

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1,  
 Jamshedpur, Jharkhand  
**Accreditation Standard** ISO/IEC 17025: 2005  
**Certificate Number** CC-2624 **Page** 1 of 14  
**Validity** 01.04.2018 to 31.03.2020 **Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b><u>ELECTRO TECHNICAL CALIBRATION</u></b>				
<b>I.</b>	<b>SOURCE</b>			
1.	DC Voltage <sup>#</sup>	1 mV to 200 mV 200 mV to 200 V 200 V to 1000 V	1.016 % to 0.116 % 0.116 % to 0.117 % 0.117 % to 0.116%	Using 5 ½ digit ZEAL MFC/ By Direct Method
2.	DC CURRENT <sup>#</sup>	0.2mA to 20 mA 20 mA to 2000 mA 2000 mA to 10 A 10 A to 100 A 100 A to 1000 A	0.192 % to 0.148% 0.145 % to 0.235% 0.235 % to 0.236% 1.76 % to 1.43% 1.43% to 1.01 %	Using 5 ½ digit ZEAL MFC/ By Direct Method
3.	AC Voltage <sup>#</sup>	<b>50 Hz</b> 5 mV to 200 mV 200 mV to 200 V 200 V to 1000 V	1.055 % to 0.239 % 0.239 % to 0.276 % 0.276 % to 0.207 %	Using 5 ½ digit ZEAL MFC/ By Direct Method
4.	AC Current <sup>#</sup>	<b>50 Hz</b> 0.2mA to 20 mA 20 mA to 2000 mA 2000 mA to 10 A 10 A to 100 A 100 A to 1000 A	0.441 % to 0.450 % 0.45 % to 0.36 % 0.36 % to 0.50 % 1.87% to 2.07% 2.07% to 1.27 %	Using 5 ½ digit ZEAL MFC/ By Direct Method
5.	DC Resistance <sup>#</sup>	1 $\Omega$ to 100 M $\Omega$ 100 M $\Omega$ to 1000 M $\Omega$	1.403 % to 1.960 % 1.960 % to 2.822 %	Using ZEAL Decade Resistance / By Direct Method
6.	Frequency <sup>#</sup>	45 Hz to 1kHz	1.314 % to 0.127 %	Using 5 ½ digit ZEAL MFC/ By Direct Method

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1, Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624 **Page** 2 of 14

**Validity** 01.04.2018 to 31.03.2020 **Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
7.	Capacitance <sup>#</sup>	1 kHz 1 nF to 100 nF 100 nF to 10 $\mu$ F	1.411 % to 1.163 % 1.246 % to 1.181 %	Using ZEAL Decade Capacitance / By Direct Method
8.	Inductance <sup>#</sup>	1 kHz 100 $\mu$ H to 1mH 1 mH to 10 H	1.401% to 1.283% 1.283% to 1.161%	Using ZEAL Decade Inductance / By Direct Method
9.	Temperature Simulation <sup>#</sup> RTD-Type Thermocouple K-Type E-Type J-Type T-Type B-Type N-Type R-Type S-Type	(-) 100 °C to 800 °C  (-) 100 °C to 1200 °C (-) 100 °C to 500 °C (-) 100 °C to 700 °C (-) 100 °C to 400 °C 600 °C to 1700 °C (-) 100 °C to 1000 °C 0 °C to 1700 °C 0 °C to 1600 °C	0.62 °C to 0.95 °C  1.48 °C to 1.06 °C 1.31 °C to 1.91 °C 1.44 °C to 1.07 °C 1.53 °C to 1.19 °C 2.67 °C to 1.82 °C 1.97 °C to 1.31 °C 2.32 °C to 1.97 °C 2.27 °C to 1.96 °C	Using Digital Temp. Calibrator Matravi / By Direct Method (Simulation)
II.	<b>MEASURE</b>			
1.	DC Voltage <sup>#</sup>	1 mV to 100 mV 100 mV to 10 V 10 V to 1000 V	0.416% to 0.010% 0.010% to 0.011 % 0.011 % to 0.059 %	Using 6 ½ digit Fluke 8846A DMM / By Direct Method
2.	DC Current <sup>#</sup>	100 $\mu$ A to 10 mA 10 mA to 1 A 1 A to 10 A	0.867 % to 0.015 % 0.015 % to 0.146 % 0.146 % to 0.068 %	Using 6 ½ digit Fluke 8846A DMM / By Direct Method
3.	AC Voltage <sup>#</sup>	@50 Hz 1 mV to 10 V 10 V to 1000 V	4.678 % to 0.045 % 0.045% to 0.915%	Using 6 ½ digit Fluke 8846A DMM / By Direct Method

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1, Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624 **Page** 3 of 14

**Validity** 01.04.2018 to 31.03.2020 **Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
		<b>@1 kHz</b> 1 mV to 10 V 10 V to 1000 V	4.678 % to 0.045 % 0.045% to 0.915%	
4.	AC Current <sup>#</sup>	<b>@50 Hz</b> 0.1 mA to 10 mA 10 mA to 1 A 1 A to 10 A	0.981 % to 0.166% 0.166 % to 0.112 % 0.112 % to 0.145 %	Using 6 ½ digit Fluke 8846A DMM / By Direct Method
5.	DC Resistance <sup>#</sup>	1 $\Omega$ to 100 M $\Omega$ 100 M $\Omega$ to 1G $\Omega$	1.177 % to 1.014 % 1.014 % to 3.843 %	Using 6 ½ digit Fluke 8846A DMM / By Direct Method
6.	Frequency <sup>#</sup>	45 Hz to 1 kHz	0.247 % to 0.129%	Using 6 ½ digit Fluke 8846A DMM / By Direct Method
7.	DC Capacitance <sup>#</sup>	1 nF to 100nF 100nF to 10 $\mu$ F	6.22 % to 1.76% 1.76 % to 1.76%	Using 6 ½ digit Fluke 8846A DMM / By Direct Method
8.	Time <sup>#</sup>	1 Sec to 100 sec 100 Sec to 1000 Sec 1000 Sec to 80000 Sec	0.012 Sec to 0.384 Sec 0.384 Sec to 0.743 Sec 0.743 Sec to 11.829 Sec	Using Timer/ Stop Watch Calibrator / By Comparison Method
9.	Temperature Simulation <sup>#</sup> RTD-Type Thermocouple K-Type E-Type J-Type T-Type B-Type	(-) 100 °C to 800°C  (-) 100 °C to 1200°C (-) 50 °C to 500 °C (-) 60 °C to 700 °C (-) 100 °C to 400 °C 600 °C to 1700 °C	0.62 °C to 0.95 °C  1.48 °C to 1.06 °C 1.28 °C to 1.89 °C 1.19 °C to 0.86 °C 1.30 °C to 1.01 °C 2.68 °C to 1.83 °C	Using Digital Temp. Calibrator Matravi / By Direct Method (Simulation)

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1,  
Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624

**Page**

**4 of 14**

**Validity** 01.04.2018 to 31.03.2020

**Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
	N-Type R-Type S-Type	(-) 100 °C to 1200 °C 0 °C to 1700 °C 0 °C to 1600 °C	1.80 °C to 1.19 °C 2.26 °C to 1.94 °C 2.32 °C to 1.96 °C	
10.	Inductance <sup>#</sup>	1 kHz 100 $\mu$ H to 1mH 1 mH to 10 H	1.8 % 1.8 % to 1.9 %	Using LCR meter Matravi 4070D / By Direct Method

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1,  
Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624 **Page** 5 of 14

**Validity** 01.04.2018 to 31.03.2020 **Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b><u>MECHANICAL CALIBRATION</u></b>				
<b>I.</b>	<b>DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)</b>			
1.	Vernier Caliper <sup>§</sup> (Dial, Digimatic, Gear Tooth Hook Type) LC.: 0.01 mm	0 to 300 mm 0 to 600 mm 0 to 1000 mm	17.0 $\mu$ m 18.0 $\mu$ m 24.0 $\mu$ m	Using Gauge Block, Length Bar & Caliper Checker
2.	External Micrometer <sup>§</sup> (Dial/Digital/Knife Edge/Flange/Ball/ Point Type) LC.: 0.01 mm  L.C.: 0.001 mm	150 mm to 600 mm 600 mm to 1000 mm  Up to 100 mm 100 mm to 150 mm	15.0 $\mu$ m 20.0 $\mu$ m  1.2 $\mu$ m 3.0 $\mu$ m	Using Gauge Block, Length Bar /Micrometer Check Set
3.	Height Gauge <sup>§</sup> L.C.: 0.02 mm L.C.: 0.01 mm	0 to 1000 mm 0 to 300 mm 0 to 600 mm	24.0 $\mu$ m 8.0 $\mu$ m 16.0 $\mu$ m	Using Gauge Block Set, Length Bar / Caliper Checker
4.	Setting Rods/ Length Bars, Setting Extension Stick <sup>§</sup>	25 mm to 200 mm 200 mm to 500 mm 500 mm to 1000 mm	4.0 $\mu$ m 8.5 $\mu$ m 17.6 $\mu$ m	Using Gauge Block, Length Bars, Comparator Set & Dial Gauge
5.	Depth Caliper/Vernier Depth Gauge <sup>§</sup> L.C.: 0.02 mm L.C.: 0.01mm	0 to 450 mm 0 to 150 mm	25.0 $\mu$ m 4.2 $\mu$ m	Using Gauge Block Set & Length Bar

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1,  
Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624

**Page**

**6 of 14**

**Validity** 01.04.2018 to 31.03.2020

**Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
6.	Plain Plug Gauge <sup>§</sup>	3 mm to 150 mm	4.2 $\mu$ m	Using Gauge Block, Comparator Set, Dial Indicator
7.	Snap Gauge <sup>§</sup> (Adjustable & Fixed)	1 mm to 100 mm	3.6 $\mu$ m	Using Gauge Block
8.	Measuring Pin <sup>§</sup>	Up to 25 mm	3.4 $\mu$ m	Using Gauge Block, Comparator Set, Dial Gauge
9.	Filler Gauge <sup>§</sup>	0.04 mm to 1 mm	4.0 $\mu$ m	Using Digimatic Micrometer
10.	Dial Bore Gauge <sup>§</sup>	0 to 1 mm	4.4 $\mu$ m	Using Slip Gauge / Dial Calibration Tester & Dial Gauge
11.	Plunger Type Dial Gauge <sup>§</sup> L.C.: 0.01 mm L.C.: 0.001 mm	0 to 10 mm 0 to 1 mm	6.4 $\mu$ m 2.0 $\mu$ m	Using Slip Gauge / Dial Calibration Tester Comparator Stand
12.	Test Foil <sup>§</sup>	5 $\mu$ m to 1 mm	3.5 $\mu$ m	Using Dig. External Micrometer
13.	Kropline Tester <sup>§</sup> L.C.: 0.001 mm	0 to 100 mm	95.0 $\mu$ m	Using Slip Gauge
14.	Depth Micrometer <sup>§</sup> L.C.: 0.01 mm L.C.: 0.001 mm	0 to 100 mm	8.0 $\mu$ m	Using Gauge Block & Length Bars
15.	Dial Thickness Gauge <sup>§</sup> L.C.: 0.01 mm L.C.: 0.001 mm	0 to 100 mm 0 to 100 mm	6.0 $\mu$ m 1.0 $\mu$ m	Using Slip Gauge

**Pankaj Varshney**  
Convenor

**Alok Jain**  
Program Manager

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1,  
Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624

**Page**

**7 of 14**

**Validity** 01.04.2018 to 31.03.2020

**Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
16.	Sound level Meter <sup>§</sup> L.C.: 0.1 db L.C.: 0.1 db	94 db & 114 db	1.5 dB 1.2 dB	Using Sound Calibrator
17.	Inside Micrometer <sup>§</sup> L.C.: 0.01 mm	50 mm to 500 mm	11.2 $\mu$ m	Using Slip Gauge & Accessories Set
18.	Jaw Type Micrometer <sup>§</sup> L.C.: 0.01 mm	5 mm to 30 mm	10.0 $\mu$ m	Using Digimatic Micrometer
19.	Coating Thickness Gauge <sup>§</sup> L.C.: 0.1 $\mu$ m, 1 $\mu$ m	Up to 710 $\mu$ m	3.0 $\mu$ m	Using Std. Test Foils
20.	Lever Type Dial Gauge <sup>§</sup> L.C.: 0.01 mm	0 to 0.80 mm	6.0 $\mu$ m	Using Dial Calibration Tester
21.	Internal Dial Caliper <sup>§</sup> L.C.: 0.01 mm	35 mm to 55 mm 55 mm to 75 mm	11.0 $\mu$ m	Using Slip Gauges & Accessories Set
22.	Ultrasonic Thickness Gauge <sup>§</sup> L.C.: 0.1 mm	Upto 100 mm	125 $\mu$ m	Using Slip Gauges & Granite Surface Plate
23.	Test Sieve <sup>§</sup>	4 mm to 125 mm	34.5 $\mu$ m	Using Dig. Vernier Caliper
24.	Surface Plate <sup>#</sup> (Granite & Cast Iron)	Upto 3000 mm x 3000 mm	2.26 $\mu$ m	Using Electronic Level and Measuring Equipment
25.	Spirit Level Gauge <sup>§</sup> L.C.: 0.02 mm	Upto 100 $\mu$ m/m	3.419 $\mu$ m per 200 mtr.	Using Electronic Level and Tilting Set Up

**Pankaj Varshney**  
Convenor

**Alok Jain**  
Program Manager

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1,  
Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624 **Page** 8 of 14

**Validity** 01.04.2018 to 31.03.2020 **Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
26.	Straight Edge <sup>§</sup> (Straightness)	Up to 1000 mm	19.40 $\mu$ m	Using Slip Gauges & '0' Grade Surface Plate
27.	Measuring Tape <sup>§</sup>	Upto 1mtr 1 mtr to 20mtr	580.0 $\mu$ m 580 $\sqrt{L}$ Where L is in Mtr	Using Std. Ver. Caliper with fixture or Using DRO with fixture and Portable Microscope
28.	Steel Scale <sup>§</sup>	0 to 1000 mm	580.0 $\mu$ m	Using Std. Ver. Caliper with fixture or using DRO with fixture and portable microscope
29.	Tachometer <sup>§</sup> Speed (RPM)/ Non Contact type	100RPM to 1000 RPM  1000 RPM to 50000 RPM	0.8% of rdg to 0.11% of rdg  0.11% of rdg to 0.55% of rdg	Using Dig. Tachometer, Photo Tachometer Calibrator, Rotary Disc with Reflecting Tape as Source
30.	Extensometer <sup>§</sup> L.C.: 0.1 mm	Up to 10 mm	10 $\mu$ m	Using Slip Gauges & Dial Gauge
31.	Hegman Gauge <sup>§</sup>	Up to 1 mm	20 $\mu$ m	Using Processing Dial Gauge
<b>II.</b>	<b>PRESSURE INDICATING DEVICES</b>			
1.	Pressure Gauge Analogue/ Digital Pressure Indicator With Pressure Transmitter / Transducer <sup>#</sup>	0 to 700 bar	0.6 bar	Using Digital Pressure Gauge & Hydraulic Comparator Pump



**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1,  
Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624

**Page**

**9 of 14**

**Validity** 01.04.2018 to 31.03.2020

**Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
2.	Pressure Gauge Analogue/ Digital Pressure Indicator With Pressure Transmitter / Transducer#	0 to 400 bar	0.4 bar	Using Digital Pressure Gauge & Hydraulic Comparator Pump
3.	Pressure Gauge Analogue/ Digital Pressure Indicator With Pressure Transmitter / Transducer#	0 to 30 bar	0.2 bar	Using Digital Pressure Gauge & Pneumatic Pressure Comparator
4.	Vacuum Gauge Analogue/Digital with Transmitter / Transducer Indicator#	0 to (-) 0.83 bar	0.010 bar	Using Digital Vacuum Gauge & Vacuum Comparator

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1,  
Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624

**Page**

**10 of 14**

**Validity** 01.04.2018 to 31.03.2020

**Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b><u>THERMAL CALIBRATION</u></b>				
<b>I.</b>	<b>TEMPERATURE</b>			
1.	Liquid in Glass Thermometer, RTD, Thermocouple, Sensor with indicator/ controller/Recorder/ Scanner, Temperature Indicator with Transmitter, Dial Temperature Gauge <sup>#</sup>	50 °C to 250 °C	1.73 °C	Using Digital Temperature Indicator with RTD, Oil Bath
2.	Liquid in Glass Thermometer, RTD, Thermocouple, Sensor with indicator/ controller/Recorder/ Scanner, Temperature Indicator with Transmitter, Dial Temperature Gauge <sup>#</sup>	(-) 30° C to 50 °C	1.1 °C	Using Digital Temperature Indicator with RTD & Using Cold chamber
3.	RTD / Thermocouple Sensor without indicator <sup>#</sup>	50 °C to 250 °C	1.86 °C	Using Digital Temperature Indicator with RTD and Temperature Calibrator & Oil Bath

**Pankaj Varshney**  
Convenor

**Alok Jain**  
Program Manager

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1,  
Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624

**Page**

11 of 14

**Validity** 01.04.2018 to 31.03.2020

**Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
4.	RTD / Thermocouple Sensor without indicator <sup>#</sup>	(-) 30 °C to 50 °C	1.5 °C	Using Digital Temperature Indicator with RTD & Low Temp. Source Unit Using Cold Chamber
5.	RTD, Thermocouple with indicator/ controller/recorder/ scanner, Temperature indicator with transmitter, Dial Temperature Gauge <sup>#</sup>	250 °C to 1100 °C	2.7 °C	Using R Type Thermocouple with Indicator & Dry Block Calibrator in this range
6.	RTD, Thermocouple with indicator/ controller/recorder/ scanner, Temperature indicator with transmitter, Dial Temperature Gauge <sup>#</sup>	1100 °C to 1350 °C	3.8 °C	Using R Type Thermocouple with indicator & High heat Muffel furnace
7.	RTD, Thermocouple without indicator <sup>#</sup>	250 °C to 1100 °C	2.7 °C	Using R Type Thermocouple with Indicator & Temperature Calibrator & Dry Block Fce
8.	RTD, Thermocouple without indicator <sup>#</sup>	1100 °C to 1350 °C	3.8 °C	Using R Type Thermocouple with indicator & High Heat Muffel furnace
9.	Calibration of Infra Red Thermometer /	50 °C to 500 °C	3.7 °C	Using Standard Infra Red Thermometer Using Black

**Pankaj Varshney**  
Convenor

**Alok Jain**  
Program Manager

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1, Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624 **Page** 12 of 14

**Validity** 01.04.2018 to 31.03.2020 **Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
	Pyrometer <sup>#</sup>			Body Source of $\epsilon = 0.95$ , RTD with Calibrator by Comparison Method
10.	Calibration of Temp. Indicator of Thermal Devices (Furnaces, heating Chambers, High Heat Furnaces, H.T Furnaces, Induction Furnace) *	Above 500 °C to 1200 °C	7.3 °C	Using Standard Infra Red Thermometer/ Non – Contact Method
11.	Furnace, Ovens, Baths, Environmental Chambers By Multi Positioning of Sensors TTR (Temperature Time Recording)/ SAT (System Accuracy Test) #	200 °C to 1000 °C	3.9 °C	Using Temperature Data Logger with multi RTDs/ Thermocouple Sensors Multi Position Calibration
12.	Furnace ,Ovens, Baths, Environmental Chambers By Single Positioning of Sensors SAT (System Accuracy Test) By Singal Positioning of Sensor with Indicator <sup>#</sup>	200 °C to 1000 °C	2.7 °C	Using Temp. Indicator/ Recorder Data Logger with RTD/Thermocouple By Comparison Method

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1, Jamshedpur, Jharkhand

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

**Certificate Number** CC-2624 **Page** 13 of 14

**Validity** 01.04.2018 to 31.03.2020 **Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
13.	Freezer, Furnace, Ovens, Vacuum Oven, Baths, BOD, Environmental Chambers Centrifugal Chamber By Multi Positioning of Sensors TTR (Temperature Time Recording)/ SAT (System Accuracy Test) #	(-) 40 °C to 250 °C	3.0 °C	Using Temperature Data Logger with multi RTDs/ Thermocouple Sensors by Multi Position Calibration
14.	Freezer, Furnace, Ovens, Vacuum Oven, Baths, BOD, Environmental Chambers Centrifugal Chamber By Single Positioning of Sensors SAT (System Accuracy Test) #	(-) 40 °C to 250 °C	2.5 °C	Using Temp. Recorder/Indicator. Data logger with Std. RTD/thermocouple, single Positioning of sensor with indicator by comparison method
<b>II.</b>	<b>SPECIFIC HEAT &amp; HUMIDITY</b>			
1.	Temperature/ Humidity Indicator/ Controller/ Data Logger with sensor & Thermo Hygrometer (Dial/ Digital) #	20 % RH to 95 % RH @ $\approx$ 25 °C  10 °C to 50° C @ $\approx$ 50 % RH	2.48 % RH @ 25 °C  0.89 °C @ 60 % RH	Using Digital Humidity Indicator with RH Sensor and Digital Temperature indicator with RTD (PRT100), Controlled Temperature & Humidity Chamber By Comparison Method (Single Position Calibration)

**Laboratory** Industrial Instrumentation & Lab, S-36/4, P.O. Adityapur-1,  
 Jamshedpur, Jharkhand  
**Accreditation Standard** ISO/IEC 17025: 2005  
**Certificate Number** CC-2624 **Page** 14 of 14  
**Validity** 01.04.2018 to 31.03.2020 **Last Amended on** 17.07.2019

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
2.	Humidity/ Temperature Indicator/ Controller with sensor of Environmental Chamber/ Humidity Chamber <sup>#</sup>	30 %RH to 95 % RH @ $\approx$ 25°C  10 ° C to 50 °C @ $\approx$ 50 % RH	2.48%RH @ 30°C 0.89°C @90% RH	Using Digital Humidity Indicator with RH sensor Digital Thermometer with RTD(PRT100) Sensor (Single Position Calibration)

\* 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.