FIELD OF CALIBRATION: TEMPERATURE

SCOPE OF ACCREDITATION:

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty(±)*	Remarks
Temperature Measuring Device	-20 °C to 50 °C	0.2° C	Calibrated using Temperature Recorder, PRT, Humidity Chamber and Thermohygrometer based on JIS B7306:1989 and JIS Z8806:1995
Relative Humidity Measuring Device	20 %RH to 95 %RH	2 %RH	
Liquid-In-Glass Thermometer (Total & Partial Immersion)	-30 °C to 0 °C 0 °C to 250 °C 250 °C to 400 °C	0.024 °C 0.041 °C 0.11 °C	Calibrated using Resistance Thermometer Display & PRT, Temperature Recorder, Constant Stirred Low Temperature Liquid Bath, Constant Stirred High Temperature Liquid Bath, Metal Block Bath and Ice Point based on ASTM E77:2007
Temperature Sensor (Thermocouple, PRT, Mechanical Thermometer & Thermistor)	-95 °C to -50 °C -50 °C to -30°C -30 °C to 0 °C 0 °C to 250 °C 250 °C to 400 °C 400 °C to 660 °C 660 °C to 800 °C 800 °C to 1,000 °C 1,000 °C to 1,200 °C	0.063 °C 0.062 °C 0.024 °C 0.041 °C 0.11 °C 0.13 °C 2.1 °C 3.1 °C 4.0 °C	Calibrated using Resistance Thermometer Display & PRT, Type R Thermocouple, Temperature Recorder, Constant Stirred Low Temperature Liquid Bath, Constant Stirred High Temperature Liquid Bath, Temperature Block Calibrator and Ice Point based on JIS C1602:1995, JIS C 1604:1997, JIS C1611:1995 and JIS Z 8710:1993

FIELD OF CALIBRATION: TEMPERATURE

SCOPE OF ACCREDITATION:

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty(±)*	Remarks
Temperature Block Calibrator	-95 °C to -50 °C -50 °C to 660 °C 660 °C to 1,200 °C	0.057 °C 0.013 °C 2.72 °C	Calibrated using PRT, Thermocouple Type R and Temperature Display based on EA-10/13:1999
Liquid Bath	-50 °C to 300 °C	0.012 °C	
Temperature Indicating Device Resistance Type PT100	-200 °C to 650 °C 650 °C to 850 °C	0.1 °C 0.1 °C	Calibrated by electrical simulation using Calibrator and Ice point based on JIS C 1601:1983 and JIS C 1603:1983
Thermocouple Type			
K	-270 °C to -100 °C -100 °C to 1,370 °C	1.5 °C 0.1 °C	
J	-210 °C to 1,200 °C	0.1 °C	
T	-270 °C to -100 °C -100 °C to 400 °C	0.5 °C 0.1 °C	
E	-270 °C to -100 °C -100 °C to 1,000 °C	0.3 °C 0.1 °C	
R	0 °C to 500 °C 500 °C to 1,760 °C	0.4 °C 0.1 °C	
S	0 °C to 500 °C 500 °C to 1,760 °C	0.4 °C 0.1 °C	
N	-100 °C to -1300 °C	0.1 °C	

FIELD OF CALIBRATION: TEMPERATURE

SCOPE OF ACCREDITATION:

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty(±)*	Remarks
Temperature Calibrator Resistance Type PT100	200 °C to 650 °C 650 °C to 850 °C	0.1 °C 0.1 °C	Calibrated by electrical measurement using Multimeter and Ice Point based on JIS Z 8704 and ITS 90:1990
JPT100	-200 °C to 500 °C	0.1 °C	
Thermocouple Type K	-270 °C to -100 °C -100 °C to 1,370 °C	1.5 °C 0.1 °C	
J	-210 °C to 1,200 °C	0.1 °C	
T	-270 °C to -100 °C -100 °C to 400 °C	0.5 °C 0.1 °C	
E	-270 °C to -100 °C -100 °C to 1,000 °C	0.3 °C 0.1 °C	
N	-270 °C to -100 °C -100 °C to 1,300 °C	1.5 °C 0.1 °C	
B	100 °C to 500 °C 500 °C to 1,820 °C	1.5 °C 0.3 °C	
R	0 °C to 500 °C 500 °C to 1,760 °C	0.4 °C 0.2 °C	
S	0 °C to 500 °C 500 °C to 1,760 °C	0.4 °C 0.2 °C	
Radiation Thermometer	-20 °C to 150 °C 150 °C to 200 °C 200 °C to 400 °C 400 °C to 1,000 °C 1,000 °C to 1,300 °C	0.39 °C 0.93 °C 0.99 °C 2.03 °C 3.56 °C	Calibrated using Temperature Recorder, Thermocouple, Single Blackbody Calibrator and Cyclops Spherical Blackbody Source based on ASTM E 1256:2007

Signatoryies:

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FIELD OF CALIBRATION: TEMPERATURE

SCOPE OF ACCREDITATION:

SITE CALIBRATION: CATE□OR□ I

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty(±)*	Remarks
Temperature Sensor (Thermocouple, PRT, Mechanical Thermometer & Thermistor)	-30 °C to 30 °C 30 °C to 650 °C	0.032 °C 0.12 °C	Calibrated using Resistance Thermometer Display & PRT, Temperature Recorder, Constant Stirred Temperature Liquid Bath, Constant Stirred High Temperature Liquid Bath, Temperature Block Calibrator and Ice Point based on JIS C 1602:1995, JIS C 1604:1997, JIS C 1611:1995 and JIS Z 8710:1993
Temperature Controlled Enclosure	-80 °C to -20 °C -20 °C to 250 °C 250 °C to 800 °C 800 °C to 1,000 °C 1,000 °C to 1,200 °C	0.6 °C 1 °C 2 °C 3 °C 5 °C	Calibrated using Temperature Recorder, PRT and Thermocouple based on AS 2853:1986
Liquid Bath	-30 °C to 300 °C	0.1 °C	
Humidity Controlled Enclosure	30 %RH to 98 %RH	5 %RH	Calibrated using Temperature Recorder, PRT, Thermocouple and Barometer based on AS 2853:1986 and BS 1339-3:2004

FIELD OF CALIBRATION: TEMPERATURE

SITE CALIBRATION: CATE□OR□ I

SCOPE OF ACCREDITATION:

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty(±)*	Remarks
Temperature Indicating Device Resistance Type PT100 JPT100 Thermocouple Type K J T E R S	 -200 °C to 650 °C -200 °C to 500 °C -270 °C to -100 °C -100 °C to 1370 °C -210 °C to 1200 °C -270 °C to 400 °C -270 °C to 1000 °C 0 °C to 1760 °C 0 °C to 1760 °C	 0.1 °C 0.1 °C 1.5 °C 1 °C 1 °C 1 °C 1 °C 1 °C 1 °C	Calibrated by electrical simulation using Calibrator and Ice Point based on JIS C1601:1983 and JIS C1603:1983

Signatories:

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