Maharashtra

Accreditation Standard ISO/IEC 17025:2005

Discipline Mechanical Calibration Issue Date 21.10.2016

Certificate Number C-0675 Valid Until 20.10.2018

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	Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks		
I.	DIMENSION (Basic Measuring Instrument, Gauge etc.)					
1.	CALIPERS ^{\$} (Digital, Dial, Vernier) L.C.: 10 µm [©]	Upto 600 mm	17.4 μm	Using Caliper Checker by Comparison Method		
2.	HEIGHT GAUGES ^{\$} (Digital, Dial, Vernier) L.C.: 10 μm ^Φ	Upto 600 mm	17.0 μm	Using Caliper Checker & Surface Plate by Comparison Method		
3.	VERNIER DEPTH CALIPER ^{\$} L.C.: 20 μm	Upto 150 mm	15.3 μm	Using Gauge Block Sets by Comparison Method		
4.	EXTERNAL MICROMETER ^{\$} (Digital, Dial, Vernier) L.C.: 1 µm L.C. : 10 µm	0 to 100 mm 0 to 200 mm	1.5 μm 3.5 μm	Using Gauge Blocks by Comparison Method		
5.	DEPTH MICROMETER ^{\$} L.C.: 10 μm	0 to 50 mm	6.0 μm	Using Gauge Blocks by Comparison Method		
6.	PLUNGER TYPE DIAL GAUGES ^{\$} L.C.: 1 μm ^Φ	Upto 25 mm	1 μm	Using ULM & Dial Calibration Tester by Comparison Method		

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	Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
7.	LEVER TYPE DIAL GAUGES [§]			
	L.C.: 10 µm	Upto 10 mm	4.1 μm	Using Dial Calibration Tester by Comparison Method
8.	LENGTH BARS ^{\$}	Upto 100 mm	2.0 µm	Using Electronic
٠.	ZZI (G III ZIII)	100 mm to 200 mm	2.4 µm	Comparator, Master
		200 mm to 350 mm	3.3 µm	Length Bars or Gauge Blocks by Comparison Method
9.	THREAD MEASURING WIRE/CYLINDRICAL PIN	Ø 0.15 mm to Ø 20 mm	1.0 μm	Using Electronic Comparator by Comparison Method
10.	THREAD MEASURING PRISMS ^{\$} (Parallelism)	A, B,C & D Type	1.5 μm	Using ULM by Comparison Method
11.	PLAIN PLUG GAUGES/	Upto Ø 100 mm	1.7 μm	Using Electronic
11.	CYLINDRICAL SETTING	Ø 100 mm to Ø 200 mm	2.5 μm	Comparator by
	MASTER ^{\$}	Ø 200 mm to Ø 350 mm	2.8 μm	Comparison Method
12.	PLAIN RING GAUGE ^{\$}	Ø 2.5 mm to Ø 100 mm	1.6 μm	Using ULM SIP by
	(Internal Diameter)	>Ø 100 mm to Ø 300 mm	2.0 µm	Comparison Method
13.	PLAIN SNAP GAUGE ^{\$}	1 mm to 200 mm	2.1 μm	Using Gauge Block. by
		>200 mm to 300 mm	3.0 µm	Comparison Method
14.	TAPER PLAIN PLUG GAUGE ^{\$}			
	(Diameter at Small End \ Large end	1 mm to 200 mm	3.7 µm	Using ULM
	Taper Angle)	Upto 30°	25.4" arc	

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15.	TAPER PLAIN RING GAUGE ^{\$} (Internal Taper Diameter)	>Ø 5 mm to Ø 100 mm	1.7 μm	Using UMM
	Taper Angle		59 " arc sec	
16.	THREAD PLUG GAUGE ^{\$} Major/ Effective Diameter Minor Diameter	Ø 1 mm to Ø 100 mm	1.7 μm 3.4 μm	Using FCDM, Cylindrical setting Master & Thread Pin Gauge
	Major/ Effective Diameter Minor Diameter	>Ø 100 mm to Ø 300 mm	2.6 μm 3.0 μm	Using ULM by Comparison Method
17.	THREAD RING GAUGE ^{\$} (Effective & Minor Diameter)	Ø 3 mm to Ø 100 mm	1.8 μm	Using ULM
	EFFECTIVE DIAMETER	Ø 100 mm to Ø 300 mm	2.6 μm	Using ULM by Comparison Method
18.	TAPER THREAD PLUG GAUGE ^{\$} (Major & Effective Diameter Minor Diameter)	Ø5 mm to Ø 100 mm	2.0 μm 3.1 μm	Using FCDM, Cylindrical setting Master & Thread Pir Gauge
	(Major & Effective Diameter Minor Diameter)	Ø 100 mm to Ø 300 mm	3.6 µm	Using ULM by Comparison Method
19.	TAPER THREAD RING GAUGE ^{\$} (Effective Diameter)	Ø 5 mm to Ø 100 mm	2.0 μm	Using UMM by Comparison Method
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	Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
20.	BORE GAUGE ^{\$} (Transmission)	Upto 2 mm	2.6 μm	Using Dial Calibration Tester by Comparison Method
21.	FEELER GAUGE/ THICKNESS GAUGE ^{\$}	0.02 mm to 2 mm	1.3 μm	Using Electronic Comparator by Comparison Method
22.	RADIUS GAUGE ^{\$}	R 0.6 mm to R 25 mm	35.9 μm	Using Profile Projector by Comparison Method
23.	THREAD PITCH GAUGE ^{\$} ANGLE PITCH	55° & 60° 0.4 mm to 6 mm pitch	17' arc 13 μm	Using Profile Projector by Comparison Method
24.	FLOATING CARRIAGE DIAMETER ^{\$}	0 to 25 mm		
	Linear X-axis Measurement		1.7 µm	Using Gauge Blocks
	Measuring faces parallelism		1.2 μm	Using Thread Measuring Wire

^{*} Measurement Capability is expressed as an uncertainty (±) at a confidence probability of 95%

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^{\$}Only in Permanent Laboratory

 $^{^{\}Phi}$ 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.