

METROLOGY LABORATORY

The Metrology Laboratory in Mechanical Engineering Department is located in the Southern side of the ground floor in Main Building. It caters mainly to dimensional metrology, but there are facilities for temperature, pressure, strain and other miscellaneous measurements. There is a total area of 180 ares, with a cabin of 15 ares for a temperature controlled section. Students from BTech as well as MTech programmes conduct a variety of experiments in the laboratory. Research scholars from all departments regularly use the laboratory for a variety of measurements. Local industries and laboratories also get many of their equipment calibrated here.

The facilities for dimensional measurement include: Universal Measuring Microscope, Height gauge, Gauge Block sets, Optical Flats, Micrometers of various sizes, Surface Plates, Tool Maker's Microscope, Measuring Projector, Dial gauges, Stereo Zoom Microscope, Three Wire sets, Screw Thread Micrometers, Gear Tooth Vernier, Disk Micrometer, Roundness Testing Instrument, Coordinate Measuring Machine, Surface Roughness Tester, Laser Scan Micrometer, etc.

Facilities for temperature measurement and calibration include Platinum Resistance Thermometer, Constant Temperature Bath, Microvoltmeter for thermocouples, Thermistor based sensors and data acquisition systems, etc.

Other instruments available include Pressure Gauge Tester, Strain indicator, Coating thickness gauge, Ultrasonic Flaw Detector, Digital balance, Stroboscope, Digital storage oscilloscope, etc.

Faculty in-charge (Metrology Laboratory) – Dr. P. B. Dhanish, Associate Professor, MED

List of equipment

Sl.	Name of Equipment	Make
1	Universal Measuring Microscope	Zeiss- Germany
2	Height Gauge	Mitutoyo-Japan
3	Gauge Block Set	Zeiss- Germany
4	Optical Flat	Zeiss- Germany
5	Surface Plate (18x24 in)	India
6	Tool Maker's Microscope	Zeiss- Germany
7	Measuring Projector	Zeiss- Germany
8	Auto-collimator	Rank Taylor Hobson Ltd-UK
9	Granite Surface Plate	GMT-India
10	Planimeter 28"	Scholar-UK
11	Screw Thread Micrometer with set of anvil	Mitutoyo-Japan
12	Digital Dial Indicator 50 mm / 0.001 mm	Mitutoyo-Japan
13	Slip Gauge Set 32 pieces	Mitutoyo-Japan
14	Holtest Micrometer 12-20 mm	Mitutoyo-Japan
15	Ultra-Violet Lamp	Blak-Ray USA
16	Magnetic Yoke	Contour Probe-USA
17	Digital Dial Indicator	Mitutoyo-Japan
18	Three-Wire Unit	Mitutoyo-Japan
19	Co-ordinate Measuring Machine	Mitutoyo-Japan Bright Apex A504
20	Surface Roughness Tester	Mitutoyo-Japan SJ301
21	Gear Tooth Caliper	Mitutoyo-Japan
22	Precision Level	Mitutoyo-Brazil
23	Temperature Bath	Julabo, Germany
24	Bore Gauges 6-10, 10-18.5, 18-35, 35-60	Mitutoyo-Japan
25	Setting Rings 10 mm, 25 mm, 50 mm, 75 mm, 100 mm	Mitutoyo-Japan
26	Pressure Gauge Tester	Ravika Engineers, Delhi

27	Slip Gauge Set 8 pcs for micrometer inspn	Mitutoyo-Japan
28	System Thermometer	Instrulab India
29	Rectangular Gauge Block 250mm, 300mm	Mitutoyo-Japan
30	Freezer-90L	Voltas India
31	Stop Watch	Diamond, India
32	Stereo Zoom Microscope	LEICA EZ4D
33	Digital Storage Oscilloscope	Tektronix TDS 2022B
34	Three wire set micrometer holder	Mitutoyo Japan
35	Digital DC microvoltmeter	SES Instruments Roorkee DMV-001
36	Surface Roughness Tester	Mitutoyo Japan SJ410
37	Profile Projector	Mitutoyo Japan PJ-A3010F
38	Stroboscope	DT2350PB
39	Sine bar 200 mm	Unity make
40	Digital balance 0.01X300g,	Keroy KRT
41	Digital strain indicator	Micron Roorkee DA05A
42	Digital Ultrasonic Flaw Detector with accessories	Modsonic, Ahmedabad
43	Coating thickness gauge	Phynix Germany
44	Platinum Resistance Thermometer	Fluke make
45	Cylindricity Measuring Instrument	Mitutoyo Japan RA1500M