

Laboratory Sastha Scientific Agencies, 314, 8th E Main, 4th Cross, HRBR 1 Block, Kalyan Nagar, Bangalore, Karnataka

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number CC-2759 (in lieu of C-1406) **Page** 1 of 3

Validity 16.06.2018 to 15.06.2020 **Last Amended on** 04.07.2018

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>MECHANICAL CALIBRATION</u>				
I.	DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)			
1.	Verification of Extensometer* (Mechanical/ Electronic)	0 to 12.5 mm	6.8 μ m	Using Extensometer Calibrator by Comparison Method
II.	DIMENSION (PRECISION INSTRUMENTS)			
1.	Measuring Microscope / Tool Makers Microscope* Linear: 1 μ m Angular: 1 Arc sec	Upto 400 mm x 400 mm 360 °	3.0 μ m 195 Arc s	Using Glass Scale & Angular Scale by Comparison Method
2.	Microscope – Metallurgical & Streao* Linear Magnification	0 to 10 mm Upto 1000 X	3.0 μ m 1.8 %	Using Glass Scale & Reticles by Comparison Method
3.	Brinell Microscope* Linear Magnification	0 to 10 mm Upto 1000 X	7.6 μ m	Using Glass Scale by Comparison Method
4.	Video Measuring System* Linear : 1 μ m Angular: 1 Arc Sec	Upto 200 mm Angular: 360°	4.9 μ m 201 Arc sec	Using Glass Scale & Angular Scale by Comparison Method
5.	Coating Thickness Gauge*	Upto 2 mm	7.9 μ m	Using Master Foil by Comparison method

Rajeshwar Kumar
Convenor

Avijit Das
Program Manager

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6.	Ultrasonic Thickness Gauge*	Upto 100 mm	12.9 μ m	Using Step/Slip Gauges by Comparison method
III.	UTM, TENSION CREEP AND TORSION TESTING MACHINE			
1.	Verification of Uni-Axial Testing Machines* Compression Tension	10 kN to 1000 kN 10 kN to 50 kN	0.8 % 0.8 %	Using Class-1 or better Proving Rings & Load Cells as per IS:1828-2005 Part -1
IV.	HARDNESS TESTING MACHINE			
1.	Verification of Rockwell Hardness Tester *	HRA HRBW HRC HR15N HR 30N HR 45N HR 15TW	0.8 HRA 1.0 HRBW 0.8 HRC 0.5 HR 15N 1.0 HR 30N 1.0 HR 45N 0.50 HR 15TW	Using Standard Hardness Test Blocks By Indirect Method as per IS:1586-2012 & ASTM E18 by Indirect Method
2.	Verification of Brinell Hardness Tester *	2.5 /187.5 HBW 5 / 750 HBW 10 / 3000 HBW	2.60 % 1.80 % 1.75 %	Using Standard Hardness Test Blocks By Indirect Method as per IS 1500-2-2013 & ASTM E10
3.	Verification of Micro-Vickers Hardness Tester *	HV 0.1 HV0.2 HV 0.3 HV 0.5 HV 1	5.78 % 4.49 % 3.40 % 3.40 % 2.50 %	Using Standard Hardness Test Blocks By Indirect Method as per IS 1501-2-2013 & ASTM E384/ E92
4.	Verification of Vickers Hardness Tester*	HV5 HV10 HV30	2.5 % 2.0 % 2.0 %	Using Standard Hardness Test Blocks By Indirect Method as per IS 1501-Part 2 & ASTM E 384/ E92

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5.	Verification Of Leeb Hardness Tester*	HLD	1.5 %	Using Standard Hardness Test Blocks as per ASTM A 956
6.	Verification of Force in Rockwell Hardness Testing Machines*	49.03 N to 1471 N	0.8 %	Using Load Cells as per IS : 1568-2012 & ASTM E18
7.	Verification of Force in Brinell Hardness Testing Machines*	1.84 kN to 29.42 kN	0.8 %	Using Load Cells as per IS : 1500-2:2013 & ASTM E10
8.	Verification of Force in Vickers Hardness Testing Machines*	2 N to 490.3N	0.8 %	Using Load Cells as per IS : 1501-2:2013 1
V.	IMPACT TESTING MACHINE			
1.	Verification of Impact Testing Machines*	Charpy: 0 to 300 J Izode: 0 to 170 J	0.80 %	Using Load Cell, Linear Instruments & Gauges as per ISO 148-2:2016, ASTM E23 IS 3766

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

*Only for Site Calibration

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