

Laboratory **Envirotech Calibration Laboratory (A Division of Envirotech Instruments Pvt. Ltd.), A-271, Okhla Industrial Area, Phase-1, New Delhi**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **CC-2799** (in lieu of C-1128, C-1129, C-1130 & C-1131) **Page** **1 of 5**

Validity **29.09.2018 to 28.09.2020** **Last Amended on 26.09.2018**

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>ELECTRO-TECHNICAL CALIBRATION</u>				
I.	MEASURE			
1.	Elapsed Time / Time Interval [#]	10 s to 60 s 60 s to 60 min 1 hour to 5 hour 5 hour to 23 hour	0.058 s to 0.22 s 0.22 s to 0.24 s 0.24 s to 0.58 s 0.58 s	Using Digital Time Calibrator by Comparison method
2.	Elapsed Time / Time Interval [#]	1 min to 60 min	0.13 min	Using Electronic Timer by Comparison method

Mamta Bharti
Convenor

Avijit Das
Program Manager

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
<u>FLUID FLOW CALIBRATION</u>				
I.	FLOW MEASURING DEVICES			
1.	Air Flow Rate [§]	35 LPM to 100 LPM	1.02 %	Using PD Meter by Comparison Method
2.	Air Flow Rate [§]	0.6 m ³ /min to 1.5 m ³ /min	0.78 %	Using PD Meter by Comparison Method, USEPA IO2.1
3.	Air Flow Rate [#]	0.6 m ³ /min to 1.5 m ³ /min	1.10 %	Using Top Loading Calibrator by Comparison Method , USPEA IO2.1
		0.25 lpm to 5 lpm	2.36 %	Using Diaphragm Gas Meter by Comparison Method
		5 lpm to 35 lpm	1.31 %	
		35 lpm to 65 lpm	0.65 %	
		3 lpm to 20 lpm	1.00 %	Using Low Flow Calibrator by Comparison Method, 40CFR Part 50 Appendix L
10 ml/min to 200 ml/min	0.9 ml/min	Using Piston Flow Calibrator by Comparison Method, ASTM D5337-0		
0.2 lpm to 3 lpm	0.032 lpm			
3 lpm to 30 lpm	0.12 lpm			
4.	Velocity [§]	3 m/s to 35 m/s	1.12 % Reading	Using 'L' Type Pitot Tube in Wind Tunnel by Comparison method

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
5.	Volume ^s	0.18 m ³ to 0.5 m ³ at Flow Rate of 34 lpm to 100 lpm	1.95 %	Using PD Meter by Comparison Meter

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<u>MECHANICAL CALIBRATION</u>				
I. PRESSURE INDICATING DEVICES				
1.	Absolute Pressure [#]	600 mbar(a) to 1200 mbar(a)	1.84 mbar	Using Absolute Pressure Meter By Comparison Method
2.	Absolute Pressure [#]	0 to 2 bar	0.00044 bar	Using Reference Pressure Sensor And Pressure Calibrator By Comparison Method
3.	Differential Pressure [#]	1 mbar to 100 mbar	0.088 mbar	Using Differential Pressure Meter By Comparison Method
4.	Differential Pressure [#]	(-) 0.8 bar to 2 bar	0.05 bar	Using Reference Pressure Calibrator By Comparison Method
5.	Vacuum Pressure [#]	(-) 0.8 bar to 0 bar	0.006 bar	Using Reference Pressure Sensor And Pressure Calibrator By Comparison Method
II. ACOUSTICS				
1.	Sound Pressure/ Acoustic Pressure [#]	94 dB & 114 dB	1.71 dB	Using Sound Level Calibrator by Comparison method

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<u>THERMAL CALIBRATION</u>				
I.	TEMPERATURE			
1.	RTD / Thermocouple/ Temperature Sensor with Indicator §	5 °C to 50 °C	0.45 °C	Using Digital Thermo-hygrometer with Sensor Using Constant Temperature Chamber By Comparison Method
2.	RTD / Thermocouple/ Temperature Sensor with Indicator #	(-) 15 °C to 110 °C	0.35 °C	Using PT-100 Four Wire RTD with Indicator Using Dry Block Calibrator By Comparison Method
3.	RTD / Thermocouple/ Temperature Sensor with Indicator #	100 °C to 600 °C	1.80 °C	Using 'S' Type Thermocouple with Indicator Using Dry Block Calibrator By Comparison Method
4.	Thermocouple/ Temperature Sensor with Indicator #	300 °C to 1200 °C	3.50 °C	Using 'R' Type Thermocouple with Indicator Using Dry Block Calibrator By Comparison Method

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

§ Only in Permanent Laboratory

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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