

Laboratory Test Mech, 61/2, Surendra Nath Banerjee Road, Kolkata, West Bengal

Accreditation Standard ISO/IEC 17025:2005

Discipline Mechanical Calibration Issue Date 24.09.2015

Certificate Number C-0454 Valid Until 23.09.2017

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Quantity Measured / Instrument	Range/ Frequency	* Calibration Measurement Capability (\pm)	Remarks
I. DIMENSION			
1. EXTERNAL MICROMETER^{\$}			
L.C.: 0.001 mm	0 to 150 mm	10.6 μ m	Using Slip Gauge, Long Slip Gauge & Optical Flat by Comparison Method
L.C. : 0.01 mm ^Φ	0 to 300 mm	12.9 μ m	
	0 to 500 mm	16.9 μ m	
	0 to 1000 mm	32.0 μ m	
2. INTERNAL MICROMETER^{\$}			
L.C.: 0.001 mm	0 to 500 mm	18.4 μ m	Using Slip Gauge, Long Slip Gauge & Micron Dial Indicator by Comparison Method
L.C.: 0.01 mm	0 to 1000 mm	33.2 μ m	
3. VERNIER CALIPER^{\$} (Dial/Digimatic)			
L.C.: 0.01 mm ^Φ	0 to 300 mm	18.1 μ m	Using Slip Gauge, Long Slip Gauge & Micron Outside Micrometer by Comparison Method
L.C. : 0.02 mm	0 to 600 mm	23.4 μ m	
L.C.: 0.01 mm	0 to 1000 mm	63.4 μ m	
4. VERNIER DEPTH GAUGE^{\$}			
L.C.: 0.02 mm	0 to 150 mm	12.0 μ m	Using Slip Gauge, Long Slip Gauge & Surface Plate by Comparison Method
L.C.: 0.01 mm	0 to 300 mm	21.9 μ m	
5. DIAL GAUGE^{\$} (Lever Type)			
L.C.: 0.01 mm	0 to 1 mm	6.5 μ m	Using Dial Calibration Tester by Comparison Method

Neeraj Verma
Convenor

Avijit Das
Program Manager

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6. DIAL GAUGE ^{\$} (Plunger Type) L.C.: 0.001 mm L..C: 0.01 mm	0 to 1 mm 0 to 25 mm	7.3 μ m 7.5 μ m	Using Dial Calibration Tester by Comparison Method
7. HEIGHT GAUGE ^{\$} L.C.: 0.01 mm ^o L.C.: 0.02 mm	0 to 300 mm 0 to 600 mm 0 to 1000 mm	15.3 μ m 26.2 μ m 39.6 μ m	Using Slip Gauge, Long Slip Gauge & Surface Plate by Comparison Method
8. FEELER GAUGE ^{\$}	0.05 mm to 1 mm	5.7 μ m	Using Outside Micrometer by Comparison Method
9. FOILS FILM ^{\$}	0 to 1mm	5.7 μ m	Using Outside Micrometer by Comparison Method
10. BALL/MEASURING PINS ^{\$} (Diameter)	0 to 25 mm 25 mm to 100 mm	15 μ m 15 μ m	Using Slip Gauge, Dial Gauge, Outside Micrometer by Comparison Method
11. SNAP GAUGE ^{\$}	0 to 100 mm 100 mm to 300 mm	4.6 μ m 11.1 μ m	Using Slip Gauge by Comparison Method
12. PLAIN PLUG GAUGE ^{\$}	Upto 100 mm	7.7 μ m	Using Slip Gauge, Dial Gauge by Comparison Method
13. COATING THICKNESS GAUGE ^{\$} L.C.: 0.0001 mm (for < 20 μ m) L.C.: 0.001 mm (above 20 μ m)	10 μ m to 1000 μ m	6.54 μ m	Using Standard Foils by Comparison Method

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14. SETTING ROD & LENGTH BARS ^{\$}	0 to 1000 mm	10.9 μ m	Using Standard Slip Gauge & Dial Indicator by Comparison Method
15. BRINELL MICROSCOPE / POLDI ^{\$}	0 to 10 mm	57.3 μ m	Using Graticules by Comparison Method
16. DIAL THICKNESS GAUGE ^{\$} L.C.: 0.01 mm	0 to 10 mm	15.82 μ m	Using Standard Slip Gauge by Comparison Method
17. STOP WATCH ^{\$} L.C. 0.01 s	20s to 15 min	1.64 s	Using Stop watch by Comparison Method
18. TEST SIEVE ^{\$}	32 μ m to 120 mm	102.5 μ m	Using Microscope & Vernier Caliper by Comparison Method
19. ANGLE/ BEVEL PROTRACTORS/ COMBINATION SQUARE SET ^{\$} L.C.: 5'	0°-90°-0°	3'	Using Angle Gauge Set by Comparison Method
20. DEPTH MICROMETER ^{\$} L.C.: 0.001 mm ^Ø	0 to 150 mm 150 mm to 300 mm	12.9 μ m 16.8 μ m	Using Slip Gauges & Surface Plate by Comparison Method

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21. DIAL BORE GAUGE ^{\$} (Travel Only) L.C.: 0.01 mm	0 to 1 mm	7.1 μ m	Using Dial Calibration Tester by Comparison Method
22. EXTENSOMETER ^{\$} L.C.: 0.001 mm L.C.: 0.01 mm	0 to 2 mm 0 to 3 mm	24.4 μ m 24.4 μ m	Using Micrometer Drum by Comparison Method
II. MASS			
1. ELECTRONIC WEIGHING BALANCE* READABILITY 0.01 g to 2 g	Upto 200 g >200 g to 20 kg	0.62 mg 1.64 mg	Using F1 Class Standard Weights
2. SPRING BALANCE*	0 to 20 kg	0.9 %	Using F1 Class Standard Weights by Comparison Method
III. FORCE			
1. STATIC UNIAXIAL TESTING MACHINE* (UTM,CTM, TTM) COMPRESSION TENSION	50 N to 1000 kN 0.5 N to 50 kN	0.6 % 0.6 %	Using Force Proving Instruments Using Force Proven Instruments & Dead Weights
2. ROCKWELL & ROCKWELL SUPERICIAL HARDNESS TESTING MACHINE*	HRA HRB HRC	1.4 HRA 2.3 HRB 0.8 HRC	Using Standard Hardness Blocks

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	HR15 N	1.875 HR15N	
	HR30N	0.9 HR30N	
	HR45N	2.2. HR45N	
	HR15T	1.3 HR15T	
	HR30T	1.1 HR30T	
	HR45T	1.5 HR45T	
IV HARDNESS			
1. VICKERS HARDNESS TESTING MACHINE*	HR1	13.6 HV1	Using Standard Hardness Blocks By Indirect Method
	HR5	6.1 HV5	
	HV10	4.9 HV10	
	HV20	4.6 HV20	
	HV30	4.3 HV30	
2. BRINELL HARDNESS TESTING MACHINE*	HBW 2.5/187.5	4.7 %	Using Standard Hardness Blocks By Indirect Method
	HBW 5/75	2.1 %	
	HBW 10/3000	2 %	
3. IMPACT TESTING MACHINE* CHARPY IZOD	0 to 300 J	2.15 J	Using Clinometer Load Cell, Height Gauge, Various Gauges & Miscellaneous Gauges Outside Micrometer
	0 to 168 J	1.24 J	

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II. RPM			
1. TACHOMETER* (NON CONTACT TYPE)	100 rpm to 39500 rpm	3.5 %	Using Stroboscope 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

^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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