



NABL

National Accreditation Board for Testing and Calibration Laboratories

(An Autonomous Body under Department of Science & Technology, Govt. of India)

CERTIFICATE OF ACCREDITATION

RELIANCE CALIBRATION LABORATORY

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

Sr. No. 21/7, (Gokul Nagar, Narhe), Laygude Estate, Dhayari-Sinhgad Road, Pune, Maharashtra
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-0333

Issue Date

19/10/2016



Valid Until

18/10/2018

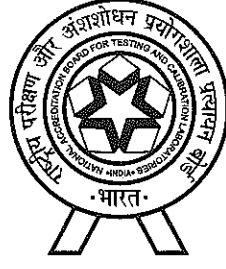
This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

Avijit Das
Program Manager

Anil Relia
Director

Prof. S. K. Joshi
Chairman



रा.प्र.प्र.बो.

राष्ट्रीय परीक्षण और अंशशोधन प्रयोगशाला प्रत्यायन बोर्ड

(विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अधीन स्वायत्तशासी निकाय)

प्रत्यायन प्रमाण-पत्र

रिलायंस कैलिब्रेशन लेबोरेटरी

का मूल्यांकन और प्रत्यायन निम्न मानक के अनुसार

आई.एस.ओ./आई.ई.सी. 17025:2005

“परीक्षण एवं अंशशोधन प्रयोगशालाओं की सक्षमता की सामान्य अपेक्षाएँ”

पुणे, महाराष्ट्र

में स्थित इसकी सुविधाओं के लिए

यांत्रिक अंशशोधन

के विषय क्षेत्र में किया गया।

(इस प्रयोगशाला के प्रत्यायन के विषय क्षेत्र की जानकारी एन ए बी एल वेबसाइट www.nabl-india.org से भी प्राप्त कर सकते हैं)

प्रमाण-पत्र संख्या

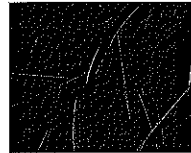
अ-0333

जारी करने की तिथि

19/10/2016

वैधता की तिथि

18/10/2018



यह प्रमाण-पत्र उपर्युक्त मानक तथा राष्ट्रीय परीक्षण और अंशशोधन प्रयोगशाला प्रत्यायन बोर्ड की अतिरिक्त अपेक्षाओं का निरंतर संतोषप्रद अनुपालन किए जाने पर अनुबंध में निर्दिष्टानुसार प्रत्यायन के क्षेत्र के लिए वैध रहेगा।

रा.प्र.प्र.बो. की ओर से हस्ताक्षरित

अ. दुस,

अविजीत दास
कार्यक्रम प्रबन्धक

अनिल रेलिया

अनिल रेलिया
निदेशक

श्रीकृष्ण जोशी

प्रो. श्रीकृष्ण जोशी
अध्यक्ष



NABL

SCOPE OF ACCREDITATION

Laboratory Reliance Calibration Laboratory, Sr. No. 21/7, (Gokul Nagar, Narhe),
Laygude Estate, Dhayari-Sinhgad Road, Pune, Maharashtra


Accreditation Standard ISO/IEC 17025:2005

Discipline Mechanical Calibration Issue Date 19.10.2016

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
I. DIMENSION (Basic Measuring Instrument Gauge etc.)			
1. CALIPER^s (Digital/ Dial/ Analogue)			
L.C.: 0.01 mm ^φ	0 to 300 mm 0 to 600 mm 0 to 1000 mm	14.0 μ m 15.0 μ m 19.0 μ m	Using Caliper Checker & Long Gauge Block Set
L.C.: 0.02 mm	0 to 2000 mm	30.0 μ m	
2. EXTERNAL MICROMETER^s			
L.C.: 0.001 mm	0 to 100 mm 100 mm to 200 mm 200 mm to 300 mm 300 mm to 600 mm	2.0 μ m 2.5 μ m 3.3 μ m 7.0 μ m	Using Gauge Blocks & Long Gauge Blocks
L.C.: 0.01 mm	600 mm to 1000 mm	11.6 μ m	
3. HEIGHT GAUGE^s (Dial/Digital)			
L.C.: 0.01 mm ^φ	0 to 300 mm 0 to 600 mm 0 to 1000 mm	14.0 μ m 19.0 μ m 25.0 μ m	Using Caliper Checker/Length Bars, Surface Plate
L.C.: 0.02 mm	0 to 1500 mm	30.0 μ m	
4. DEPTH GAUGE^s			
L.C.: 0.01 mm ^φ	0 to 600 mm	15.0 μ m	Using Gauge Blocks, Caliper Checker, Length Bars & Surface Plate
5. DEPTH MICROMETER^s			
L.C.: 0.001 mm ^φ	0 to 300 mm	7.3 μ m	Using Gauge Blocks & Surface Plate


Shally Sharma
Convenor


Avijit Das
Program Manager



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6. PLUNGER TYPE DIAL INDICATOR^s L.C.: 0.001 mm ^φ	0 to 25 mm 0 to 50 mm	1.5 μ m 2.3 μ m	Using Electronic Micro Indicator on Dial Calibration Tester & Gauge blocks with Comparator Stand
7. LEVER TYPE DIAL INDICATOR^s L.C.: 0.001 mm ^φ	0 to 1 mm	1.5 μ m	Using Electronic Micro Indicator on Dial Calibration Tester
8. BORE GAUGE^s (Transmission Accuracy)	2.0 mm	2.4 μ m	Using Electronic Micro Indicator on Dial Calibration Tester
9. DIAL THICKNESS GAUGE / PISTOL CALIPER / OUTSIDE CALIPER^s L.C.: 0.01 mm L.C.: 0.10 mm	0 to 30 mm 0 to 50 mm	8.0 μ m 65.0 μ m	Using Gauge Blocks
10. PLAIN PLUG GAUGE / PIN GAUGE/ CYLINDRICAL SETTING STANDARD/ OD MASTER^s	0 to 25 mm 25 mm to 100 mm 100 mm to 175 mm 175 mm to 375 mm	1.5 μ m 1.9 μ m 2.6 μ m 4.0 μ m	Using Comparator /Gauge Block Set & ULM
11. FEELER GAUGE^s	Up to 2 mm	1.5 μ m	Using Comparator Stand with Electronic Micro indicator
12. LENGTH BAR/WIDTH GAUGE/HEIGHT BLOCKS^s	0 to 175 mm 175 mm to 375 mm	2.6 μ m 3.5 μ m	Using ULM, Long Gauge Block Set & Micro Indicator / Surface plate
MICROMETER SETTING ROD^s	0 to 175 mm 175 mm to 600 mm 600 mm to 975 mm	2.6 μ m 10.4 μ m 13.9 μ m	

MICROMETER SETTING ROD^s

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13. SNAP GAUGE ^s	0.5 mm to 100 mm 100 mm to 200 mm 200 mm to 350 mm	2.0 μ m 3.0 μ m 3.2 μ m	Using Gauge Blocks & ULM
14. THREAD PLUG GAUGE ^s (Only PCD)	Up to 100 mm 100 mm to 200 mm	4.0 μ m 5.0 μ m	Using FCDM, ULM & Thread Measuring Wires
TAPER THREAD PLUG GAUGE ^s (Only PCD)	0 to 4"	5.0 μ m	
15. THREAD RING GAUGE ^s (Only PCD)	4 mm to 100 mm 100 mm to 200 mm 200 mm to 300 mm	3.6 μ m 5.0 μ m 5.0 μ m	Using ULM Master Setting Ring, & T Stylus anvils
TAPER THREAD RING GAUGE ^s (Only PCD)	0 to 4"	4.0 μ m	
16. RADIUS GAUGE ^s	Up to 25 mm	25.0 μ m	Using Profile Projector
17. THREAD PITCH GAUGE ^s Angle Pitch	55°, 60° 0.3 mm to 6.0 mm	10.0 min. 20.0 μ m	Using Profile Projector
18. COMPARATOR STAND ^s (Work Table Flatness)	200 mm x 200 mm (Base)	4.0 μ m	Using Elect. Micro Indicator
19. PLAIN TAPER PLUG GAUGE ^s	2.0 mm to 200 mm	3.5 μ m	Using ULM, Gauge Blocks Set
PLAIN TAPER RING GAUGE ^s	5.0 mm to 200 mm	4.1 μ m	


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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
20. RIGHT ANGLE / ANGLE PLATE ^s	Upto 300 mm	9.0 μ m	Using Electronic Probe With Square Master
21. 'V' BLOCK Parallelism & Symmetry ^s	Up to 150 mm	6.6 μ m	Using Std. Cyl. Mandrel & Elec. Micro Indicator
22. PLAIN RING GAUGE ^s	2.0 mm to 100 mm 100 mm to 200 mm 200 mm to 370 mm	2.0 μ m 2.5 μ m 3.0 μ m	Using ULM & Master Ring
23. INTERNAL MICROMETER ^s L.C.: 0.01 mm	5.0 mm to 30 mm 50 mm to 300 mm 50 mm to 1000 mm	3.5 μ m 4.5 μ m 7.0 μ m	Using Gauge Block Set & Accessories & ULM
24. BEVEL PROTRACTOR ^s	0 to 360°(5 min) 180°(1°)	5.8 min. 35 min.	Using Angle gauges
25. INTERNAL CALIPERS ^s L.C.: 0.01 mm ^{phi}	Up to 100 mm (or 2 mm Dial Travel)	11.0 μ m	Using Gauge Blocks and Accessories
26. DIAL CALIBRATION TESTER ^s L.C.: 0.0001mm	Up to 25 mm	1.3 μ m	Using Elec. Micro Indicator
27. DIAL SNAP GAUGE [#]	0.5 mm to 100 mm 100 mm to 200 mm 200 mm to 300 mm	2.2 μ m 2.4 μ m 3.0 μ m	Using Gauge Blocks Set And Electronic Micro Indicator Probe
28. 3 POINT INTERNAL MICROMETER ^s L.C.: 0.001 mm ^{phi}	6 mm to 125 mm	3.0 μ m	Using Master Setting Ring Gauge


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29. SINE BAR & SINE CENTRE ^S (Angular Accuracies)	0 to 300 mm	13.5 sec.	Using angle gauge blocks, Gauge blocks & Lever type Dial Gauge by Comparison Method
30. SPLINE PLUG GAUGE ^S	Up to 150 DOP	2.25 μ m	Using ULM /Pin Gauge Set by Comparison Method
32. MEASURING TAPE ^S (in step of 1 mtr)	Up to 50 m	125 μ m	Using Tape & Scale Calibration Machine By Comparison Method
33. MEASURING SCALE ^S	Up to 1 m.	125 μ m	Using Tape & Scale Calibration Machine By Comparison Method
34. TEST MANDRILL ^S (Runout)	0 to 300 mm	4.0 μ m	Using Bench Centre/Ele. Probe by comparison Method
35. ELECTRONIC PROBE ^S (LVDT) L.C.: 0.0001 mm	0 to 25 mm	0.5 μ m	Using '0' Grade Gauge Block Set by Comparison Method
36. SURFACE PLATE*	3000 mm X 3000 mm	$1.25 \sqrt{\frac{L+W}{150}} \mu$ m (L&W in mm)	Using Electronic level L.C. 1 μ m/m by Comparison Method
37. ELECTRONIC HEIGHT GAUGE* L.C.: 0.0001 mm ^{phi}	Up to 1000 mm	12.0 μ m	Using Caliper Checker & Long Gauge Bars by Comparison Method
38. BENCH CENTER* (Co-Axility)	Upto 1000 mm	3.24 μ m	Using Test Mandrels & Plunger Dial by Comparison Method


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II. DIMENSION (Precision Instruments)			
1. GAUGE BLOCKS ^S	Up to 10 mm 10 mm to 25 mm 25 mm to 50 mm 50 mm to 100 mm	0.11 μ m 0.14 μ m 0.19 μ m 0.33 μ m	Using Gauge Block Calibrator & K Grade Gauge Block Set By Comparison Method
2. SPIRIT LEVEL ^S L.C.: 0.02 mm/m	\pm 0.200 mm/mtr	0.02 mm/m	Using Electronic Level with Tilting Table By Comparison Method
3. PROFILE PROJECTOR* Linear X-Y Axis Angular (Measurement) Magnification	0 to 200 mm 360° 10 X, 25 X & 50 X	8.0 μ m 5 min 1.6 %	Using Measuring Glass scale & Angle Gauge & Digital Caliper by Comparisons Method
III. PRESSURE INDICATING DEVICES			
1. PRESSURE- HYDRAULIC [#] (Digital/Analogue) Pressure Gauges	0 to 40 bar 0 to 400 bar	0.13 bar 1.30 bar	Using Digital Pressure Gauge with Oil based Comparator Pump based on per DKD-R6-1
IV. TORQUE GENERATING DEVICES			
1. TORQUE WRENCH ^S Type I-(Class B & C) Type II-(Class A & B)	0.5 Nm to 5 Nm 5 Nm to 50 Nm 50 Nm to 500 Nm	2.20 % rdg 2.40 % rdg 3.0 % rdg	Using Toque Sensor with Indicator with Torque Wrench Calibration System Based on IS/ISO 6789:2003 In Both Clockwise & Anti Clockwise Direction

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V. HARDNESS TESTING MACHINES			
1. RUBBER HARDNESS TESTER FOR SPRING FORCE CALIBRATION ⁴	0 to 100 Shore A 0 to 100 Shore D	1.3 Shore A 1.5 Shore D	Using Rubber Hardness Tester Calibrator By Comparison Method as per ASTM D-2240
VI. FORCE PROVING INSTRUMENTS			
1. PUSH PULL GAUGE IN PULL MODE ONLY ⁵	5 N to 500 N	2.23 N	Using Load Cell With Indicator & Loading Frame by Comparison Method

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

⁵ 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.

⁴ 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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