



NABL

National Accreditation Board for Testing and Calibration Laboratories

Department of Science & Technology, India

CERTIFICATE OF ACCREDITATION

WINMET TECHNOLOGIES PRIVATE LIMITED

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

Plot No. 140 A, Sector-6, Faridabad, Haryana

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-0584

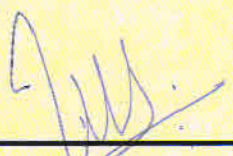
Issue Date 14/02/2014

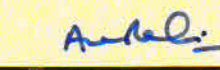


Valid Until 13/02/2016

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


Srikanth. R
Convenor


Anil Relia
Director


Dr. T. Ramasami
Chairman



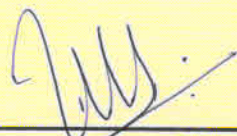
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SCOPE OF ACCREDITATION

Laboratory	Winmet Technologies Pvt. Ltd., Plot No. 140-A, Sector-6, Faridabad, Haryana		
Accreditation Standard	ISO/IEC 17025:2005		
Discipline	Mechanical Calibration	Issue Date	14.02.2014
Certificate Number	C-0584	Valid Until	13.02.2016
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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
I. DIMENSION			
1. EXTERNAL MICROMETER ^s L.C. 0.01mm	0 to 600mm	7.60 μ m	Using Slip gauge set By Comparison Method
L.C. 0.001mm	0 to 100 mm	1.32 μ m	
	0 to 300 mm	1.70 μ m	
	0 to 600 mm	4.60 μ m	
2. INTERNAL MICROMETER ^s L.C. 0.01 mm	0 to 100mm	6.0 μ m	Using Slip Gauge Set, Slip gauge Accessories, Caliper Checker By Comparison Method
	100 mm to 300mm	6.0 μ m	
L.C. 0.001mm	0 to 100mm	0.94 μ m	
	100 mm to 300mm	1.44 μ m	
3. DEPTH MICROMETER, MICROMETER HEAD ^s L.C. 0.01mm	Upto 300mm	6.0 μ m	Using Slip Gauge Set By Comparison Method
L.C. 0.001mm	Upto 300mm	1.52 μ m	
4. CALIPER ^s (Vernier/dial/digital) L.C. 0.01 mm	Upto 300mm	10.0 μ m	Using Slip gauge; Caliper Checker & Long Slip Gauge By Comparison Method
	Upto 600mm	10.0 μ m	
L.C. 0.01/0.02mm	Upto 300 mm	13.67 μ m	
	Upto 1000mm	13.84 μ m	


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5. DEPTH GAUGE ^s (Vernier / dial / digital) L.C. 0.01mm	0 to 150 mm	5.90 μ m	Using Slip Gauge Set By Comparison Method
L.C. 0.02mm	0 to 150 mm	11.60 μ m	
6. INSIDE DIAL CALIPER ^s L.C. 0.010 mm	25mm to 95 mm	6.14 μ m	Slip Gauge set, Slip gauge Accessories By Comparison Method
L.C. 0.025 mm	25mm to 95 mm	14.58 μ m	
7. HEIGHT GAUGE ^s (Vernier/dial/Electronic) L.C.0.001mm	Upto 1000 mm	11.0 μ m	Using Slip Gauge Set, Caliper Checker, Long Slip Gauge By Comparison Method
L.C. 0.01 mm	Upto 1000 mm	12.43 μ m	
L.C. 0.02 mm	Upto 1000mm	15.95 μ m	
8. HEIGHT MASTER ^s L.C. 0.001mm	Upto 300 mm	2.00 μ m	Using Slip Gauge Set, Caliper Checker By Comparison Method
9. CALIPER CHECKER/ STEP GAUGE ^s	Upto 600 mm	5.80 μ m	Using Slip Gauge Set, Caliper Checker, Electronic Probe By Comparison Method


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10. DIAL CALIBRATION TESTER ^s			
L.C.0.001 mm	0 to 25 mm	1.20 μ m	Using Slip Gauges, Electronic Probe
L.C 0.0001mm	0 to 25 mm	0.6 μ m	By Comparison Method
11. SLIP GAUGE ACCESSORIES ^s	0 to 250 mm	3.36 μ m	Using Slip Gauges By Comparison Method
12. PLUNGER TYPE DIAL GAUGE ^s			
L.C. 0.01 mm	0 to 25 mm	5.87 μ m	Using Dial Calibration Tester
L.C. 0.001mm	0 to 10mm	1.40 μ m	By Comparison Method
13. LEVER TYPE DIAL GAUGE ^s			
L.C. 0.001mm	0 to 1 mm	1.40 μ m	Using Dial Calibration Tester
L.C. 0.01 mm	0 to 1 mm	5.87 μ m	By Comparison Method
14. DIAL BORE GAUGE ^s			
L.C. 0.001mm (Travel Only)	Up to 150 mm (Travel upto 3mm)	1.40 μ m	Using Dial Calibration Tester By Comparison Method
15. DIAL THICKNESS GAUGE & DIAL SNAP GAUGE ^s			
L.C. 0.001mm	0 to 10 mm	0.87 μ m	Using Slip Gauge By Comparison Method

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16. PLAIN PLUG GAUGE, EXTERNAL DIA, FLUSH PIN GAUGE, MEASURING PIN, THREE WIRE SET EXTENDED ROD, LENGTH BAR ^s	0 to 25 mm 50 to 120 mm Upto 600 mm	2.0 μ m 2.86 μ m 6.70 μ m	Using Digital Micrometer Using Dial Gauge, Slip Gauge With Comparator Stand Long Slip Gauge, Electronic Probe By Comparison Method
17. PLAIN RING GAUGE, INTERNAL DIA ^s	Upto 150 mm	3.25 μ m	Using Slip Gauge & Accessories By Comparison Method
18. SNAP GAUGE, GAP GAUGE ^s	Upto 250 mm	3.06 μ m	Using Slip Gauge Box By Comparison Method
19. FEELER GAUGE, STANDARD FOILS ^s	Upto 1.0 mm	1.68 μ m	Using Digital Micrometer By Comparison Method
20. V- BLOCK ^s Parallelism & Squareness	Upto 200mm	3.53 μ m	Using Lever Type Dial Gauge Mandrel & Surface Plate
21. ELECTRONIC/ SPRIT LEVEL ^s L.C. 0.001mm/m 0.01mm/m 0.02mm/m	Base Length 300 mm 300 mm 300 mm	3.0 s 4.0 s 6.8 s	Using Slip Gauge Set, Sine Bar


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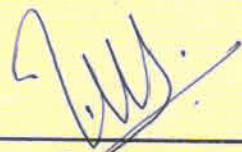
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22. ELECTRONIC PROBE ^s	0 to 2 mm	0.20	Using Slip Gauges
23. STEEL SCALE ^s	Upto 1000 mm	501 μ m	Using Tape & Scale
MEASURING TAPE ^s	Upto 5000 mm	501 $\sqrt{L}$ μ m μ m L in m	Measuring Unit By Comparison Method
PAI STEEL SCALE ^s	Upto 1000 mm	501 μ m	
24. MANDREL, MASTER CYLINDER For Squareness	Upto 600 mm	6.65 μ m	Slip Gauge Set, Lever type dial gauge
25. FORD CUP ^s Dia Linear Dim. Orifice Diameter	Upto 5mm 5mm to 100 mm	3.09 μ m 13.0 μ m	Digital Caliper
26. COATING METER ^s	Upto 1.0 mm	2.0 μ m	Standard Foils
27. COMPARATOR STAND ^s (Flatness Only)	Upto 300x300 mm	2.66 μ m	Slip Gauge Set, Lever type dial gauge
28. THREAD PLUG GAUGE/ WEAR CHECK PLUG ^s For Effective Dia	Upto 100 mm	5.36 μ m	Using Three Wire Set, Digital Micrometer


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29. TEST SIEVE ^s	0.03 mm to 10 mm 10 mm to 150 mm	3.70 μ m 16.10 μ m	Using Profile Projector, Digital Caliper By Comparison Method
30. PITCH GAUGE ^s	Up to 60° Up to 3.5 mm	1.76 min 3.95 μ m	Using Profile Projector
31. RADIUS GAUGE SET ^s	0.5mm to 25 mm 25mm to 50 mm	3.20 μ m 3.20 μ m	Using Profile Projector
32. GLASS SCALE ^s Lc. 0.1 mm Lc. 1.0 mm	Upto 25 mm Upto 200 mm	58 μ m 0.58 mm	Using Profile Projector By Comparison Method
33. SURFACE FINISH TESTER ^s	Upto Ra 60 μ m	0.31 μ m	Using Master specimen
34. RECEIVING GAUGE, CD GAUGE, PCD GAUGE ^s	Upto 600 mm	19.53 μ m	Using Coordinate Measuring Machine
35. ANGLE GAUGE, TAPER PLUG, TAPER RING ^s	Upto 60°	15 s	Using Slip Gauge Set
36. BEVEL ANGLE PROCTOR/ COMBINATION SET ^s	0° to 180 ° to 0°	3 min	Using Angle Gauge Sine Bar, Slip Gauge Set, Sine Bar


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37. SINE BAR / SINE CENTRE ^S	Upto 300 mm	3.28 μ m	Using Slip Gauge Set, Lever type dial gauge
38. ANGLE PLATE, BOX ANGLE PLATE, TRY SQUARE/ENGINEERS SQUARE ^S For Parallelisms & Squareness	Upto 300 mm	7.30 μ m	Using Slip gauge set, Lever type dial gauge, Height gauge
39. 3D-COORDINATE MEASURING MACHINE [*]	1 x 1 x 1 mtr.	$5.22 + \frac{L}{500} \mu$ m L in mm	Using Caliper Checker, Long Slip Gauge By Comparison Method
40. SURFACE PLATE [*]	Upto 2500 x 1600 mm	$4.24 \sqrt{\frac{L+W}{150}} \mu$ m μ m L & W in mm	Using Precision level
41. BENCH CENTER [*]	300mm to 1500 mm	7.44 μ m	Using Level, dial gauge, Test mandrel
42. GEAR ROLLING TESTER [*] (Horizontal & Vertical)	0 to 300 mm	2.80 μ m	Master Mandrel, Slip Gauge Blocks
43. STRAIGHT EDGE [*] (Straightness)	Upto 2000mm x 200 mm	$4.24 \sqrt{\frac{L}{150}} \mu$ m L in mm	Using Level

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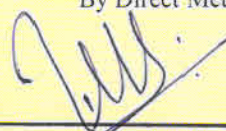
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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
44. AIR GAUGE UNIT* L.C. 0.001mm	± 0.080 mm	4.10 μ m	Master ring gauge By Comparison Method
45. PROFILE PROJECTOR* Linear X,Y Axis L.C. 0.001 mm	0 to 200 mm	4.15 μ m	Using Slip Gauge, Digital Caliper & Angle Gauge By Comparison Method
Magnification	10 X to 100 X	6.6%	
Angular	0° to 360 °	3.5 min of arc	
46. MICROSCOPE* Linear X,Y Axis	0 to 200mm	1.05 μ m	Using Glass Scale, Slip Gauge Set By Comparison Method
Magnification	10 X to 100 X	6.6%	
II. ACCOUSTIC			
1. SOUND LEVEL METER	94dB to 114 dB	2.12 dB	Using Sound Level meter Calibrator By Comparison Method
2. SOUND LEVEL METER CALIBRATOR	94dB to 114 dB	1.40 dB	Using Sound Level meter By Comparison Method
III. ACCELERATION & SPEED [#]			
1. SPEED (RPM) (Non-Contact)	0 to 40000rpm	0.08%	Using Tachometer By Direct Method


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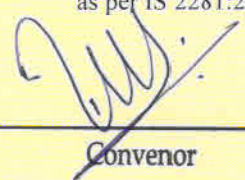
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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability ($\pm$)	Remarks
IV. PRESSURE			
1. PRESSURE GAUGES/INDICATOR, PRESSURE SWITCH TRANSMITTER [#]	0 to 30 bar	0.26 % FS	Using Digital Pressure Gauge DMM hydraulic comparator.
	0 to 700 bar	0.055 % FS	By Direct/ Comparison Method
2. PRESSURE TRANSDUCER, MANOMETER [*]	0 to 30 bar	0.26% FS	Using Digital Pressure Gauge, DMM hydraulic comparator.
	0 to 700 bar	0.22% FS	By Direct/ Comparison Method
V. VACUUM			
1. VACUUM GAUGES, VACUUM TRANSMITTERS & VACUUM SWITCHES [#]	-700 mmHg to 0 mmHg	0.95%	Using Digital Pressure Gauge and comparator By Direct/ Comparison Method
2. VACUUM TRANSDUCERS [*]	-700 mmHg to 0 mmHg	1.2% FS	Using Digital Pressure Gauge By Direct/ Comparison Method
VI. HARDNESS[*]			
1. VERIFICATION OF BRINELL HARDNESS TESTER	HBW 5/750 HBW 10/3000	2.04% 2.03 %	Using Std. Test Blocks by Indirect Method as per IS 2281:2005


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2. VERIFICATION OF VICKERS HARDNESS TESTER	HV 5 HV 30	4.49% 3.25%	Using Std. Test Blocks by Indirect Method as per IS 1754:2002
VII. MASS			
1. BALANCE ^s	(0 to 200) g d ≤ 0.1 mg	0.80 mg	Using Standard weights of Class F ₁ based on OIML R-76-1
	(0 to 20)Kg d ≤ 0.1g	0.30 g	
2. WEIGHING BALANCE/ BATCHING PLANT*	(0 to 200) g d ≤ 0.01mg d ≤ 0.1 mg	0.80 mg 0.80 mg	Using Standard weights of Class F ₁ and F ₂ based on OIML R-76-1
	(0 to 20) Kg d ≤ 0.1g	0.3g	
VIII. VOLUME ^s			
1. GLASSWARE	1 ml to 10 ml 10 ml to 100ml 100 ml to 1000 ml 1 L to 10 L	0.52 µl 60 µl 91 µl 0.92 ml	Standard Weights F ₁ Class Gravimetric method using weighing balance & distilled water

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

^SOnly 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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