



NABL

National Accreditation Board for Testing and Calibration Laboratories

Department of Science & Technology, India

CERTIFICATE OF ACCREDITATION

SME CALIBRATION CENTRE-DIVISION OF S. M. ENGINEERS

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

1, Makarand Apartment, 13, Mayur Colony, Kothrud, Pune

in the discipline of

MECHANICAL CALIBRATION

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Certificate Number C-0240

Issue Date 01/07/2013



Valid Until 30/06/2015

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

Alok Jain
Convenor

Anil Relia
Director

Dr. T. Ramasami
Chairman



NABL

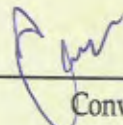
Department of Science & Technology, India

SCOPE OF ACCREDITATION

Laboratory	SME Calibration Centre-Division of S. M. Engineers, Pune Location 1: 1, Makarand Apartments, 13, Mayur Colony, Kothrud, Pune Location 2 : Sr. No. 77/4, Near Vishnu Malati Industrial Estate, Post Shivane, Dist. Pune		
Accreditation Standard	ISO/IEC 17025:2005		
Discipline	Mechanical Calibration	Issue Date	01.07.2013
Certificate Number	C-0240	Valid Until	30.06.2015
Last Amended on	-	Page	1 of 4

Measured Qty / Instrument	Range/ Frequency	*Calibration Measurement Capability (\pm)	Remarks
Location 1			
FORCE²			
Verification of Static Uniaxial Testing Machines (Universal, Compression, Load, Tensile Testing Machine, Spring Testing Machine)			
1. Verification of Universal Testing Machine Compression Mode	Upto 2000kN	0.18%	Using Class 1 Dynamometers & Load cells as per IS 1828 : 2005 / ISO 7500 : 1999
Compression Mode	Upto 2000 kN	0.28%	Using Class A Dynamometers & Load cells as per ASTM E4 - 10
2. Verification of Tensile & Universal Testing Machine Tension Mode	Upto 500kN	0.19%	Using Class 1 Dynamometers & Load cells as per IS 1828 : 2005 / ISO 7500 : 1999
3. Load Verification of Rockwell Hardness Tester	29.42 N to 1471 N	0.2%	Using Class 0 & Class 1 Load Cells as per IS 1586 part 2 2012 / ISO 6508 -2 :2005
4. Load Verification of Brinell	153.2N to 29.42kN	0.17%	Using Class 0 & Class 1 Load Cells, As per IS 2281 : 2005/ ISO 6506 - 2 : 1999

Location 1


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5. Load Verification of Vickers Hardness Tester	49.03 N to 980.7 N	0.2%	Using Class 0 & Class 1 Load Cells As per IS 1754 : 2002/ ISO 6507 - 2 : 1997
HARDNESS²			
6. Indirect Verification of Rockwell & Rockwell Superficial Hardness Testing Machine	HRA HRB HRC HR 15 N HR 30 N HR 45 N HR 30 T	0.69 HRA 1.8 HRB 0.70 HRC 0.75 HR 15 N 0.75 HR 30 N 0.75 HR 45 N 1.5 HR 30 T	Using Standard Test Blocks as per IS 1586 part 2 - 2012 / ISO 6508-2- 2005
7. Indirect Verification of Brinell Hardness Testing Machine	HBW 2.5 / 187.5 HBW 5 / 750 HBW 10 / 3000	2.4% 1.4% 1.9%	Using Standard Test Blocks As per IS 2281 : 2005 / ISO 6506 - 2 : 1999
8. Indirect Verification of Vickers Hardness Testing Machine	HV 1 HV 5 HV 10 HV 20 HV 30	2.5% 2.2% 1.6% 1.7% 1.6%	Using Standard Test Blocks As per IS 1754 : 2002/ ISO 6507 - 2: 1997
IMPACT²			
9. Verification of Impact Testing Machines (Charpy & Izod) by Direct Verification for Metallic Materials	0 to 750 Joules	0.34 %	Using Various instruments Gauges , Load cell As per BSEN ISO 148 - 2 : 2008 IS : 3766 : 2004, BS 131 - IV : 1972 (Amendment - 1993) ASTM E 23 - 07

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Measured Qty / Instrument	Range/ Frequency	*Calibration Measurement Capability (\pm)	Remarks
Location 1			
10. Verification of Impact Testing Machine (Charpy & Izod) by Direct Verification for Plastic Materials	0 to 50 Joules	0.25 %	Using Various instruments Gauges , Load cell As per ASTM D256
11. EXTENSOMETER ² Electronic Mechanical	Upto 50 mm Upto 50 mm	3.0 μ m 6.0 μ m	Using Digital Calibration Tester with Digital Prob & DRO As per IS 12872 : 1990 ISO 9513 - 1989 , ASTM E 83 - 10a & D6110
12. Profile Projector ²	X-Y travel : 0 - 250 mm Magnification : Upto 100x Angle: 0-360°	15.0 μ m 0.11 % 8.5 min of arc	Using Slip Gauges, Digital Dial caliper, Mitutoyo Glass Scale & Angle gauges by comparison Method
13. Erichsen Cupping Testing Machine ² Verification of the travel of punch of Erichen Cupping Machine	0 to 25 mm	8.0 μ m	Using Erichsen Cupping Punch Travel Calibration Fixture by comparison Method

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Measured Qty / Instrument	Range/ Frequency	*Calibration Measurement Capability (\pm)	Remarks
Location 1			
14. Linear Measurement ² Measurement of Travel of UTM Crosshead (Encoder) & Crosshead Travel of Spring Testing Machine	0 to 270 mm	6.0 μ m	Using Electronica Make Glass Scale by comparison Method
Location 2			
15. TORQUE ¹ Torque Wrenches & Torque Sensors (Type I - Class B & C and Type II - Class A & B)	50 Nm to 1000 Nm	1.5 % rdg	Using Torque calibrator with different Transducers & Indicator, Sushma Make Torque Calibration System As per ISO 6789 :2003
16. Pressure (Hydraulic) ³ For Dial Pressure Gauges , Digital Pressure Gauges , Pressure Transmitters	0 to 700 bar	0.1 % FS	Using Digital Pressure Gauge with Budenburg Hydraulic Comparator based on DKD R6-1:2003

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

¹Only in Permanent Laboratory

²Only for Site Calibration

³The 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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