

Laboratory Unique Testing Solutions, Plot No. 611-P, Sector – 38, Gurgaon, Haryana

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number CC-2769

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Validity 04.07.2018 to 03.07.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>MECHANICAL CALIBRATION</u>				
I. DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)				
1.	Caliper [§] (Vernier / Dial / Digimatic) L.C.: 0.01 mm L.C.: 0.01 mm	0 to 300 mm 0 to 600 mm	11.80 μ m 15.70 μ m	Using Caliper Checker as per IS 3651 by Comparison Method
2.	External Micrometer [§] L.C.: 0.001 mm	0 to 25 mm >25 mm to 100 mm	1.30 μ m 1.18 μ m	Using Slip Gauges Set as per IS 2967 by Comparison Method
3.	Height Gauge [§] (Vernier / Dial / Digimatic) L.C.: 0.01 mm	0 to 600 mm	12.0 μ m	Using Caliper Checker as per IS 2921 by Comparison Method
4.	Feeler Gauge [§]	Up to 1 mm	5.0 μ m	Using Digital External Micrometer as per IS 3179 by Comparison Method
5.	Flakiness Gauge [§]	Up to 100 mm	15 μ m	Using Caliper Checker as per IS 2386 by Comparison Method

Dheeraj Chawla
Convenor

Avijit Das
Program Manager

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6.	Elongation Gauge [§]	Up to 81 mm	14.70 μ m	Using Caliper Checker as per IS 2386 by Comparison Method
7.	Test Sieve Aperture Size [§]	4.50mm to 40mm	35 μ m	Using Caliper Checker as per IS 460 by Comparison Method
8.	Cube Mould [§]	Up to 150mm	50 μ m	Using Caliper Checker as per IS 10086 by Comparison Method
9.	Snap Gauge/Gap Gauge [§]	1mm to 100mm	5.2 μ m	Using Slip Gauge Set as per IS 3477 by Comparison Method
II.	PRESSURE INDICATING DEVICES			
1.	Hydraulic Pressure Digital / Analogue Pressure Gauges #	0 to 70 bar 70 bar to 700 bar	0.15 bar 1.10 bar	Using Digital Pressure Gauge and Hydraulic Comparator(Water Based) based on DKD R6-1 .
2.	Digital/ Analogue Vacuum Gauges #	0 to (-) 0.9 bar	0.06 bar	Using Digital Vacuum Gauge and Mechanical Vacuum Pump based on DKD R6-1

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III.	UTM, TENSION CREEP AND TORSION TESTING MACHINE			
1.	Tensile / Universal Testing Machine, Load Testing Machine, Spring Testing Machine, Tensometer, Flexural Testing Machine* -Tension	10N to 100kN	0.72%	Using Force Proving Instrument based on IS 1828 Part I
2.	Compression / Universal Testing Machine, Load Testing Machine, Spring Testing Machine, Tensometer, Flexural Testing Machine* -Compression	20N to 2000kN	0.92%	Using Force Proving Instrument based on IS 1828 Part I
3.	Calibration /Verification of Crosshead / Actuator Displacement Measuring System Used in Material Testing Machine*	0 to 600mm	0.13mm	Using Digital Height Gauge per ASTM E 2309 by Comparison Method

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IV.	HARDNESS TESTING MACHINES			
1.	Rockwell Hardness Testing Machine*	HRA HRBW HRC	0.91HRA 0.86HRBW 0.90HRC	Using Standard Reference Test Blocks as per IS 1586-2 (Indirect Method)
2.	Micro Vickers & Vickers Hardness Testing Machines*	HV1 HV5 HV10	10.41% 2.86% 5%	Using Standard Reference Test Blocks as per IS-1501 (Part-2) (Indirect Method)
3.	Brinell Hardness Testing Machines*	HBW 5/750 HBW 10/1000	1.8% 1.4%	Using Standard Reference Test Blocks as per IS-1500 (Part-2) (Indirect Method)

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<u>THERMAL CALIBRATION</u>				
I.	TEMPERATURE			
1.	RTD/Thermocouple with or without Indicator ,Temperature Indicator With Sensor Probe [§]	(-)40 °C to 25°C	1.25 °C	Using 4 Wire PT-100 RTD and Read Unit 6. DMM & Dry Alcohol bath
	RTD/Thermocouple with or without Indicator, Temperature Indicator With Sensor Probe [#]	50 °C to 300 °C	1.52 °C	Using 4 Wire PT-100 RTD and Read Unit 6. DMM & Dry Bath
2.	Thermocouple with or without Indicator Temperature Indicator With Sensor Probe [#]	300 °C to 600 °C	3.09 °C	Using R Type Thermocouple and Read Unit 6. DMM and Dry Block
3.	Temperature Indicator of Deep freezer ,Oven / Furnace [*]	(-)40 °C to 200°C > 200 °C to 300 °C	0.60 °C 1.31 °C	Using 4 wire PT-100 RTD and Read Unit 6. DMM a Single Specified Position calibration
		300 °C to 1200 °C	3.09 °C	Using R Type Thermocouple and Read Unit 6. DMM

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4.	Indicator of Environmental Chamber / RH Chamber *	15 %RH to 95 %RH @ 25°C	1.78 %RH	Using Digital Thermohygrometer with Probe at Single Point Specified Position Calibration

* 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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