

**Laboratory**                      **AVM Labs Pvt. Ltd., Door No 49, Moorthy Nagar, 3<sup>rd</sup> Street, Chettiar Agaram, Porur, Chennai, Tamil Nadu**  
**Accreditation Standard**      **ISO/IEC 17025: 2017**  
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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
<b><u>ELECTRO TECHNICAL CALIBRATION</u></b>				
<b>I.</b>	<b>SOURCE</b>			
1.	DC Voltage <sup>#</sup>	10 mV to 100 mV 100 mV to 300 mV 300 mV to 500mV 500mV to 1000mV 1V to 1000V	0.15% to 0.01% 0.01% 0.031% to 0.02% 0.02% to 0.013% 0.013% to 0.011%	Using Multifunction calibrator 1000A by Direct Method
2.	AC Voltage <sup>#</sup>	<b>10Hz to 1kHz</b> 10mV to 100mV  <b>20Hz to 1kHz</b> 100mV to 300mV  <b>50Hz to 1kHz</b> 300mV to 3V 3V to 100V 100V to 500V 500V to 750V  <b>1kHz to 20kHz</b> 10mV to 100mV 100mV to 300mV 300mV to 3V 3V to 100V	0.86% to 0.13%  0.13% to 0.1%  0.1% to 0.21% 0.21% to 0.13% 0.13% to 0.1% 0.1% to 0.127 %  0.86% to 0.3% 0.3% 0.3% to 0.28% 0.28% to 0.118%	Using Multifunction calibrator 1000A by Direct Method
3.	DC Current <sup>#</sup>	100µA to 300µA 300µA to 300 mA 300mA to 10A  10A to 1000A	0.095% to 0.081% 0.081% to 0.1% 0.1%  1.0%	Using Multifunction calibrator 1000A With Current Coil by Direct Method

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**Convenor**

**Avijit Das**  
**Program Manager**



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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
8.	Frequency <sup>#</sup>	1Hz to 100kHz	0.068% to 0.007%	Using Multifunction calibrator 1000A by Direct Method
9.	Temperature Simulation <sup>#</sup> ( Indicator, Controller Recorder) RTD Sensor `J` Type Thermocouple `T` Type Thermocouple `K` Type Thermocouple `R` Type Thermocouple `S` Type Thermocouple `E` Type Thermocouple `N` Type Thermocouple `B` Type Thermocouple	(-)200°C to 800°C (-)180°C to 750°C (-)200°C to 400°C (-)200°C to 1340°C 50°C to 1700°C 50°C to 1700°C 0°C to 800°C (-)200°C to 1300°C 600°C to 1800°C	0.33°C 0.59°C 0.70°C 0.92°C 2.40°C 2.52°C 0.50°C 0.88°C 2.90°C	Using Multifunction calibrator 1000A by Direct Method
II.	<b>MEASURE</b>			
1.	DC Voltage <sup>#</sup>	1 mV to 100 mV 100 mV to 1000 V	0.42% to 0.009% 0.009%	Using 6½ DMM Agilent 34401A by Direct Method
	DC High Voltage <sup>#</sup>	1 kV to 40 kV	3.3%	Using HV Probe & DMM by Direct Method
2.	AC Voltage <sup>#</sup>	<b>1kHz</b> 10mV to 100mV  <b>40Hz to 1kHz</b> 100mV to 10V 10V to 100V 100V to 750V	0.98% to 0.23 %  0.23% 0.23% to 0.12% 0.12% to 0.1%	Using 6½ DMM Agilent 34401A by Direct Method

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8.	Temperature Simulation # (Indicator, Controller, Recorder) RTD Sensor `J` Type Thermocouple `T` Type Thermocouple `K` Type Thermocouple `R` Type Thermocouple `S` Type Thermocouple `E` Type Thermocouple `N` Type Thermocouple `B` Type Thermocouple	 (-)200°C to 800°C (-)180°C to 750°C (-)200°C to 400°C (-)200°C to 1340°C 50°C to 1700°C 100°C to 1700°C (-)200°C to 1000°C (-)200°C to 1300°C 600°C to 1800°C	 0.32°C 0.49°C 0.60°C 0.72°C 2.41°C 2.41°C 0.39°C 0.75°C 2.90°C	 Using MFC Unomat TRX by Direct Method

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<b><u>MECHANICAL CALIBRATION</u></b>				
<b>I. PRESSURE INDICATING DEVICES</b>				
1.	Vacuum <sup>#</sup> (Digital / Dial Gauge, Transmitter, Transducers)	(-)0.9 to 0 bar	0.2 % rdg	Using Digital Pressure Calibrator by comparison method as per DKD-R-6-1
2.	Pressure (Pneumatic) <sup>#</sup> (Digital / Dial Gauge, Magnehelic Gauge, Manometer, Differential Pressure, Transmitter, Transducers)	0 to 50 mmWc >50 to 200 mmWc >200 to 2000 mmWc 0 to 1 bar >1 to 40 bar	0.18 mmWc 0.2 mmWc 1.5 mmWC 0.2 % rdg 0.27 % rdg	Using Differential Pressure Calibrator / Digital Pressure Calibrator & Digital Pressure Gauge by comparison method as per DKD-R-6-1
3.	Pressure (Hydraulic) <sup>#</sup> (Digital / Dial Gauge, Transmitter, Transducers)	1 to 70 bar >70 to 700 bar	0.11 %rdg 0.14 % rdg	Using Digital Pressure Gauge by comparison method as per DKD-R-6-1
4.	Pressure (Hydraulic) <sup>#</sup> (Digital / Dial Gauge, Transmitter, Transducers)	7.0 bar to 700 bar	0.02 %rdg	Using Dead Weight Tester by comparison method as per DKD-R-6-1



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<b>IV. WEIGHING SCALE AND BALANCE</b>				
1.	Calibration of Weighing Balance # d= 0.001 mg and Coarser d= 0.01 mg and Coarser d= 0.1 mg and Coarser d= 10 mg and Coarser d= 10 mg and Coarser d= 1 g and Coarser d= 10 g and Coarser d= 100 g and Coarser d= 200 g and Coarser	0 to 5 g 0 to 60 g >60 g to 200 g >200 g to 4 kg >4 kg to 20 kg >20 kg to 100 kg >100 kg to 500 kg >500 kg to 1000 kg >1000 kg to 2000 kg	0.008 mg 0.05 mg 0.2 mg 0.02 g 0.2 g 20 g 80 g 500 g 800 g	Using Standard Weights accuracy class E2. Calibration of Weighing Balances of Class-I and coarser as per OIML-R-76-1  Using Standard Weights accuracy class F1. Calibration of Weighing Balances of Class-II and coarser as per OIML-R-76-1  Using Standard Weights accuracy class M1. Calibration of Weighing Balances of Class-III and coarser as per OIML-R-76-1
<b>V. VOLUME</b>				
1.	Piston Pipette # (Micro Pipette)	10 µl to 100 µl >100 µl to 5000 µl	0.13 µl 0.74 µl	Using Digital precision Balances up to 60/200 g readability 0.01/0.1 mg & Distilled water of known density. as per ISO 8655-6, ISO/TR 20461

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2.	Volumetric Glassware <sup>#</sup> (Glass Burette)	0.1 ml to 50 ml >50 ml to 100 ml	2.0 µl 8.5 µl	Using Digital precision Balances upto 60/210g readability 0.01mg/0.1mg & Distilled water of known density. as per ISO 4787, ISO/TR 20461
	Volumetric Glassware <sup>#</sup> (Glass Pipette-Graduated / Non-Graduated)	0.1 ml to 50 ml >50 ml to 100 ml	2.0 µl 8.5 µl	Using Digital precision Balances upto 60/210g readability 0.01mg/0.1mg & Distilled water of known density. as per ISO 4787, ISO/TR 20461
	Volumetric Glassware <sup>#</sup> (Measuring Cylinder, Volumetric Flask, Conical Flask, Dispenser, Beaker, Specific Gravity Cup, Pycnometer)	5 ml to 100 ml >100 ml to 2000 ml >2000 ml to 10000 ml	8.5 µl 75.0 µl 6.5 ml	Using Digital precision Balances up to 60 / 210 / 4100 / 22000g, readability 0.01mg / 0.1mg / 0.01g / 0.1g & Distilled water of known density. as per ISO 4787, ISO/TR 20461
<b>VI.</b>	<b>TORQUE GENERATING DEVICES</b>			
1.	Torque Wrench, Torque Screw Driver <sup>#</sup> (Type-I Class-A, B, C, D, E. Type-II Class-A, B, C, D, E, F, G)	0.1 Nm to 2 Nm >2 Nm to 20 Nm >20Nm to 1000 Nm	1.0% rdg. 1.0% rdg 0.8% rdg	Using Digital Torque Calibration System by comparison method as per ISO 6789



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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b>X. DIMENSION (BASIC MEASURING INSTRUMENTS, GAUGE, ETC.)</b>				
1.	Caliper <sup>§</sup> (Vernier / Dial / Digital) L.C.: 0.01 mm <sup>φ</sup>	0 to 300 mm 0 to 600 mm 0 to 1000 mm 0 to 1500 mm 0 to 2000 mm	12.4 $\mu$ m 16.2 $\mu$ m 20.7 $\mu$ m 21.7 $\mu$ m 39.0 $\mu$ m	Using Gauge Block, Long Gauge Block and Caliper Checker by comparison method as per IS-3651 (Part-1,2 & 3)
2.	Inside Caliper <sup>§</sup> (Mech / Dial / Digital) L.C.: 0.01 mm <sup>φ</sup>	10 to 300 mm 10 to 600 mm	10.3 $\mu$ m 12.2 $\mu$ m	Using Caliper Checker by comparison method as per AVM-WI-D-02
3.	Height Gauge <sup>#</sup> (Mech / Dial / Digital) L.C.: 0.01 mm <sup>φ</sup>	0 to 300 mm 0 to 600 mm 0 to 1000 mm	9.9 $\mu$ m 12.0 $\mu$ m 18.8 $\mu$ m	Using Gauge Block, Long Gauge Block and Caliper Checker by comparison method as per IS-2921
4.	External Micrometer <sup>§</sup> (Mech / Digital / Indicating) L.C.: 0.001 mm <sup>φ</sup>	0 to 100 mm > 100 mm to 300 mm > 300 mm to 600 mm	1.0 $\mu$ m 4.9 $\mu$ m 9.7 $\mu$ m	Using Gauge Block, Long Gauge Block by comparison method as per IS-2967
	L.C.: 0.01 mm	>600 mm to 1000 mm >1000 mm to 2000 mm	15.8 $\mu$ m 38.4 $\mu$ m	

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
5.	Internal Micrometer <sup>§</sup> (Caliper Type) (Mech / Digital) L.C.: 0.001 mm <sup>§</sup>	5 mm to 100 mm	1.3 $\mu$ m	Using Gauge Block by comparison method as per IS-2966
6.	Internal Micrometer <sup>§</sup> (Stick / Tubular Type) L.C.: 0.01 mm <sup>§</sup>	13 mm to 100 mm >100 mm to 500 mm >500 mm to 2100 mm	5.9 $\mu$ m 8.0 $\mu$ m 39.0 $\mu$ m	Using Gauge Block, Long Gauge Block & Dial Test Indicator by comparison method as per IS-2966
7.	Depth Micrometer <sup>§</sup> (Mech / Digital) L.C.: 0.001 mm <sup>§</sup>	0 to 150 mm 0 to 300 mm	5.33 $\mu$ m 5.33 $\mu$ m	Using Gauge Block, Long Gauge Block by comparison method as per BS-6468
8.	Depth Caliper <sup>§</sup> (Mech / Dial / Digital) L.C.: 0.01 mm <sup>§</sup>	0 to 300 mm 0 to 600 mm	8.2 $\mu$ m 13.7 $\mu$ m	Using Gauge Block, Caliper Checker, Long Gauge Block by comparison method as per IS-4213
9.	Dial Indicator <sup>§</sup> (Dial / Digital) L.C.: 0.001 mm <sup>§</sup>	0 to 100 mm	1.82 $\mu$ m	Using Length Measuring Machine by comparison method as per IS-2092

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10.	Dial Test Indicator <sup>§</sup> (Dial / Digital) L.C.: 0.001 mm <sup>ϕ</sup> L.C.: 0.01 mm <sup>ϕ</sup>	0 to 0.14 mm 0 to 1.6 mm	0.7 $\mu$ m 0.7 $\mu$ m	Using Length Measuring Machine by comparison method as per IS-11498
11.	Dial Caliper Gauge <sup>§</sup> L.C.: 0.01 mm <sup>ϕ</sup>	0 to 100 mm	6.1 $\mu$ m	Using Gauge Block by comparison method as per AVM-WI-D23
12.	Dial Thickness Gauge <sup>§</sup> L.C.: 0.001 mm <sup>ϕ</sup> L.C.: 0.01 mm <sup>ϕ</sup>	0 to 25 mm 0 to 100 mm	1.0 $\mu$ m 6.0 $\mu$ m	Using Gauge Block by comparison method as per AVM-WI-D10
13.	Dial Bore Gauge <sup>§</sup> Span Dia. (6mm to 400mm) L.C.: 0.001 mm <sup>ϕ</sup>	1 mm (Transmission Error)	1.1 $\mu$ m	Using Length Measuring Machine by comparison method as per AVM-WI-D21
14.	LVDT, Electronic Probe with DRO <sup>§</sup> L.C.:0.0001mm <sup>ϕ</sup>	0 to 100 mm	0.81 $\mu$ m	Using Gauge Block by comparison method as per AVM-WI-D09
15.	Micrometer Head <sup>§</sup> L.C.:0.001mm <sup>ϕ</sup>	0 to 50mm	1.0 $\mu$ m	Using Gauge Block, Electronic Comparator by comparison method as per IS-9483

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
16.	Feeler Gauge <sup>o</sup>	0.005 mm to 2mm	1.42 $\mu$ m	Using Length Measuring Machine by comparison method as per IS-3179
17.	Surface Plate <sup>#</sup>	3500 mm x 2600 mm	$3.1\sqrt{(L+W)}/150$ $\mu$ m Where L+W in mm	Using Spirit Level L.C.:0.02 mm/m as per IS-12937, IS-2285, IS-7327
18.	Comparator Stand <sup>#</sup>	300 mm x 300 mm	2.0 $\mu$ m	Using Surface Plate With Dial Test Indicator as per IS-7599
19.	Straight Edges <sup>s</sup>	50 to 1000 mm	2.0 $\mu$ m	Using Surface Plate With Dial Test Indicator as per IS-12937 & IS-2220
20.	Engineers Parallel <sup>s</sup>	50 to 1000 mm	2.0 $\mu$ m	Using Surface Plate With Dial Test Indicator as per IS-4241
21.	Right Angle, Try Square, Engineers Square <sup>s</sup> (Parallelism, Squareness)	50 to 300 mm	4.34 $\mu$ m 8.5 $\mu$ m	Using Surface Plate With Slip Gauge Set, Dial Test Indicator & Granite Square as per IS-2103

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22.	Angle Plate, Box Angle Plate <sup>§</sup> (Parallelism, Flatness, Squareness)	100 to 300 mm	4.3 $\mu$ m 8.6 $\mu$ m	Using Surface Plate With Slip Gauge Set, Dial Test Indicator & Granite Square as per IS-2554, IS-6232, IS-6973
23.	V-Block <sup>#</sup> (Squareness, Parallelism, Symmetricity)	50 to 200 mm	8.5 $\mu$ m 7.1 $\mu$ m 7.1 $\mu$ m	Using Surface Plate With Slip Gauge Set, Granite Square, Test Mandrel & Dial Test Indicator as per IS-2949
24.	Coating Thickness Gauge <sup>§</sup> L.C.: 0.1 $\mu$ m <sup>Φ</sup>	10 $\mu$ m to 2000 $\mu$ m	3.2 $\mu$ m	Using Standard Foil by comparison method as per AVM-WI-D26
25.	Ultra Sonic Thickness Gauge <sup>§</sup> L.C.: 0.01mm <sup>Φ</sup>	0 to 100 mm	54.4 $\mu$ m	Using Gauge Block as per AVM-WI-D11
26.	Plain Plug Gauge, Setting Plug Gauge <sup>§</sup>	1 mm to 200mm	1.6 $\mu$ m	Using Length Measuring Machine, Gauge Block by comparison method as per IS-3455
27.	Snap gauge, <sup>§</sup> Gap Gauge <sup>§</sup>	3 mm to 150 mm >150 mm to 500 mm	2.0 $\mu$ m 5.8 $\mu$ m	Using Gauge Block, Long Gauge Block as per IS- 3455

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28.	Thread Plug Gauge <sup>§</sup>	2 mm to 100 mm	3.9 $\mu$ m	Using Length Measuring Machine, Thread Measuring Wire Set as per IS-2334, IS-4218, IS-6311, ISO-228, ANSI/ASME-B1.2
29.	Bench Center * (Parallelism & Co-axiality Measurement)	300 to 1000 mm	11.8 $\mu$ m	Using Test Mandrel & Dial Test Indicator as per IS-5980
30.	Thread Pitch Gauge <sup>§</sup>	0.1 to 7 mm	7.92 $\mu$ m	Using Profile Projector as per IS 4211
31.	Radius Gauge, Radius Measurement <sup>§</sup>	0.1 to 50 mm	9.8 $\mu$ m	Using Profile Projector as per IS 5273
32.	Taper Scale <sup>§</sup>	0.1 to 15 mm	5.5 $\mu$ m	Using Profile Projector as per AVM-WI-D44
33.	Wet Film Thickness Gauge <sup>§</sup>	10 to 3000 $\mu$ m	5.5 $\mu$ m	Using Profile Projector as per AVM-WI-D45
34.	Test Sieve <sup>§</sup>	0.025 to 125 mm	8.03 $\mu$ m	Using Profile Projector as per IS 460
35.	Steel Scale <sup>§</sup> L.C.: 0.5 mm <sup>Φ</sup>	0 to 1000 mm	36.7 $\mu$ m	Using Tape & Scale Calibrator as per IS 1481
36.	Bevel Protector <sup>§</sup> L.C.: 1' <sup>Φ</sup>	0 to 360°	2.0' of arc	Using Angle Gauge Set as per IS 4239

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37.	Angle Protector, Combination Set <sup>§</sup> L.C.: 1° <sup>ϕ</sup>	0 to 180°	35'	Using Angle Gauge Set as per AVM-WI-D47
38.	Industrial Angle Gauges, Angle Measurements <sup>§</sup>	0 to 360°	4.63' of arc	Using Profile Projector as per AVM-WI-D48
39.	Weld Fillet Gauge <sup>§</sup>	0 to 100 mm 0 to 60°	27.9 $\mu$ m 35'	Using Profile Projector as per AVM-WI-D49
40.	Measuring Tape, Pie Tape <sup>§</sup>	0 to 50 meter	59 $\sqrt{L}$ $\mu$ m Where 'L' is in meter	Using Tape & Scale Calibrator as per IS 1269
41.	Plain Ring Gauge, Setting Ring Gauge <sup>§</sup>	3 to 100 mm	2.0 $\mu$ m	Using Length Measuring Machine as per IS 3485, IS 3455
42.	Thread Ring Gauge <sup>§</sup>	4 to 100 mm	2.0 $\mu$ m	Using Length Measuring Machine, Master Setting Ring as per IS-2334, IS-4218, IS-6311, ISO-228, ANSI/ASME-B1.2
43.	3 Point Micrometer L.C.: 0.001 mm <sup>ϕ</sup>	4 to 100 mm	3.31 $\mu$ m	Using Master Ring Gauge as per AVM-WI-D50

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<b>II. DIMENSION (PRECISION EQUIPMENTS)</b>				
1.	Caliper Checker, Depth Micrometer Checker <sup>§</sup>	0 to 300 mm	5.0 $\mu$ m	Using Gauge Block, Long Gauge Block, Electronic Probe by comparison method as per AVM-WI-D30
2.	Caliper Checker <sup>§</sup>	0 to 600mm	9.8 $\mu$ m	Using Gauge Block, Long Gauge Block, Electronic Probe by comparison method as per AVM-WI-D30
3.	Cylindrical Measuring Pins <sup>§</sup>	0.1 mm to 20 mm	1.4 $\mu$ m	Using Length Measuring Machine as per IS-11103
4.	Cylindrical Setting Master <sup>§</sup>	5 mm to 100 mm	1.8 $\mu$ m	Using Length Measuring Machine by comparison method as per IS-4349
5.	Dial Calibration Tester <sup>§</sup> L.C.: 0.0001mm <sup>ϕ</sup>	0 to 25mm	0.9 $\mu$ m	Using Gauge Block, Electronic Comparator by comparison method as per AVM-WI-D32
6.	Electronic Height Gauge, 2D Height Gauge <sup>#</sup> L.C.: 0.0001 mm <sup>ϕ</sup>	0 to 600 mm	8.8 $\mu$ m	Using Gauge Block, Long Gauge Block by comparison method as per IS-2921

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7.	Height Master <sup>\$</sup> L.C.: 0.002 mm <sup>Φ</sup>	0 to 300 mm 0 to 600 mm	5.1 $\mu$ m 9.8 $\mu$ m	Using Gauge Block, Long Gauge Block, Electronic Probe by comparison method as per AVM-WI-D40
8.	Length Bar <sup>\$</sup>	10 mm to 100 mm	1.9 $\mu$ m	Using Length Measuring Machine as per IS-7014
9.	Length Bar, Long Gauge Block <sup>\$</sup>	100mm to 500 mm	6.1 $\mu$ m	Using Gauge Block, Electronic Probe by comparison method as per IS-7014, IS-2984
10.	Length Measuring Machine <sup>#</sup> (Single Axis) L.C.: 0.0001 mm <sup>Φ</sup>	0 to 100 mm	2.0 $\mu$ m	Using Gauge Block by comparison method as per AVM-WI-D41
11.	Micrometer Setting Rod <sup>\$</sup>	25 mm to 100 mm >100mm to 600 mm	1.95 $\mu$ m 7.31 $\mu$ m	Using Length Measuring Machine Gauge Block, Electronic Comparator by comparison method as per AVM-WI-D29
12.	Profile Projector, Video Measuring Machine <sup>#</sup> L.C.: 0.001 mm <sup>Φ</sup> L.C.: 1" <sup>Φ</sup>	Linear 0 to 300mm Angle 360° Magnification 10X to 100X	6.7 $\mu$ m 2.1 minute 4.7%	Using Glass Scale, Angle gauge set by comparison method as per AVM-WI-D36

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b><u>THERMAL CALIBRATION</u></b>				
<b>I.</b>	<b>TEMPERATURE</b>			
1.	Liquid-In-Glass Thermometers <sup>#</sup>	(-)80°C to 50°C >50°C to 250°C	0.21°C 0.32°C	Using RTD (PT 100), 6½ DMM. with Cryostatic Circulator & Oil Bath by comparison method
2.	RTD's, Thermocouple with & without controllers, Temperature Indicator With Sensor, Recorders With Probes, Temperature Baths, Dry Block Calibrators, Low Temperature Bath, Digital Thermometers With Sensor, Temperature Gauges, Temperature Switches, Data Logger With Sensor, Temperature Transmitter, Temperature Transducer <sup>#</sup>	(-)80°C to 100°C >100°C to 400°C >400°C to 500°C >500°C to 1200°C	0.2°C 0.26°C 2.10°C 2.92°C	Using RTD(PT 100), S-type Thermocouple, 6½ DMM with Cryostatic Circulator & Dry Block Temperature Calibrators by Comparison method

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
3.	Temperature By Spatial Mapping, Thermal Chambers, Furnaces, Ovens, Incubators, Water Bath, Refrigerator, Deep Freezers, Autoclaves*	(-)80°C to 100°C >100°C to 400°C >400°C to 600°C >600°C to 800°C >800°C to 1200°C	0.65°C 1.5°C 2.3°C 2.5°C 3.5°C	Using Thermocouple Type-K, Multi Channel Temperature Recorder by Direct method
4.	Thermal Chambers, Furnaces, Ovens, Incubators, Dry Block Furnace, Water Bath, BOD Incubator, Centrifuge, Dryer, Refrigerator, Deep Freezers, Autoclaves*	-80°C to 50°C >50°C to 200°C >200°C to 400°C >400°C to 500°C >500°C to 1200°C	0.65°C 0.3°C 0.32°C 1.87°C 3.0°C	Temperature Calibrator With RTD / Thermocouple Sensor (Single Position Calibration) by Direct method
5.	Thermal Chambers, Furnaces, Dry Block Furnace*	>1200°C to 1500°C	4.7°C	Temperature Calibrator With Thermocouple Sensor (Single Position Calibration) by Direct method
6.	Non-Contact Type Thermometer# (Infrared Thermometer, Digital Pyrometer)	50°C to 300°C >300°C to 900°C	2.85°C 3.4°C	Infrared Thermometer & Black Body Source by comparison method

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b>II. SPECIFIC HEAT AND HUMIDITY</b>				
1.	Temperature & Humidity Indicators (Digital / Analog), Thermo-Hygrometer, Thermo-hygrographs, Humidity Sensor With and without Indicator, Controller, Data Logger, Recorder, Humidity Transmitter <sup>#</sup> (Temperature, Relative Humidity)	10% to 95% RH @25°C 10°C to 50°C @50% RH	0.92% RH 0.7°C	Digital RH Indicator with Sensor & Humidity Generator by comparison method
2.	Temperature Indicator of Environmental & Climatic Chamber*	10% to 95% RH @25°C 10°C to 50°C @ 50% RH	0.95% RH 0.7°C	Digital RH Indicator with Sensor & Humidity Generator by comparison method
3.	Thermal Mapping of Environmental & Climatic Chamber*	10% to 95% RH 10°C to 50°C	1.24% RH 1.5°C	Digital RH Datalogger with Sensor by direct method

\* Measurement Capability is expressed as an uncertainty ( $\pm$ ) at a confidence probability of 95.45%

\$ Only in Permanent Laboratory

♣ Only for Site Calibration

# The Laboratory also capable for site calibration however, the uncertainty at site depends on the prevailing actual environmental conditions and master equipment used

φ Laboratory can also calibrate instruments/devices of coarser resolution / least count within the accredited range using same reference standard/ master equipment under the scope of accreditation

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