Laboratory	**S.V. Precision Instruments, Shed No. 11A & 11B, Type-III, Industrial Estate, Kukatpally, Hyderabad, Telangana**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Certificate Number	**CC-2619** ***(in lieu of C-0094)***	**Page**	**1 of 8**
Validity	**26.03.2018 to 25.03.2020**	**Last Amended on**	**-**

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
	MECHANICAL CALIBRATION			
I.	**DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)**			
1.	Slip Gauges[$]	0.5 mm to 20 mm 20 mm to 50 mm 50 mm to 70 mm 70 mm to 100 mm	0.12 µm 0.15 µm 0.20 µm 0.35 µm	Using Slip Gauge Calibration Tester & Gauge Block by Comparison Method IS – 2984 – 2003, ISO 3650 – 1998
2.	Setting Rods[$]	25 mm to 300 mm 300 mm to 600 mm 600 mm to 1000 mm	2.2 µm 3.5 µm 5.3 µm	Using Slip Gauges , Length Bars & Electronic Comparator
3.	Plain Plug Gauges[$]	5 mm to 125 mm	2.4 µm	Using Slip Gauges & Comparator Stand by Comparison Method IS – 6137 – 1983 IS – 6244 – 1980 IS – 6246 – 1980
4.	Vee Blocks[$] Parallelism & Symmitricity	25 mm to 150 mm	5.0 µm	Using Height Gauge, Digimatic Gauge & Mandrel by Comparison Method IS – 4960 – 1968 IS – 2949 – 1992
	Squareness	25 mm to 150 mm	8.0 µm	
5.	Feeler Gauge Sets[$]	0.5 mm to 1 mm	3.0 µm	Using External Micrometer by Comparison Method IS – 3179 – 1990
6.	Caliper Checkers[$]	0 to 600 mm	8.5 µm	Using Length Bars & Linear Height Gauge

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
7.	Coating Thickness Foils[$]	0.01 mm to 3 mm	2.0 µm	Using Electronic Comparator
8.	Calipers[$] L.C.: 0.02 mm (All Types)	0 to 150 mm 0 to 450 mm 0 to 600 mm 0 to 1000 mm	12.0 µm 17.0 µm 17.0 µm 18.0 µm	Using Slip Gauges & Length Bars by Comparison Method IS – 3651 – 1985
	L.C.: 0.01 mm	0 to 300 mm 0 to 600 mm	10.0 µm 14.0 µm	
9.	Height Gauges[$] L.C.: 0.02 mm (Vernier, Dial Digital)	0 to 1000 mm	18.0 µm	Using Slip Gauges, Length Bars & Digimatic Dial Gauge by Comparison Method IS – 2921 – 1988 IS – 2921 – 2016
	L.C.: 0.01 mm	0 to 300 mm 0 to 600 mm	7.0 µm 7.9 µm	
10.	Depth Verniers[$] L.C.: 0.02 mm	0 to 300 mm	15.0 µm	Using Slip Gauges & Length Bars by Comparison Method IS – 4213 – 1991
11.	External Micrometers[$] L.C.: 0.01 mm	0 to 100 mm 100 mm to 300 mm 300 mm to 600 mm 600 mm to 1000 mm	3.3 µm 9.0 µm 12.0 µm 16.0 µm	Using Slip Gauges & Length Bars by Comparison Method IS– 2967 – 1983
	L.C.: 0.001 mm	0 to 300 mm	1.7 µm	
12.	Dial Type Inside Calipers[$] L.C.: 0.01 mm	10 mm to 55 mm	7.0 µm	Using Slip Gauges
13.	Depth Micrometers[$] L.C.: 0.01 mm	0 to 100 mm 0 to 300 mm	4.0 µm 7.0 µm	Using Slip Gauges & Length Bars

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
14.	Height Masters[$] L.C.: 0.002 mm	0 to 300 mm	3.0 µm	Using Slip gauges & Electronic Comparator by Comparison Method IS–13907–1994
15.	Dial Calibration Testers[$] L.C.: 1 µm	0 to 25 mm	1.9 µm	Using Slip gauges & Electronic Comparator
16.	Dial Thickness Gauges (Digimatic) [$] L.C.: 0.01 mm	0 to 25 mm	2.9 µm	Using Slip Gauges
	L.C.: 0.001 mm	0 to 12 mm	0.9 µm	
17.	Lever Type Dial Gauge[$] L.C.: 0.001 mm	0 to 1 mm	1.9 µm	Using Dial Gauge Testing Stand With Electronic Probe Comparison Method IS– 1498–1985
18.	Plunger Type Dials[$] L.C.: 0.001 mm	0 to 25 mm	1.9 µm	Using Dial Gauge Testing Stand With Electronic Comparator Comparison Method IS – 2092 – 1983
	Plunger Type Dials L.C.: 0.01 mm	0 to 50 mm	2.9 µm	Using Length Measuring Machine
19.	Bore Dial Gauges[$]	Upto 2 mm Travel	5.0 µm	Using Digimatic Gauge & Dial Calibration Tester Comparison Method JIS – B – 7515

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
20.	Steel Scales[$]	100 mm to 2000 mm	$311\sqrt{\frac{L}{1000}}$ 'L' is in mm	Using Tape Scale Calibrator by Comparison Method IS - 1481 - 1970
21.	Steel Tapes[$]	0 to 30 Meters	$311\sqrt{\frac{L}{1000}}$ 'L' is in mm	Using Tape Scale Calibrator by Comparison Method IS - 1269 - 1997
22.	Bevel Protractors[$] L.C.: 5 Minutes	± 90º	4.5 Minutes	Using Sine Bar by Comparison Method IS – 4239 – 1970 IS – 5812 – 1970
23.	Clinometers[$] L.C.: 1 Minute	± 45º	53 s	Using Sine Bar & Gauge Block
24.	Electronic Levels[$] L.C.: 1 µm/m	± 2 mm/mtr	4 µm/m	Using Electronic Level & Tilting Table
25.	Spirit Levels[$] L.C.: 20 µm/m	± 0.300 mm/mtr	12.0 µm/m	Using Electronic Level & Tilling Table by Comparison Method IS – 5706 – 1993 & 1632 – 1993
26.	Surface Plates[$]	300 mm x 300 mm to 4000 mm x 4000 mm	$0.8\sqrt{\frac{L+W}{120}}$ µm L & W in mm	Using Electronic Level by Comparison Method IS – 7327 – 2003 (Granite) / IS – 2285 – 2003 (Cast Iron)
27.	Coating Thickness Gauges[$]	0 to 3 mm	3.0 µm	Using PVC Foils

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
28.	Sine Bars For Angle[$]	200 mm	9 arc sec	Using Slip Gauges, Dial Indicator, Surface Plate & Angle Gauge by Comparison Method IS – 5359 – 1987
29.	Three Point Micrometers[$]	8 mm to 90 mm 125 mm	4.9 µm 7.0 µm	Using Ring Gauges
30.	Test Sieves/s[$]	3 mm x 3 mm	10.9 µm	Using Profile Projector by Comparison Method IS - 460 – 1985 (Part 3) & IS–1555–2004
		3 mm to 10 mm	16.0 µm	Using Digimatic Caliper by Comparison Method IS - 460 – 1985 (Part 3) & IS–1555–2004
31.	Granite Squares[$]	600 mm x 450 mm	9.1 µm	Using Granite Squares, Linear Height Gauge & Digimatic Dial Indicator by Comparison Method IS –6232 – 1971
32.	Straight Edge Parallelism Straightness[$]	1000 mm	4.4 µm	Using Slip Gauge, Digimatic Gauge & Surface Plate by Comparison Method IS – 2220 – 1990 IS – 5268 – 1991 (Part-1)

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
33.	Angle Plates[$] Flatness	300 mm x 300 mm	2.4 µm	Using Slip Gauge Surface Plate Digimatic Gauge by Comparison Method IS – 2220 – 1990 IS – 5268 – 1991 (Part-1)
	Parallelism Squareness	300 mm x 300 mm	11.5 µm	Using Dial Test Indicator Granite Square
34.	Tape / Scale Calibrators[$] L.C.: 0.001 mm	1000 mm	20.0 µm	Using Length Bars
35.	Linear Height Gauges[$] (Linear Accuracy & Perpendicular) L.C.: 0.001 mm	0 to 600 mm	5.5 µm	Using Length Bars & Surface Plate
36.	Bench Centre[$] (Parallelism & Coaxiality)	300 mm	8.8 µm	Using Mandrel & Digimatic Gauge by Comparison Method IS – 5980 – 1978 IS – 2013 – 1995
37.	Pitch Gauge Set[$]	0.25 mm to 7 mm	6.3 µm	Using Profile Projector
38.	Radius Gauge Set[$]	1 mm to 25 mm	9.0 µm	Using Profile Projector
39.	Snap Gauge[$]	8 mm to 100 mm	3.0 µm	Using Slip Gauge
40.	Try Square[$]	0 to 600 mm	6.5 µm	Using Master Square Slip Gauge by Comparison Method IS – 2103 –1980

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
41.	Electronic Comparator[$]	0 to 25 mm	0.52 µm/m	Using Slip Gauge
42.	Inside Micrometer[$] L.C.: 0.01 mm	50 mm to 63 mm	4.0 µm	Using Slip Gauges, Length Bars & Electronic Comparator by Comparison Method IS – 2966 – 1964
		With Extension Rod 100 mm	4.0 µm	
		With Extension Rod 200 mm	4.1 µm	
		With Extension Rod 300 mm	4.2 µm	
43.	Comparator Stand[$] Flatness	Ø 55 mm, 100 mm x 150 mm to 400 mm x 300 mm	4.0 µm	Using Slip gauges, Try Square & Mandrel by Comparison Method IS – 7599-1975
	Perpendicularity	1000 mm	8.6 µm	
44.	Thread Plug Gauge[$]	M 2 mm to M100 mm	1.71 µm	Using Length Measuring Machine & Thread Wire Set by Comparison Method IS 2334 – 2001 & IS 1502 – 1996
45.	Thread Ring Gauge[$]	M 2 mm to M100 mm	1.09 µm	Using Length Measuring Machine & Master Setting Ring by Comparison Method IS – 2334 – 2001
46.	Plain Ring Gauge[$]	Ø2 mm to Ø100 mm	1.09 µm	Using Length Measuring Machine & Master Setting Ring by Comparison Method IS – 3485-1983
47.	Thread Wire Set[$]	0.17 mm to 6.35 mm	0.2 µm	Using Length Measuring Machine by Comparison Method IS - 2334 - 2001

Laboratory	**S.V. Precision Instruments, Shed No. 11A & 11B, Type-III, Industrial Estate, Kukatpally, Hyderabad, Telangana**
Accreditation Standard	**ISO/IEC 17025: 2005**
Certificate Number	**CC-2619** ***(in lieu of C-0094)*** **Page 8 of 8**
Validity	**26.03.2018 to 25.03.2020** **Last Amended on -**

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
48.	Mandrel[$] (Run Out, Variation in Diameter)	10 mm to 1000 mm	9.4 µm	Using Millimess & Bench Centre by Comparison Method IS – 2063-2002 (Part-1) IS – 230 – 1996
49.	Linear Height Gauges[♣] (Linear Accuracy & Perpendicular) L.C.: 0.001 mm	0 to 600 mm	5.5 µm	Using Length Bars & Surface Plate
50.	Surface Plate[♣]	600 mm x 600 mm to 4000 mm x 4000 mm	$2.54\sqrt{L+W}/120$ µm L & W in mm	Using Electronic Level by Comparison Method IS 7327-2003 & IS 2285 – 2003
51.	Bench Center[♣] (Parallellism & Coaxiality)	1000 mm	9.2 µm	Using Mandrel & Millimess by Comparison Method IS – 5980 – 1978 IS – 2013 – 1995

*** Measurement Capability is expressed as an uncertainty (±) at a confidence probability of 95%**
[$]Only in Permanent Laboratory
[♣]Only for Site Calibration

Vishal Shukla
Convenor

Avijit Das
Program Director