



# NABL

## National Accreditation Board for Testing and Calibration Laboratories

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

### CERTIFICATE OF ACCREDITATION

## R & D INSTRUMENT SERVICES

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

#5, Natesan Nagar, 27<sup>th</sup> Street, Alapakkam, Chennai, Tamil Nadu

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](http://www.nabl-india.org))

**Certificate Number** C-0673

**Issue Date** 21/10/2016



**Valid Until** 20/10/2018.

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

## आर एण्ड डी इंस्ट्रुमेंट सर्विसेस्

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”

चेन्नई, तमिलनाडु

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.nabi-india.org](http://www.nabi-india.org) से भी प्राप्त कर सकते हैं)

प्रमाण-पत्र संख्या अ-0673

जारी करने की तिथि 21/10/2016



वैधता की तिथि 20/10/2018

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

पो. श्रीकृष्ण जोशी  
अध्यक्ष



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## SCOPE OF ACCREDITATION

Laboratory	R & D Instrument Services, #5, Natesan Nagar, 27th Street, Alapakkam, Chennai, Tamil Nadu		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Mechanical Calibration	Issue Date	21.10.2016
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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b>1. PRESSURE INDICATING DEVICES</b>			
1. PRESSURE - PNEUMATIC <sup>S</sup> (Analog / Digital, Master / Standard / Test / Industrial Pressure gauges, Transducers, Transmitters, Indicating Transmitters, Indicators, Controllers, Recorders, Data Loggers, Switches, Manometers, Calibrators, Modules)	0.2 bar to 35 bar	0.012 %rdg	Using Pneumatic DWT by Direct Method as per DKD R-6-1
2. PRESSURE- HYDRAULIC <sup>S</sup> (Analog / Digital, Master / Standard / Test / Industrial Pressure gauges, Transducers, Transmitters, Indicating Transmitters, Indicators, Controllers, Recorders, Data Loggers, Switches, Calibrators, Modules)	1 bar to 20 bar	0.011 %rdg	Using Hydraulic DWT, by Direct Method as per DKD R-6-1
	20 bar to 700 bar	0.013 %rdg	
	700 bar to 1200 bar	0.013 %rdg	
	1200 bar to 1400 bar	0.031 %rdg	Using DPI 104 by Comparison Method as per DKD R-6-1
3. VACUUM <sup>S</sup> (Analog / Digital, Master / Standard / Test / Industrial Vacuum gauges, Transducers, Transmitters, Indicating Transmitters, Indicators, Controllers, Recorders, Data Loggers, Switches, Manometers, Calibrators, Modules)	(-) 30 mbar to (-) 200 mbar	0.022 %rdg	Using Pneumatic DWT by Direct Method as per DKD R-6-1
	(-) 200 mbar to (-) 1000 mbar	0.016 %rdg	

  
Mohit Kaushik  
Convenor

  
Avijit Das  
Program Manager



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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
4. DIFFERENTIAL PRESSURE GAUGES <sup>5</sup> (Magnehelic / Photohelic Gauge, Differential pressure Indicators / Controllers / Transmitters / Switches)	$\pm 200$ mbar	0.031%rdg	Using Precision Pressure Controller by Comparison Method as per DKD R-6-1
5. PRESSURE - PNEUMATIC* (Analog / Digital, Master / Standard / Test / Industrial Pressure gauges, Transducers, Transmitters, Indicating Transmitters, Indicators, Controllers, Recorders, Data Loggers, Switches, Manometers, Calibrators, Modules)	0 to 20 bar	0.053% rdg	Using DPI 145 by Comparison Method as per DKD R-6-1
	>20 bar to 35 bar	0.032% rdg	Using EPC-40, APC- 70 by Comparison Method as per DKD R-6-1
6. PRESSURE -HYDRAULIC* (Analog / Digital, Master / Standard / Test / Industrial Pressure gauges, Transducers, Transmitters, Indicating Transmitters, Indicators, Controllers, Recorders, Data Loggers, Switches, Calibrators, Modules)	0 to 700 bar	0.032 %rdg	Using APC-700 by Comparison Method as per DKD R-6-1
	700 bar to 1400 bar	1.5 %rdg	Using APC-1400 by Comparison Method as per DKD R-6-1
7. VACUUM* (Analog / Digital, Master / Standard / Test / Industrial Vacuum gauges, Transducers, Transmitters, Indicating Transmitters, Indicators, Controllers, Recorders, Data Loggers, Switches, Manometers, Calibrators, Module)	0 to (-) 1000 mbar	0.264 %rdg	Using APC-2, DPI 145 by Comparison Method as per DKD R-6-1

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
8. DIFFERENTIAL PRESSURE GAUGES <sup>+</sup> (Magnehelic / Photohelic Gauge, Differential pressure Indicators / Controllers / Transmitters / Switches )	$\pm 200$ mbar	$\pm 0.29$ %rdg	Using Digital Manometer by Comparison Method as per DKD R-6-1
II. DIMENSION (Basic Measuring Instrument, Gauge etc.)			
1. CALIPERS <sup>5</sup> (Vernier / Dial / Electronic) L.C. 0.01 mm	0 to 600 mm	10.76 $\mu$ m	Using Caliper checker as per IS : 3651
2. HEIGHT GAUGES <sup>5</sup> (Vernier / Dial / Electronic) L.C. 0.02 mm	0 to 600 mm	11.41 $\mu$ m	Using Caliper Checker as per IS : 2921
3. DEPTH GAUGES <sup>5</sup> (Vernier / Dial / Electronic) L.C. 0.01 mm	Upto 300 mm	9.2 $\mu$ m	Using Gauge Blocks as per IS : 4213
4. EXTERNAL MICROMETER <sup>5</sup> L.C. 0.001 mm L.C. 0.01 mm	0 to 100 mm 0 to 300 mm	2.9 $\mu$ m 8.0 $\mu$ m	Using Gauge Blocks and Long Gauge Blocks as per IS : 2967
5. INTERNAL MICROMETER <sup>5</sup> (Stick Type) L.C. 0.01 mm	50 to 250 mm	5.16 $\mu$ m	Using Gauge Blocks and Gauge Block Accessories as per IS : 2966

*Mohit*

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6. DEPTH MICROMETER <sup>S</sup> L.C. 0.01 mm	Upto 300 mm	6.04 $\mu$ m	Using Gauge Blocks as per IS : 2967
7. PLUNGER DIAL GAUGE <sup>S</sup> L.C. 0.001 mm L.C. 0.01 mm	Upto 25 mm Upto 50 mm	2.4 $\mu$ m 2.5 $\mu$ m	Using Gauge Blocks and Electronic Dial Calibration Tester as per IS : 2092
8. LEVER DIAL GAUGE <sup>S</sup> L.C. 0.01 mm	Upto 2 mm	2.3 $\mu$ m	Using Electronic Dial Calibration Tester as per IS : 11498
9. BORE DIAL GAUGE <sup>S</sup> (Only Transmission Error ) L.C. 0.001 mm	1.2 mm	4.4 $\mu$ m	Using Electronic Dial Calibration Tester as per WI/RD/ML/09
10. DIAL THICKNESS GAUGE <sup>S</sup> L.C. 0.01 mm	Upto 10 mm	2.9 $\mu$ m	Using Gauge Blocks as per IS : 14271
11. FEELER GAUGE <sup>S</sup>	0.05 mm to 1 mm	3.11 $\mu$ m	Using Digital Micrometer as per IS : 3179
12. PLAIN PLUG GAUGE <sup>S</sup>	Upto 100 mm	4.01 $\mu$ m	Using Gauge Blocks and Electronic Dial Calibration Tester as per IS : 3455
13. PLAIN SNAP / GAP GAUGE <sup>S</sup>	2.5 mm to 100 mm	1.5 $\mu$ m	Using Gauge Blocks as per IS : 3455

  
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14. MICROMETER SETTING STANDARD <sup>S</sup>	Upto 200 mm 200 mm to 300 mm	5.4 $\mu$ m 5.9 $\mu$ m	Using Gauge Blocks, Electronic Dial Calibration Tester as per WI/RD/ML/16
15. SETTING MASTER PLUG GAUGE <sup>S</sup>	Upto 100 mm	3.98 $\mu$ m	Using Gauge Blocks and Electronic Dial Calibration Tester as per IS : 3485
16. SLIP GAUGE ACCESSORIES <sup>S</sup> (Measuring jaw-Nominal size, Parallelism & Flatness)	Upto 25 mm	3.83 $\mu$ m	Using Gauge Blocks, Electronic Dial Calibration Tester and Optical Flat as per IS : 4440
II. ACCELERATION AND SPEED			
1. NON-CONTACT TACHOMETER <sup>#</sup>	60 rpm to 900 rpm >900 rpm to 3000 rpm >3000 rpm to 60000 rpm	0.64 rpm 1.56 rpm 13.93 rpm	Using Stroboscope & Tachometer Amprobe Tach 20 by Comparison Method WI/RD/MS/01
2. RPM INDICATOR <sup>*</sup>	60 rpm to 240 rpm >240 rpm to 3000 rpm	1.67 rpm 4.33 rpm	Using Tachometer by Comparison Method WI/RD/MS/02

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

<sup>S</sup> Only in Permanent Laboratory

<sup>\*</sup> Only for Site Calibration

<sup>#</sup> 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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