method	1 ml to 100 ml	0.15ml
136	MECHANICAL-WEIGHING SCALE AND BALANCE	Precision Balance (d=10 mg, Class II)	Using F1 Class Weights, As per OIML- R-76 by Comparison Method	1000 g to 3000 g	18mg
137	MECHANICAL-WEIGHING SCALE AND BALANCE	Precision Balance (d>1 mg, Class II)	Using F1 /E2 Class Weights, As per OIML- R-76 by Comparison Method	200 g to 1020 g	5mg

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 27 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
138	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (d=0.1 g, Class II)	Using F1 Class Weights, As per OIML- R-76 by Comparison Method	3000 g to 30 kg	1g
139	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (d>5 g, Class IV)	Using F1 Class Weights, As per OIML- R-76 by Comparison Method	30 kg to 50 kg	4.4g
140	MECHANICAL-WEIGHTS	Mass (Class F1 and coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	100 g	0.11mg
141	MECHANICAL-WEIGHTS	Mass (Class F1 and coarser)	Using E2 Class Weight and Balance, d=0.1 mg, As per OIML R-111 By ABBA Method	200 g	0.33mg
142	MECHANICAL-WEIGHTS	Mass (Class F2 and coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	1 g	0.09mg
143	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using F1 Class Weight and Balance, d=1 mg, As per OIML R-111 By ABBA Method	1 kg	5mg

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 28 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
144	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	10 g	0.09 mg
145	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	10 mg	0.02mg
146	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	100 mg	0.05mg
147	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	2 g	0.09mg
148	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	2 mg	0.02mg
149	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	20 g	0.26 mg

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 29 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
150	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	20 mg	0.03mg
151	MECHANICAL-WEIGHTS	Mass (Class F2 and coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	200 mg	0.06mg
152	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	5 g	0.09mg
153	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	5 mg	0.02mg
154	MECHANICAL-WEIGHTS	Mass (Class F2 and coarser)	Using E2 Class Weight and Balance, d=0.01 mg, as per OIML R-111 By ABBA Method	50 g	0.14 mg
155	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	50 mg	0.04mg

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	30 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
156	MECHANICAL-WEIGHTS	Mass (Class F2 and Coarser)	Using E2 Class Weight and Balance, d=0.01 mg, As per OIML R-111 By ABBA Method	500 mg	0.08mg
157	MECHANICAL-WEIGHTS	Mass (Class M1 and coarser)	Using F1 Class Weight and Balance d=10mg as per OIML R 111, by ABBA Method.	2 kg	16.21mg
158	MECHANICAL-WEIGHTS	Mass (Class M1 and coarser)	Using a F1 Class Weight and Balance d=0.1g as per OIML R 111, by ABBA Method.	20 kg	300mg
159	MECHANICAL-WEIGHTS	Mass (Class M2 and coarser)	Using F1 Class Weight and Balance, d=0.1g, As per OIML R-111 by ABBA Method	10 kg	1g
160	MECHANICAL-WEIGHTS	Mass (Class M2 and coarser)	Using F1 Class Weight and Balance, d=100 mg As per OIML R-111 By ABBA Method	5 kg	1.3g
161	MECHANICAL-WEIGHTS	Mass (Class M2 and Coarser)	Using F1 Class Weight and Balance, d=1 mg, As per OIML R-111 By ABBA Method	500 g	10mg

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	31 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
162	MECHANICAL-WEIGHTS	Mass (F2 Class Weight and Coarser)	Using E2 Class Weight and Balance d=0.01 mg, As per OIML R-111 By ABBA Method.	1 mg	0.02mg
163	THERMAL-TEMPERATURE	Liquid In Glass Thermometer	Using Standard Master Sensor (PT-100) with DTM and Digit DMM as a Readout & Liquid Baths by Comparison Method	(-) 35 °C to 200 °C	1.35°C
164	THERMAL-TEMPERATURE	Non Contact Type Temperature IR Thermo Meter/ Pyrometer/ Indicator @ emissivity 0.95	Using Standard Non - Contact Pyrometer and Black Body Source by Comparison Method	500 °C to 1000 °C	8.13°C
165	THERMAL-TEMPERATURE	Non Contact Type Temperature, IR Thermo Meter/ Pyrometer/ Indicator @ emissivity 0.95	Using Standard Non - Contact Pyrometer and Black Body Source by Comparison Method	50 °C to 500 °C	6.32°C
166	THERMAL-TEMPERATURE	Temperature Indicator of Digital /Analog Industrial Furnace/Oven/Baths	Using Standard Sensor (PT-100) with Readout by Direct Method (Single Position)	10 °C to 400 °C	1.31°C

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	32 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
167	THERMAL-TEMPERATURE	Temperature Indicator of Bod Incubator (for Non Medical Purpose) Deep Freezer, Cooler	Using Master Sensor PT-100 & Readout by Direct Method (Single Position)	(-)80 °C to 0 °C	1°C
168	THERMAL-TEMPERATURE	Temperature indicator of BOD, Incubator, Autoclave, Deep Freezer/Cooler for Non Medical Purpose only	Using Master Sensor (PT-100) and Readout by Direct Method (Single Position)	5 °C to 150 °C	1°C
169	THERMAL-TEMPERATURE	Temperature indicator of Digital/Analog Industrial Furnace/Oven/Baths	Using Master Sensor (PT-100) with Readout by Direct Method (Single Position)	0 °C to 400 °C	1.31°C
170	THERMAL-TEMPERATURE	Temperature indicator of Digital/Analog Industrial Furnace/Oven/Baths	Using Standard S Type Thermocouple with Readout by Direct Method (Single Position)	400 °C to 1200 °C	5 °C
171	THERMAL-TEMPERATURE	Temperature Indicator Of Digital/Analog Industrial Furnace/Oven/Baths.	Using Standard PT-100 Sensor with Readout by Direct Method (Single Position)	0 °C to 400 °C	1°C

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	33 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
172	THERMAL-TEMPERATURE	Thermocouple With or With out Indicator/Controller, Dial Thermometer, Digital Thermometer, Thermistor	Using Standard S Type Thermocouple with Readout & Dry Block Baths by Comparison Method,	0 °C to 1200 °C	3 °C
173	THERMAL-TEMPERATURE	Thermocouples with or without Indicator,Dial thermometer,Thermistor, Digital thermometer.	Using Master (PT-100) Sensor with Readout by Comparison Method.	50 °C to 400 °C	11.56°C
174	THERMAL-TEMPERATURE	Thermocouples, Temperature Sensor (RTD) with or without indicator, Dial thermometer, Thermistor, Digital Thermometer	Using Standard Master Sensor (PT-100) with Readout & Baths. by Comparison Method	0 °C to 200 °C	0.65°C

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	34 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Site Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (at 50 Hz)	Using 6½ Precision Multimeter by Comparison/Direct Method	10 µA to 10 mA	1.4 % to 1.31 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (at 50 Hz)	Using Precision Multimeter 6½ by Comparison/Direct Method	10 mA to 10 A	1.31 % to 0.9 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage (at 50 Hz)	Using High Voltage Probe with DMM by Comparison/Direct Method	5 kV to 35 kV	5 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (at 50 Hz)	Using 6½ Precision Multimeter by Comparison/Direct Method	1 mV to 100 mV	1.06 % to 5.5 %

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	35 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (at 50 Hz)	Using 6½ Precision Multimeter by Comparison/ Direct Method	100 mV to 1000 V	5.5 % to 0.5 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance @1 kHz	Using 6½ Precision Multimeter by Comparison/Direct Method	1 nF to 1 µF	0.5 % to 1.4 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (at 50 Hz)	Using Multifunction Calibrator by Direct Method	100 µA to 10 A	1.87 % to 1.89 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (at 50 Hz)	Using Multifunction Calibrator with Current Coil by Direct method	50 A to 900 A	0.5 % to 1 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage (at 50 Hz)	Using Multifunction Calibrator by Direct Method	5 mV to 1000 V	0.34 % to 0.8 %

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 36 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @1 kHz	Using Standard Capacitance Box By Direct Method	100 pF to 100 µ F	1.5 % to 3 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Energy (1Ø & 3Ø), 4 Wire, (0 to 6 A), (0 to 300 V), (45 Hz to 60 Hz), PF: 0.5 (Lag) to UPF to 0.5 (Lead)	Using 3-phase Energy Meter with Calibrator by Comparison Method	2W to 1800W (1Ø); 6W to 5400 W (3Ø)	0.46 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Frequency	Using Multifunction Calibrator By Direct Method	45 Hz to 1 kHz	0.6 % to 1.0 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @0.1 kHz	Using Decade Inductance Box by Direct Method	100 µH to 10 H	0.4 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Power (1Ø & 3Ø), 4 Wire, (0 to 6 A), (0 to 300 V), (45 Hz to 60 Hz), PF: 0.5 (Lag) to UPF to 0.5 (Lead)	Using 3 Phase Energy Meter with Calibrator by Comparison Method	2W to 1800W (1Ø); 6W to 5400 W (3Ø)	0.46%
15	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Precision Multimeter by Comparison/Direct Method	10 µA to 100 mA	4.7 % to 0.85 %

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	37 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
16	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Precision Multimeter by Comparison/Direct Method	100 mA to 10 A	0.85 % to 0.15 %
17	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using High Voltage Probe with DMM by Direct/Comparison Method	5 kV to 35 kV	6 %
18	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Precision Multimeter by Comparison/Direct Method	1 mV to 100 mV	2.34 % to 1.5 %
19	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Precision Multimeter by Comparison/Direct Method	100 mV to 1000 V	1.5 % to 0.08 %
20	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Precision Multimeter by Comparison/Direct Method	10 k ohm to 100 M ohm	0.04 % to 1.5 %
21	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Precision Multimeter by Comparison/Direct Method	10 ohm to 100 ohm	2.45 % to 0.07 %

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	38 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
22	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Precision Multimeter by Comparison/Direct Method	100 ohm to 10 k ohm	0.07 % to 0.04 %
23	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6½ Precision Multimeter by Comparison/Direct Method	100 M ohm to 1 G ohm	1.5 % to 2..45 %
24	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multifunction Calibrator by Direct Method	100 µA to 10 A	0.78 % to 0.5 %
25	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Function Calibrator with Current Coil by Comparison/Direct method	50 A to 1000 A	0.8 %
26	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multifunction Calibrator with Current Coil by Direct Method	1 mV to 999 V	0.19 % to 0.5 %
27	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Standard Resistance Box by Direct Method	1 mohm to 10 mohm	1.2 %

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 39 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
28	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Standard Resistance Box by Direct Method	10 mohm to 100 mohm	1.5 %
29	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Standard Resistance Box by Direct Method	100 µohm to 1 mohm	1.5 %
30	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Standard Resistance Box by Direct Method	100 mohm to 1 ohm	1.5 %
31	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 Wire)	Using Standard Resistance Box by Direct Method	50 µohm to 100 µohm	1.55 %
32	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using High Resistance Box	1 Gohm to 1 Tohm	2.5 % to 7.5 %
33	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance Box by Direct Method	1 Mohm to 500 Mohm	1.5 %

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 40 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
34	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance Box by Direct Method	1 ohm to 1 Mohm	0.5 %
35	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance Box by Direct Method	500 Mohm to 1000 Mohm	2.5 %
36	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	B Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator /Multimeter by Direct Method	600 °C to 1750 °C	2°C
37	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	N Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	10 °C to 1000 °C	1.5°C
38	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	R Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	10 °C to 1750 °C	1.5°C
39	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	S Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator/Multimeter by Direct Method	50 °C to 1750 °C	1.5°C

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 41 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
40	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	B Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	600 °C to 1760 °C	1.5°C
41	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	E Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator/Multimeter by Direct Method	(-) 200 °C to 750 °C	1°C
42	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	E Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method.	(-)190 °C to 490 °C	0.8°C
43	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	J Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	(-) 200 °C to 690 °C	0.5°C
44	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	K Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	10 °C to 1200 °C	1.2°C
45	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	RTD (PT-100/ 50) Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator by Direct Method	(-) 200 °C to 600 °C	1°C

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 42 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
46	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	T Type (Indicator/ Recorder/ Controller)	Using Universal Process Calibrator/Multimeter by Direct Method	(-) 200 °C to 390 °C	1.2°C
47	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	K Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	10 °C to 1350 °C	1°C
48	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	N Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	10 °C to 1300 °C	1°C
49	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	R Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	10 °C to 1750 °C	1.5°C
50	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	S Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	10 °C to 1750 °C	1°C
51	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	J Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	(-) 200 °C to 750 °C	1°C

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 43 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
52	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD Type (PT 100) (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	(-) 150 °C to 800 °C	1°C
53	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	T Type (Indicator/ Recorder/ Controller/ Transmitter)	Using Universal Process Calibrator by Direct Method	(-) 200 °C to 390 °C	1°C
54	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 6½ Precision Multimeter By Comparison Method	42 Hz to 1 kHz	1.0 %
55	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time Calibrator by Comparison Method	300 s to 24 hrs	10 s
56	MECHANICAL-HARDNESS TESTING MACHINES	Brinell Hardness Testing Machine (Indirect Verification)	Using Hardness Block as per IS 1500-2 / ISO 6506-2 & ASTM E10:2018	0 to 10/3000 HBW	2%
57	MECHANICAL-HARDNESS TESTING MACHINES	Brinell Hardness Testing Machine (Indirect Verification)	Using Hardness Block as per IS 1500-2 / ISO 6506-2 & ASTM E-10:2018	0 to 5/750 HBW	2%

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 44 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
58	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machine (Indirect Verification)	Using Standard Hardness Block as per IS 1586-2 / ISO 6508-2 & ASTM-E18:2022	20 HRA to 88 HRA	1.5HRA
59	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machine (Indirect Verification)	Using Standard Hardness Block as per IS 1586-2 / ISO 6508-2 & ASTM E-18:2022	20 HRBW to 100 HRBW	1.5HRBW
60	MECHANICAL-HARDNESS TESTING MACHINES	Rockwell Hardness Testing Machine (Indirect Verification)	Using Standard Hardness Block as per IS 1586-2/ ISO 6508-2 & ASTM E-18:2022	20 HRC to 70 HRC	0.70HRC
61	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure Pressure Gauge / Pressure Switch / Pressure Transducer / Pressure Transmitter / Pressure Calibrator	Using Digital Pressure Gauge with Hydraulic Comparator/ DMM by Comparison Method, as per DKDR6-1	0 bar to 1000 bar	1%
62	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure Pressure Gauge / Pressure Switch / Pressure Transducer / Pressure Transmitter / Pressure Calibrator	Using Digital Pressure Gauge with Hydraulic Comparator /DMM by Comparison Method, as per DKDR6-1	0 bar to 400 bar	0.8%

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 45 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
63	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure Pressure Gauge / Pressure Switch / Pressure Transducer / Pressure Transmitter / Pressure Calibrator	Using Digital Pressure Gauge with Hydraulic Comparator/DMM by Comparison Method, as per DKDR6-1	0 bar to 70 bar	0.5%
64	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure Pressure Gauge / Pressure Switch / Pressure Transducer / Pressure Transmitter / Pressure Calibrator	Using Digital Pressure Gauge with Hydraulic Comparator/DMM by Comparison Method, as per DKDR6-1	0 bar to 7 bar	0.41%
65	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Low pressure/ Manometer/Magnehelli Gauge/ Tranasmitter/ Pressure Switch/ Pressure Calibrator	Using Digital Pressure Gauge with Pneumatic Comparator, DMM by Comparison Method as per DKDR6-1	0 mmWc to 200 mmWc	1.6%
66	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Travel Speed of UTM /CTM/ TTM	Using Stop Watch & Digimatic Caliper/ Height Gauge	0 to 300 mm/min.	6.92%rdg.

SCOPE OF ACCREDITATION

Laboratory Name : TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2498 **Page No** 46 of 49

Validity 26/12/2022 to 25/12/2024 **Last Amended on** 21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
67	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Uniaxial Testing Machine (Compression)	Using Force Load Cell of Class AA and A as per ASTM E4:2021	2.5 kN to 50 kN	0.50%
68	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Uniaxial Testing Machine (Compression)	Using Force Proving Instrument of Class 1 or better as per IS 1828-1 / ISO 7500-1	4 kN to 2000 kN	0.65%
69	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Uniaxial Testing Machine (Compression)	Using Force Load Cell of Class AA and A as per ASTM E4	50 kN to 1000 kN	0.50%
70	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Uniaxial Testing Machine (Tension)	Using Force Load Cell of Class AA and A as per ASTM E4:2021	2.5 kN to 50 kN	0.50 %
71	MECHANICAL-UTM, TENSION CREEP AND TORSION TESTING MACHINE	Uniaxial Testing Machine (Tension)	Using Force Proving Instrument of Class 1 or Better as per IS 1828-1 / ISO 7500-1	50 N to 50 kN	0.90%

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	47 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
72	MECHANICAL-WEIGHING SCALE AND BALANCE	Precision Balance (d=10 mg, Class II)	Using F1 Class Weights, As per OIML- R-76 by Comparison Method	1000 g to 3000 g	18mg
73	MECHANICAL-WEIGHING SCALE AND BALANCE	Precision Balance (d>1 mg, Class II)	Using F1 /E2 Class Weights, As per OIML- R-76 by Comparison Method	200 g to 1020 g	5mg
74	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (d=0.1 g, Class II)	Using F1 Class Weights, As per OIML- R-76 by Comparison Method	3000 g to 30 kg	1g
75	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (d>10 g, Class IV)	Using F1/F2/M1 Class Weights, As per OIML- R-76 by Comparison Method	50 kg to 100 kg	16g
76	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (d>20 g, Class IV)	Using F1/F2/M1 Class Weights, As per OIML- R-76 by Comparison Method	100 kg to 300 kg	26g
77	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (d>5 g, Class IV)	Using F1 Class Weights, As per OIML- R-76 by Comparison Method	30 kg to 50 kg	4.4g
78	THERMAL-TEMPERATURE	Temperature Indicator of Digital /Analog Industrial Furnace/Oven/Baths	Using Standard Sensor (PT-100) with Readout by Direct Method (Single Position)	10 °C to 400 °C	1.31°C

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	48 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
79	THERMAL-TEMPERATURE	Temperature Indicator of Bod Incubator (for Non Medical Purpose) Deep Freezer, Cooler	Using Master Sensor PT-100 & Readout by Direct Method (Single Position)	(-)80 °C to 0 °C	1°C
80	THERMAL-TEMPERATURE	Temperature indicator of BOD, Incubator, Autoclave, Deep Freezer/Cooler for Non Medical Purpose only	Using Master Sensor (PT-100) and Readout by Direct Method (Single Position)	5 °C to 150 °C	1°C
81	THERMAL-TEMPERATURE	Temperature indicator of Digital/Analog Industrial Furnace/Oven/Baths	Using Master Sensor (PT-100) with Readout by Direct Method (Single Position)	0 °C to 400 °C	1.31°C
82	THERMAL-TEMPERATURE	Temperature indicator of Digital/Analog Industrial Furnace/Oven/Baths	Using Standard S Type Thermocouple with Readout by Direct Method (Single Position)	400 °C to 1200 °C	5 °C
83	THERMAL-TEMPERATURE	Temperature Indicator Of Digital/Analog Industrial Furnace/Oven/Baths.	Using Standard PT-100 Sensor with Readout by Direct Method (Single Position)	0 °C to 400 °C	1°C

SCOPE OF ACCREDITATION

Laboratory Name :	TESTING MACHINE SERVICE CENTRE, BALITIKURI, SHIBTALA INDUSTRIAL ESTATE, HOWRAH, WEST BENGAL, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2498	**Page No**	49 of 49
Validity	26/12/2022 to 25/12/2024	**Last Amended on**	21/06/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
84	THERMAL-TEMPERATURE	Temperature Indicator of Digital/Analog Industrial Furnace/Oven/Baths. .	Using Master S type Thermocouple with Readout by Direct Method (Single Position).	1200 °C to 1400 °C	3.37°C
85	THERMAL-TEMPERATURE	Thermocouple With or With out Indicator/Controller, Dial Thermometer, Digital Thermometer, Thermistor	Using Standard S Type Thermocouple with Readout & Dry Block Baths by Comparison Method,	0 °C to 1200 °C	3 °C
86	THERMAL-TEMPERATURE	Thermocouples with or without Indicator,Dial thermometer,Thermistor, Digital thermometer.	Using Master (PT-100) Sensor with Readout by Comparison Method.	50 °C to 400 °C	11.56°C

*** CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k = 2.**