Laboratory	**Shanmugha Precision Forging (A Unit of Vee See Bee Trust), Shanmugha Complex, Thirumalaisamudram, Thanjavur, Tamil Nadu**
Accreditation Standard	**ISO/IEC 17025: 2005**
Certificate Number	**CC-2402** **Page 1 of 3**
Validity	**06.10.2017 to 05.10.2019** **Last Amended on -**

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
	MECHANICAL CALIBRATION			
I.	**DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)**			
1.	Caliper Vernier/Dial/Digital[$] L.C.: 0.01mm L.C.: 0.02 mm	 Upto 600 mm Upto 600 mm	 14.59 μm 15.83 μm	Using Caliper Checker IS 3651: 1982 P1(Reaffirmed 2010) , IS 3651: 1985 P2 (Reaffirmed 2010) & IS 3651: 1988 P3 (Reaffirmed 2008)
2.	Depth Caliper Vernier / Dial /Digital[$] L.C.: 0.020 mm	 Upto 150 mm	 13.47 μm	Using Gauge Block Set On Surface Plate By Comparison Method IS 4213: 1991 (Reaffirmed 2010)
3.	Height Gauge Vernier / Dial / Digital[$] L.C.: 0.010 mm L.C.: 0.020 mm	 0 to 300 mm 0 to 600 mm	 12.02 μm 17.3 μm	Using Caliper Checker IS 2921 : 2016
4.	External Micrometer [$] L.C.: 0.001 mm L.C.: 0.01 mm	 Upto 150 mm Upto 300 mm	 1.96 μm 8.55 μm	Using Gauge Block Set Based On Comparison Method IS 2967: 1983 (Reaffirmed 2008)
5.	Depth Micrometer[$] L.C.: 0.01 mm	 Upto 150 mm	 8.2 μm	Using Gauge Block Set Based On Comparison Method

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
6.	Plunger Type Dial Indicator $ L.C.: 0.001 mm L.C.: 0.01 mm	 0 to 1 mm 0 to 10 mm	 1.54 μm 3.28 μm	Using Dial Calibration Tester By Comparison Method IS 2092: 1983 (Reaffirmed 2008)
7.	Lever Type Dial Indicator$ L.C.: 0.001 mm L.C.: 0.01 mm	 0 to 0.14 mm 0 to 0.8 mm	 1.54 μm 3.27 μm	Using Dial Calibration Tester By Comparison Method IS 11498: 1985 (Reaffirmed 2010)
8.	Bore Gauge With Dial (For Transmission Accuracy)$ L.C.: 0.001 mm	 Upto 1 mm	 2.06 μm	Using ULM By Comparison Method
9.	Plain Plug Gauge$	Upto 150 mm	1.78 μm	Using ULM Based On Comparison Method IS 3455 : 1985 (Reaffirmed 2010)
10.	Plain Ring Gauge$	4 mm to 200 mm	2.35 μm	Using ULM Based On Comparison Method IS 3455 : 1985 (Reaffirmed 2010)
11.	Snap Gauge$	4 mm to 130 mm	2.32 μm	Using ULM Based On Comparison Method IS 3455 : 1985 (Reaffirmed 2010), IS 7606 : 1982 (Reaffirmed 2010) & IS 14271 : 1995 (Reaffirmed 2010)

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
12.	Measuring Pins[$]	0.1 mm to 15 mm	1.2 μm	Using ULM Based On Comparison Method IS 11103 : 1984 (Reaffirmed 2010)
13.	Thread Measuring Wires[$]	0.17 mm to 3.20 mm	1.18 μm	Using ULM Based On Comparison Method IS 6311 : 1978 (Reaffirmed 2010)
14.	Thread Plug Gauge Effective Diameter[$]	M3 to M100	3.1 μm	Using ULM based on comparison method IS 2334: 2001 (Reaffirmed 2013) IS 4218 : 2001 P1, P2 & P4 (All reaffirmed 20060 IS 4218 : 1999 P3 (Reaffirmed 2009)
15.	Thread Ring Gauge Effective Diameter [$]	M4 to M100	2.3 μm	Using ULM based on comparison method IS 2334: 2001 (Reaffirmed 2013) IS 4218 : 2001 P1, P2 & P4 (All reaffirmed 20060 IS 4218 : 1999 P3 (Reaffirmed 2009)
16.	Feeler Gauge[$]	0 to 1 mm	1.19 μm	Using ULM based on comparison method IS 3179: 1990 (Reaffirmed 2010) IS 4210: 1967 (Reaffirmed 2008)

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

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