

Laboratory

Precise Testing and Calibration Centre, No 48, 1st Floor, 1st Main, 2nd Block, 3rd Stage, Basaveshwar Nagar, Bangalore, Karnataka

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number

CC-2467

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Validity

06.12.2017 to 05.12.2019

Last Amended on 03.01.2018

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>MECHANICAL CALIBRATION</u>				
I. DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)				
1.	Calipers [§] (Vernier/Dial/Digital) L.C:0.01mm	0 to 300 mm 0 to 600 mm 0 to 1000 mm	7.2 μ m 8.6 μ m 14.7 μ m	Using Slip Gauge Set Grade '0', Caliper Checker, Length Bar & Slip Gauge Accessories by Comparison Method
2.	Depth Micrometer [§] (Vernier/Dial/Digital) L.C:0.01mm	0 to 150 mm	6.3 μ m	Using Slip Gauge Set Grade '0', & Gauge Block Accessories by Comparison Method
3.	External Micrometer [§] (Analog/Digital) L.C.:0.001mm	0 to 150mm 150 mm to 300mm 300 mm to 600mm 600 mm to 1000mm	1.7 μ m 4.1 μ m 5.6 μ m 9.5 μ m	Using Slip Gauge Set Grade '0', length bar by Comparison Method
4.	Internal Micrometer/ Stick Micrometer [§] L.C:0.01mm	0 to 600mm 0 to 1000mm	9.3 μ m 12.2 μ m	Using Slip Gauge Set Grade '0', Gauge Block Accessories Set & Length bar by Comparison Method

Abhinav Thakur
Convenor

Avijit Das
Program Director

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5.	Plunger Type (Dial/Digital) Indicator [§] L.C:0.001mm	0 to 25mm	6.7 μ m	Using Dial Calibration Tester by Comparison Method
6.	Lever Type (Dial/Digital) Indicators [§] L.C:0.001mm L.C:0.01mm	0 to 0.2 mm 0 to 2 mm	1.6 μ m 6.7 μ m	Using Dial Calibration Tester by Comparison Method
7.	Plain Plug Gauge [§]	1mm to 100mm	2.8 μ m	Using Gauge Block, Dial Gauge By Comparison Method
8.	Width Gauge [§]	1mm to 100mm	3.6 μ m	Using Gauge Block, Dial Gauge By Comparison Method
9.	Radius Gauge [§]	Up to 25 mm	4.1 μ m	Using Profile Projector By Direct Method
10.	Pitch Gauge [§]	Up to 25 mm Angle: Up to 75°	4.0 μ m 2.8 min	Using Profile Projector By Direct Method
11.	Test Sieves [§]	0.03 mm to 10 mm 10 mm to 30 mm	3.7 μ m 4.3 μ m	Using Profile Projector By Direct method

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12.	Bevel Protractor [§] (Vernier/Digital)	0 to 360° (0° - 90° - 0°)	3.6 min	Using Profile Projector By Direct method
13.	Snap Gauge/Adjustable Snap Gauge [§]	1 mm to 200mm	3.6 μ m	Using Slip gauge Set Grade '0' by Comparison Method
14.	Dial Depth Gauge [§] L.C:0.01mm	0 to 10 mm	5.8 μ m	Using Slip Gauge Set Grade '0' by Comparison Method
15.	Feeler Gauge [§]	0.05 to 1.0mm	2.8 μ m	Using Digital Micrometer by Direct Method
16.	Bore Gauge [§] (Dial/Digital) (Only Transmission)	Up to 2.0 mm	4.0 μ m	Using Dial Calibration Tester by Comparison Method
17.	Thickness Gauge [§] (Dial/Digital) L.C:0.01mm	0 to 50mm	5.8 μ m	Using Slip Gauge Set Grade '0' by Comparison Method
18.	Height Gauge [§] (Vernier/Digital/Dial) L.C: 0.01mm	0 to 600mm	6.9 μ m	Using Caliper Checker by Comparison Method

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
19.	Pistol Caliper ^{\$} L.C:0.1mm	0 to 100mm	57.8 μ m	Using Slip Gauge Set Grade '0' by Comparison Method
20.	Depth Caliper ^{\$} (Vernier/Dial/Digital) L.C:0.01mm	0 to 300 mm	6.8 μ m	Using Slip Gauge Set Grade '0', Gauge Block Accessories & Caliper Checker by Comparison Method
21.	Dial Caliper Gauge/Groove Dial/ Inside Caliper Gauge ^{\$} L.C:0.01mm	10 mm to 150mm	5.9 μ m	Using Slip Gauge Set Grade '0', & Slip gauge Accessories by Comparison Method
22.	Coating Thickness Gauge ^{\$}	0 to 2mm	1.8 μ m	Using Standard Foils by Comparison Method
23.	Foils ^{\$}	5 to 250 μ m 250 μ m to 5mm	2.2 μ m 2.2 μ m	Using Digital Micrometer by Direct Method IS:7814
24.	Setting Rod ^{\$}	25 mm to 200mm 200 mm to 1000mm	3.1 μ m 8.1 μ m	Using Slip Gauge Set Grade '0', Length bar & comparator Stand by Comparison Method

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25.	Dial Snap Gauge ^s	0 to 100mm	1.6 μ m	Using Slip Gauge Set Grade '0' by Comparison Method
26.	Spirit Level ^s	Sensitivity 0.01 mm/meter	13.4 μ m/meter	Using Electronic Level & Tilting Table by Direct Method
27.	Height Measuring System* (Electronic) L.C:0.001 mm	0 to 1000 mm	9.8 μ m	Using Length bar by Comparison Method
28.	Surface plate*	3000 mm X 3000 mm	$1.0 \sqrt{\frac{L+W}{100}} \mu$ m L & W in mm L – Length W – Width	Using Electronic Level And Steel Bridge By Direct Method
29.	Measuring Scale L.C.:0.5 mm	0 to 300 mm	290 μ m	Using Profile projector by Direct Method
II.	DIMENSION (PRECISION INSTRUMENTS)			
1.	Profile projector * Linear L.C:0.001mm Angle L.C:14" Magnification	0 to 250 mm 0 to 360 ° 5X to 100X	17 μ m 0.3 min 0.22%	Using Graticules scale, '0' Grade Slip gauge set by Comparison Method

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III.	PRESSURE INDICATING DEVICES			
1.	Pressure Gauges/Switch Pressure Transducers with indicator [#]	0 to 40 bar 0 to 700 bar	0.021 % rdg 0.018 % rdg	Using Pressure & Vacuum Calibrator by Comparison Method
2.	Vacuum Gauges/ Switch Vacuum Transducers with indicator [#]	(-) 0.1 to (-) 0.8 bar	0.34 % rdg	Using Pressure & Vacuum Calibrator by Comparison Method
IV.	UTM, TENSION CREEP AND TORSION TESTING MACHINE			
1.	Force Measuring System* UTM/CTM Compression Tension	 10kN to 1000 kN 10kN to 200 kN	 0.25 % 0.41%	 Using Load cell with Indicator based By Comparison Method

* Measurement Capability is expressed as an uncertainty (\pm) at a confidence probability of 95%

[§]Only in Permanent Laboratory

*Only for Site Calibration

[#] The laboratory is also capable for site calibration however, the uncertainty at site depends on the prevailing actual environmental conditions and master equipment used.

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