Laboratory	**Shanmugha Precision Forging (A Unit of Vee See Bee Trust), Shanmugha Complex, Thirumalaisamudram, Thanjavur, Tamil Nadu**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Discipline	**Mechanical Calibration**	**Issue Date**	**01.08.2015**
Certificate Number	**C-0958**	**Valid Until**	**31.07.2017**
Last Amended on	**07.08.2015**	**Page**	**1 of 3**

Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
I. DIMENSION			
1. VERNIER CALIPER$ (Dial/Digital) L.C. 0.01 mm$^{\Phi}$	0 to 600 mm	10.8 μm	Using Caliper Checker By Comparison Method
2. EXTERNAL MICROMETER$ (Including Blade & Flange)			
L.C. 0.01 mm	0 to 300 mm	7.2 μm	Using 'K' Grade Slip
L.C. 0.001 mm	0 to 150 mm	1.5 μm	By Comparison Method
3. DEPTH MICROMETER$			
L.C. 0.01 mm	0 to 150 mm	6.8 μm	Using K Grade Slip By Comparison Method
4. PLUNGER DIAL GAUGE$			
L.C. 0.001 mm	0 to 1 mm	2.9 μm	Using Dial Gauge Calibrator
L.C. 0.01 mm	0 to 10 mm	3.2 μm	By Comparison Method
5. LEVER TYPE DIAL GAUGE$			
L.C. 0.001 mm	0 to 0.14 mm	2.9 μm	Using Dial Gauge Calibrator
L.C. 0.01 mm	0 to 0.8 mm	3.2 μm	By Comparison Method

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Convenor

Avijit Das
Program Manager

	Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
6.	**HEIGHT GAUGE$**			
	L.C. 0.01 mm	0 to 300 mm	12.7 μm	Using Caliper Checker
	L.C. 0.02 mm	0 to 600 mm	17.3 μm	By Comparison Method
7.	**DEPTH VERNIER CALIPER$** **Dial/Digital**			
	L.C. 0.02 mm	0 to 150 mm	13.5 μm	Using Gauge Block Set on Surface Plate By Comparison Method
8.	**FEELER GAUGE$**	upto 1 mm	1.0 μm	Using Universal Length Measuring Machine By Comparison Method
9.	**BORE DIAL GAUGE$**	Upto 1 mm Transmission	1.0 μm	Using Universal Length Measuring Machine By Comparison Method
10.	**THREAD PLUG GAUGES$** **(Pitch Circle Diameter)**	M 3 to M 100	3.4 μm	Using Universal Length Measuring Machine By Comparison Method
11.	**TAPER THREAD PLUG GAUGES$** **(Pitch Circle Diameter)**	1/8" to 4"	4.7 μm	Using Universal Length Measuring Machine By Comparison Method
12.	**THREAD RING GAUGES$**	M4 to M100	2.6 μm	Using Universal Length Measuring Machine By Comparison Method

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
13. **SURFACE ROUGHNESS$ MASTER R_a, R_z, R_t, R_{max}**	0.08 mm 0.25 mm 0.80 mm 2.50 mm Cut off	6.3%	Using Surfcom By Comparison Method
14. **PLAIN PLUG GAUGE$**	Upto 150 mm	2.1 μm	Using Universal Length Measuring Machine By Comparison Method
15. **SNAP GAUGE$**	4 mm to 130 mm	2.6 μm	Using Universal Length Measuring Machine By Comparison Method
16. **PLAIN RING GAUGE$**	4 mm to 200 mm	2.6 μm	Using Universal Length Measuring Machine By Comparison Method
17. **CYLINDRICAL MEASURING PIN$**	0 to 10 mm	1.0 μm	Using Universal Length Measuring Machine by Comparison Method
	0 to 15 mm	1.8 μm	Using Digital Micrometer By Comparison Method
18. **THREAD MEASURING WIRE$**	0.17 mm to 3.20 mm	0.9 μm	Using Universal Length Measuring Machine By Comparison Method

* Measurement Capability is expressed as an uncertainty (±) at a confidence probability of 95%
$Only in Permanent Laboratory
Φ Laboratory can also calibrate instruments/devices of coarser resolution / least count within the accredited range using same reference standard/ master equipment under the scope of accreditation.

Neeraj Verma
Convenor

Avijit Das
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