

Laboratory **Instrumentation Laboratory, Works Engineering & Services, Heavy Electrical Equipment Plant, ADM, Bldg , HEEP, BHEL, Ranipur, Haridwar, Uttarakhand**

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

Certificate Number **CC-2618**

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Validity **22.03.2018 to 21.03.2020**

Last Amended on --

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
2.	DC Current [#]	0 to 20 mA	0.005 mA	Using Multifunction Calibrator By Direct Method
3.	Resistance [#]	0 to 1000 Ω	0.150 Ω	Using Multifunction Calibrator By Direct Method
4.	Temperature Simulation [#] K-Type Thermocouple T-Type Thermocouple R-Type Thermocouple S-Type Thermocouple J Type Thermocouple RTD	(-) 40 $^{\circ}$ C to 1370 $^{\circ}$ C (-)40 $^{\circ}$ C to 400 $^{\circ}$ C (-)40 $^{\circ}$ C to 1700 $^{\circ}$ C (-)40 $^{\circ}$ C to 1760 $^{\circ}$ C (-)40 $^{\circ}$ C to 1200 $^{\circ}$ C (-)40 $^{\circ}$ C to 800 $^{\circ}$ C	0.400 $^{\circ}$ C 0.400 $^{\circ}$ C 0.650 $^{\circ}$ C 0.700 $^{\circ}$ C 0.300 $^{\circ}$ C 0.300 $^{\circ}$ C	Using Multifunction Calibrator By Direct Method

Abhinav Thakur
Convenor

Avijit Das
Program Director

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<u>MECHANICAL CALIBRATION</u>				
1.	PRESSURE INDICATING DEVICES			
1.	Hydraulic/Pressure / Pressure Gauge/ Transmitter [§]	1 bar to 60 bar 60 bar to 600 bar 600 bar to 1000 bar	0.06% Rdg. 0.055% Rdg. 2.01 bar	Using Dead Weight Tester Direct Method
2.	Hydraulic Pressure/Pressure Gauge/Transmitter [§]	0 to 600 bar	1.25 bar	Using Pressure Calibrator Comparison Method
3.	Pneumatic Pressure/Pressure Gauge/Transmitter [§]	0 to 25 bar	0.048 bar	Using Pressure Calibrator Comparison Method
4.	Negative Pressure/Vacuum Gauge/Transmitter [§]	(-) 0.9 to 0 bar	0.03 bar	Using Pressure Calibrator Comparison Method

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<u>THERMAL CALIBRATION</u>				
I.	TEMPERATURE			
1.	RTD, Thermocouple [§]	(-)40 °C to 420 °C	0.29 °C	Using PRT, Thermometer Readout & Metrology Well by Comparison Method
2.	RTD, Thermocouple [§]	>420 °C to 700 °C	1.23 °C	Using S-Type Thermocouple & Metrology Well by Comparison Method
3.	Thermocouple [§]	>700 °C to 1200 °C	3.12 °C	Using S-Type Thermocouple & Thermocouple Furnace by Comparison Method

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

[§]Only in Permanent Laboratory

^{*}Only for Site Calibration

[#] 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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