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SCOPE OF CALIBRATION: TEMPERATURE

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty ($\pm$)*	Remarks
Temperature Recorders/Indicators			By electrical simulation using calibrator with reference to ITS-90
(a) Type T	-100 °C to 390 °C	0.6 °C	
(b) Type E	-100 °C to 0 °C 0 °C to 990 °C	0.6 °C 0.5 °C	
(c) Type K	-100 °C to 0 °C 0 °C to 1300 °C	0.5 °C 0.6 °C	
(d) Type R	0 °C to 1000 °C 1000 °C to 1700 °C	1.6 °C 1.4 °C	
(e) Type J	-100 °C to 0 °C 0 °C to 1100 °C	0.5 °C 0.4 °C	
(f) Type S	0 °C to 1000 °C 1000 °C to 1700 °C	1.6 °C 1.5 °C	
(i) Pt 100	-100 °C to 0 °C 0 °C to 800 °C	0.6 °C 0.7 °C	
Temperature Calibrator			By electrical measurement using Temperature calibrator
(a) Type T	-100 °C to 390 °C	0.6 °C	
(b) Type E	-100 °C to 990 °C	0.5 °C	
(c) Type K	-100 °C to 0 °C 0 °C to 1300 °C	0.5 °C 0.6 °C	

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SCOPE OF CALIBRATION: TEMPERATURE

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty ($\pm$)*	Remarks
(d) Type R	0 °C to 1000 °C 1000 °C to 1700 °C	1.5 °C 1.4 °C	By electrical measurement using Temperature calibrator
(e) Type J	-100 °C to 1100 °C	0.5 °C	
(f) Type S	0 °C to 1000 °C 1000 °C to 1700 °C	1.5 °C 1.4 °C	
(i) Pt 100	-100 °C to 800 °C	0.6 °C	
Temperature & Humidity Indicator or Recoder	0 °C to 50 °C 50 °C to 100 °C	0.6 °C 0.8 °C	Comparison with sensor in chamber or temperature/humidity reference meter in chamber.
	Relative humidity at 25 °C 20 %rh to 50 %rh 50 %rh to 95 %rh	 2.2 %rh 2.5 %rh	Comparison with sensor in chamber or temperature/humidity reference meter in chamber.
Temperature Sensor	0 °C	0.8 °C	Comparison with reference Thermometer with sensor in ice point
	50 °C to 350 °C	1 °C	Comparison with reference thermal block calibrator
Mechanical Thermometer	0 °C	1.5 °C	Comparison with reference Thermometer with sensor in ice point
	50 °C to 350 °C	2 °C	Comparison with reference thermal block calibrator
Radiation Thermometer	0 °C	0.8 °C	Comparison with reference Pt 100 in ice point
	30 °C to 400 °C	3.6 °C	Comparison with Blackbody temperature calibrator

Signatories:

1. **Manivannan A/L Subramaniam**
2. **Bhavani A/P Gopal Krishnan**

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SCOPE OF CALIBRATION: TEMPERATURE

SITE: CATEGORY I

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty ($\pm$)*	Remarks
Temperature Recorders/Indicators			By electrical simulation using calibrator with reference to Table ITS-90
(a) Type T	-100 °C to 0 °C 0 °C to 390 °C	0.7 °C 0.6 °C	
(b) Type E	-100 °C to 0 °C 0 °C to 990 °C	0.6 °C 0.5 °C	
(c) Type K	-100 °C to 0 °C 0 °C to 1300 °C	0.5 °C 0.6 °C	
(d) Type R	0 °C to 1000 °C 1000 °C to 1700 °C	1.6 °C 1.4 °C	
(e) Type J	-100 °C to 0 °C 0 °C to 1000 °C	0.5 °C 0.4 °C	
(f) Type S	0 °C to 1000 °C 1000 °C to 1700 °C	1.6 °C 1.5 °C	
(i) Pt 100	-100 °C to 0 °C 0 °C to 800 °C	0.6 °C 0.7 °C	
Temperature Sensor with Indicator	-35 °C to 165 °C	0.1 °C	Comparison with Pt100 in Temperature block calibrator

Signatories:

1. Manivannan A/L Subramaniam
2. Bhavani A/P Gopal Krishnan

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SCOPE OF CALIBRATION: TEMPERATURE

SITE: CATEGORY I

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty ($\pm$)*	Remarks
Temperature Control Enclosure	-50 °C to 200 °C 200 °C to 400 °C 400 °C to 800 °C 800 °C to 950 °C	0.6 °C 0.8 °C 1.8 °C 2.5 °C	Calibrate using temperature recorder with thermocouple.

Signatory:

1. Manivannan A/L Subramaniam