Name of Accreditation Program	JCSS Accreditation Program
Accreditation Identification	JCSS 0029 Calibration
Name of Conformity Assessment Body	Measurement and Calibration Center, Japan Quality Assurance Organization
Name of Legal Entity	Japan Quality Assurance Organization JCN 9010005016585
Inquiry Point	Sales Division TEL: +81-42-679-0144 FAX: +81-42-679-0187

*JCN: Japan Corporate Number

23･01･19-NITE-009
2024-03-29

Certificate of Accreditation

International Accreditation Japan (IAJapan) hereby accredits the following conformity assessment body as a calibration laboratory of Japan Calibration Service System.

Accreditation Identification: JCSS 0029 Calibration

Name of Conformity Assessment Body: Measurement and Calibration Center,
Japan Quality Assurance Organization

Name of Legal Entity: Japan Quality Assurance Organization

Location of Conformity Assessment Body: 4-4-4 Minamiosawa, Hachioji-shi, Tokyo 192-0364, JAPAN

Scope of Accreditation: Length, Mass, Temperature, Angle, Fluid Flow, Acceleration, Electricity (High Frequency) & Electromagnetic Fields, Force, Acoustics & Ultrasound, Radiation & Radioactivity & Neutron, Hardness, Humidity (as the following pages)

Accreditation Requirement: ISO/IEC 17025:2017*

* The relevant accreditation requirements described in the Accreditation Scheme Document for JCSS are also applied.

Effective Date of Accreditation: 2024-03-29

Expiry Date of Accreditation: 2028-03-28

Date of Initial Accreditation: 1994-05-02

JCSS

K. Saito

SAITO Kazunori
Chief Executive, International Accreditation Japan (IAJapan)
National Institute of Technology and Evaluation

- International Accreditation Japan (IAJapan) is a laboratory accreditation body which has signed MRAs of ILAC (International Laboratory Accreditation Cooperation) and APAC (Asia Pacific Accreditation Cooperation).
- MRA requirements are, in addition to relevant international standards and guides, requirements for participation in proficiency testing programs, surveillance and reassessment, and the policy for the traceability of measurement for MRA purpose.
- This laboratory fulfills ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation means this laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).
- The latest accreditation information is publicly available on IAJapan Website as an accreditation certificate.

General Field of Calibration: Length
Date of Initial Accreditation of the Field: 1994-05-02
Laboratory’s permanent facility/On-site Calibration: Laboratory’s permanent facility
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Expanded Uncertainty (Level of Confidence Approximately 95 %) (L (mm): Nominal Length)
Laser Wavelength	Frequency stabilized laser in the 633 nm region		4.2×10^{-11}
Length Measuring Instrument	Gauge Blocks (Interferometry method)	From 0.1 mm up to 100 mm	0.02 µm
		More than 100 mm up to 250 mm	$(0.01+L/3500)$ µm
		More than 250 mm up to 400 mm	$(0.02+L/3400)$ µm
		More than 400 mm up to 800 mm	$(0.02+L/3200)$ µm
		More than 800 mm up to 1000 mm	$(0.02+L/3100)$ µm
	Gauge Blocks (Comparison method)	From 0.1 mm up to 100 mm	0.07 µm
		More than 100 mm up to 500 mm	$(0.005+L/1800)$ µm
		More than 500 mm up to 1000 mm	$(0.025+L/1800)$ µm
	End Gauges with flat ends (Comparison method)	From 0.1 mm up to 1010 mm	$(0.2+L/650)$ µm
	Standard Scale	up to 300 mm	0.4 µm
		More than 300 mm up to 1000 mm	$(0.2+L/1500)$ µm
	Calibration apparatus for extensometers	up to 25 mm	0.3 µm
		More than 25 mm up to 50 mm	0.4 µm
		More than 50 mm up to 75 mm	0.5 µm
		More than 75 mm up to 100 mm	0.6 µm
	Extensometers	up to 5 mm	0.8 µm
		More than 5 mm up to 50 mm	2.4 µm
		More than 50 mm up to 600 mm	6.4 µm
Dimensional Measuring Instrument	One Dimensional Grating	From 97 nm up to 1000 nm	0.03 nm

#All Calibration Procedures are in-house procedures developed by this laboratory.
Note: The value in the Expanded Uncertainty column of ‘Laser Wavelength’ excludes sources of uncertainty attributed to a unit under test.

Laboratory’s permanent facility/On-site Calibration: On-site Calibration
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)
Length Measuring Instrument	Extensometers	up to 5 mm	0.8 µm
		More than 5 mm up to 50 mm	2.4 µm
		More than 50 mm up to 600 mm	6.4 µm

#All Calibration Procedures are in-house procedures developed by this laboratory.

General Field of Calibration: Mass
Date of Initial Accreditation of the Field: 1996-11-14
Laboratory's permanent facility/On-site Calibration: Laboratory's permanent facility
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)		
			One by one comparison		A method except One by one comparison
			Conventional mass	True mass	Conventional mass
Weight	Weight and Deadweight	50 kg	0.30 g	12 μg/g	—
		More than 20 kg less than 50 kg	5.0 μg/g	12 μg/g	—
		20 kg	7.0 mg	11 μg/g	6.0 mg
		More than 10 kg less than 20 kg	4.0 μg/g	11 μg/g	—
		10 kg	3.0 mg	4.0 μg/g	2.1 mg
		More than 5 kg less than 10 kg	4.0 μg/g	4.0 μg/g	—
		5 kg	1.8 mg	4.0 μg/g	1.1 mg
		More than 3 kg less than 5 kg	4.0 μg/g	4.0 μg/g	—
		3 kg	1.5 mg	4.0 μg/g	—
		More than 2 kg less than 3 kg	4.0 μg/g	4.0 μg/g	—
		2 kg	0.60 mg	4.0 μg/g	0.42 mg
		More than 1 kg less than 2 kg	4.0 μg/g	4.0 μg/g	—
		1 kg	0.20 mg	4.0 μg/g	0.16 mg
		More than 500 g less than 1 kg	4.0 μg/g	4.0 μg/g	—
		500 g	0.11 mg	4.0 μg/g	0.085 mg
		More than 300 g less than 500 g	4.0 μg/g	4.0 μg/g	—
		300 g	0.15 mg	4.0 μg/g	—
		More than 200 g less than 300 g	4.0 μg/g	4.0 μg/g	—
		200 g	0.060 mg	4.0 μg/g	0.035 mg
		More than 100 g less than 200 g	4.0 μg/g	4.0 μg/g	—
		100 g	0.030 mg	4.0 μg/g	0.019 mg
		More than 50 g less than 100 g	4.0 μg/g	4.0 μg/g	—
		50 g	0.020 mg	4.1 μg/g	0.010 mg
		More than 30 g less than 50 g	5.0 μg/g	4.7 μg/g	—
		30 g	0.026 mg	5.4 μg/g	—
		More than 20 g less than 30 g	8.0 μg/g	9.0 μg/g	—
		20 g	0.015 mg	8.7 μg/g	0.0080 mg
		More than 10 g less than 20 g	9.0 μg/g	10 μg/g	—
		10 g	0.010 mg	15 μg/g	0.0060 mg
		More than 5 g less than 10 g	15 μg/g	17 μg/g	—
		5 g	0.0080 mg	25 μg/g	0.0050 mg
		More than 3 g less than 5 g	32 μg/g	35 μg/g	—
		3 g	0.013 mg	56 μg/g	—
		More than 2 g less than 3 g	25 μg/g	28 μg/g	—
		2 g	0.0060 mg	60 μg/g	0.0040 mg
		More than 1 g less than 2 g	40 μg/g	60 μg/g	—
		1 g	0.0050 mg	81 μg/g	0.0030 mg
		More than 500 mg less than 1 g	50 μg/g	90 μg/g	—
		500 mg	0.0040 mg	0.15 mg/g	0.0025 mg
		More than 200 mg less than 500 mg	80 μg/g	0.15 mg/g	—
		200 mg	0.0030 mg	0.17 mg/g	0.0020 mg

		More than 100 mg less than 200 mg	0.16 mg/g	0.20 mg/g	―
		100 mg	0.0025 mg	0.22 mg/g	0.0015 mg
		More than 50 mg less than 100 mg	0.25 mg/g	0.30 mg/g	―
		50 mg	0.0020 mg	0.30 mg/g	0.0012 mg
		More than 20 mg less than 50 mg	0.45 mg/g	0.45 mg/g	―
		20 mg	0.0016 mg	0.70 mg/g	0.0010 mg
		More than 10 mg less than 20 mg	0.90 mg/g	0.90 mg/g	―
		10 mg	0.0012 mg	1.1 mg/g	0.00080 mg
		More than 5 mg less than 10 mg	1.6 mg/g	1.6 mg/g	―
		5 mg	0.0011 mg	1.8 mg/g	0.00060 mg
		More than 2 mg less than 5 mg	3.2 mg/g	3.2 mg/g	―
		2 mg	0.0011 mg	4.3 mg/g	0.00060 mg
		More than 1 mg less than 2 mg	6.0 mg/g	6.0 mg/g	―
		1 mg	0.0011 mg	9.0 mg/g	0.00060 mg
		0.8 mg	0.0016 mg	―	―
		0.6 mg	0.0014 mg	―	―
		0.5 mg	0.00080 mg	―	0.00040 mg
		0.4 mg	0.0014 mg	―	―
		0.2 mg	0.00080 mg	―	0.00040 mg
		0.1 mg	0.00080 mg	―	0.00040 mg
		0.05 mg	0.00080 mg	―	0.00040 mg

#All Calibration Procedures are in-house procedures developed by this laboratory.

Laboratory's permanent facility/On-site Calibration: Laboratory's permanent facility, On-site Calibration

Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)	
			Permanent Laboratory	On-site Calibration
Scale	Non-Automatic Electronic Weighing Instruments	More than 150 kg up to 600 kg	16 μg/g	16 μg/g
		More than 20 kg up to 150 kg	9.6 μg/g	9.6 μg/g
		20 kg	3.0 μg/g	3.0 μg/g
		More than 100 g less than 20 kg	1.1 μg/g	1.1 μg/g
		100 g	0.97 μg/g	0.97 μg/g
		More than 50 g less than 100 g	1.8 μg/g	1.8 μg/g
		50 g	1.2 μg/g	1.2 μg/g
		More than 20 g less than 50 g	2.8 μg/g	2.8 μg/g
		More than 10 g up to 20 g	2.4 μg/g	2.4 μg/g
		10 g	3.6 μg/g	3.6 μg/g
		More than 5 g less than 10 g	8.8 μg/g	8.8 μg/g
		5 g	5.9 μg/g	5.9 μg/g
		More than 2 g less than 5 g	14 μg/g	14 μg/g
		More than 1 g up to 2 g	12 μg/g	12 μg/g
		1 g	18 μg/g	18 μg/g
		More than 500 mg less than 1 g	45 μg/g	45 μg/g
		500 mg	30 μg/g	30 μg/g
		More than 200 mg less than 500 mg	71 μg/g	71 μg/g

		More than 100 mg up to 200 mg	59 µg/g	59 µg/g
		100 mg	94 µg/g	94 µg/g
		More than 50 mg less than 100 mg	0.22 mg/g	0.22 mg/g
		50 mg	0.15 mg/g	0.15 mg/g
		More than 20 mg less than 50 mg	0.36 mg/g	0.36 mg/g
		More than 10 mg up to 20 mg	0.30 mg/g	0.30 mg/g
		10 mg	0.47 mg/g	0.47 mg/g
		More than 5 mg less than 10 mg	1.4 mg/g	1.4 mg/g
		5 mg	0.71 mg/g	0.71 mg/g
		More than 2 mg less than 5 mg	2.4 mg/g	2.4 mg/g
		2 mg	1.8 mg/g	1.8 mg/g
		1 mg	3.6 mg/g	3.6 mg/g

#All Calibration Procedures are in-house procedures developed by this laboratory.

General Field of Calibration: Temperature
Date of Initial Accreditation of the Field: 2014-11-13
Laboratory’s permanent facility/On-site Calibration: Laboratory’s permanent facility
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range		Expanded Uncertainty (Level of Confidence Approximately 95 %)
Contact Type Thermometer	Liquid-in-glass Thermometer	From 0 °C up to 50 °C		0.04 °C
	Temperature sensors with display unit (Comparison calibration)	From -40 °C less than 100 °C		0.03 °C
		100 °C		0.04 °C
		More than 100 °C up to 200 °C		0.06 °C
		More than 200 °C up to 300 °C		0.08 °C
		Equipped within temperature Controlled enclosures	From -40 °C up to 300 °C	0.4 °C

#All Calibration Procedures are in-house procedures developed by this laboratory.

Laboratory’s permanent facility/On-site Calibration: On-site Calibration
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range		Expanded Uncertainty (Level of Confidence Approximately 95 %)
Contact Type Thermometer	Temperature sensors with display unit (Comparison calibration)	Equipped within temperature Controlled enclosures	From -40 °C up to 300 °C	0.4 °C

#All Calibration Procedures are in-house procedures developed by this laboratory.

General Field of Calibration: Angle
Date of Initial Accreditation of the Field: 2006-03-01
Laboratory’s permanent facility/On-site Calibration: Laboratory’s permanent facility
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range		Expanded Uncertainty (Level of Confidence Approximately 95 %)
Angle Measuring Instrument	Rotary Encoder	0° to 360°	up to 225,000 points	0.05”
	Rotary Encoder Calibration System (Self-calibration System)	0° to 360°		0.04”

#All Calibration Procedures are in-house procedures developed by this laboratory.

General Field of Calibration: Fluid flow
Date of Initial Accreditation of the Field: 2001-02-20
Laboratory’s permanent facility/On-site Calibration: Laboratory’s permanent facility
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)
Anemometers	Anemometers (Low air speed)	From 0.05 m/s less than 0.30 m/s	0.019 m/s
		From 0.30 m/s less than 0.59 m/s	0.023 m/s
		From 0.59 m/s less than 0.88 m/s	0.028 m/s
		From 0.88 m/s less than 1.21 m/s	0.036 m/s
		From 1.21 m/s less than 1.50 m/s	0.042 m/s
	Anemometers (Medium air speed)	1.3 m/s	0.05 m/s
		More than 1.3 m/s up to 3 m/s	0.06 m/s
		More than 3 m/s up to 5 m/s	0.06 m/s
		More than 5 m/s up to 7 m/s	0.08 m/s
		More than 7 m/s up to 10 m/s	0.11 m/s
		More than 10 m/s up to 15 m/s	0.15 m/s
		More than 15 m/s up to 20 m/s	0.20 m/s
		More than 20 m/s up to 25 m/s	0.26 m/s
		More than 25 m/s up to 30 m/s	0.32 m/s
		More than 30 m/s up to 35 m/s	0.38 m/s
		More than 35 m/s up to 40 m/s	0.44 m/s

#All Calibration Procedures are in-house procedures developed by this laboratory.

General Field of Calibration: Acceleration
Date of Initial Accreditation of the Field: 2005-02-21
Laboratory's permanent facility/On-site Calibration: Laboratory's permanent facility
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)
Accelerometer	Reference Accelerometer (Voltage sensitivity)	0.5 Hz	1.3 %
		0.63 Hz	1.1 %
		0.8 Hz	1.1 %
		1 Hz	0.8 %
		1.25 Hz	0.7 %
		1.6 Hz	0.7 %
		2 Hz	0.7 %
		2.5 Hz	0.7 %
		3.15 Hz	0.7 %
		4 Hz	0.7 %
		5 Hz	0.7 %
		6.3 Hz	0.7 %
		8 Hz	0.7 %
		10 Hz	0.7 %
		12.5 Hz	0.7 %
		16 Hz	0.7 %
		20 Hz	0.5 %
		25 Hz	0.5 %
		31.5 Hz	0.5 %
		40 Hz	0.5 %
		50 Hz	0.5 %
		63 Hz	0.5 %
		80 Hz	0.5 %
		100 Hz	0.5 %
		125 Hz	0.5 %
		160 Hz	0.5 %
		200 Hz	0.5 %
		250 Hz	0.5 %
		315 Hz	0.5 %
		400 Hz	0.6 %
		500 Hz	0.5 %
		630 Hz	0.5 %
		800 Hz	0.5 %
		1 kHz	0.5 %
		1.25 kHz	0.5 %
		1.6 kHz	0.5 %
		2 kHz	0.6 %
		2.5 kHz	0.7 %
		3.15 kHz	0.7 %
		4 kHz	0.7 %
		5 kHz	0.7 %
		6.3 kHz	0.8 %
		8 kHz	0.8 %
		10 kHz	0.8 %
	Reference Accelerometer (Electric charge sensitivity)	20 Hz	0.6 %
		25 Hz	0.6 %
		31.5 Hz	0.6 %
		40 Hz	0.6 %

		50 Hz	0.6 %
		63 Hz	0.6 %
		80 Hz	0.6 %
		100 Hz	0.6 %
		125 Hz	0.6 %
		160 Hz	0.6 %
		200 Hz	0.6 %
		250 Hz	0.7 %
		315 Hz	0.7 %
		400 Hz	0.7 %
		500 Hz	0.6 %
		630 Hz	0.6 %
		800 Hz	0.6 %
		1 kHz	0.6 %
		1.25 kHz	0.6 %
		1.6 kHz	0.6 %
		2 kHz	0.7 %
		2.5 kHz	0.8 %
		3.15 kHz	0.8 %
		4 kHz	0.8 %
		5 kHz	0.8 %
		6.3 kHz	0.9 %
		8 kHz	0.9 %
		10 kHz	0.9 %

#All Calibration Procedures are in-house procedures developed by this laboratory.

General Field of Calibration: Electricity (High Frequency) & Electromagnetic Fields
Date of Initial Accreditation of the Field: 1995-06-21
Laboratory’s permanent facility/On-site Calibration: Laboratory’s permanent facility
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/ Materials to be calibrated		Range			Expanded Uncertainty (Level of Confidence Approximately 95 %)
Radio Frequency Measuring Equipments	RF Power Source	50 MHz		1 mW	0.45 %
		From 10 MHz up to 12 GHz		1 mW	1.2 %
				From 10 pW less than 10 nW	1.8 %
				From 10 nW up to 100 mW	1.6 %
	RF Power Measuring Equipment	Coaxial 7 mm	10 MHz, 30 MHz, 50 MHz, 70 MHz, 100 MHz, 300 MHz, 500 MHz, 700 MHz, 1 GHz, 2 GHz, 3 GHz, 4 GHz, 5 GHz, 6 GHz	1 mW	0.53%
			7 GHz, 8 GHz	1 mW	0.76 %
			9 GHz, 10 GHz, 11 GHz, 12 GHz,	1 mW	0.88 %
			13 GHz	1 mW	0.92 %
			14 GHz, 15 GHz, 16 GHz, 17 GHz, 18 GHz	1 mW	1.4 %
			From 10 MHz up to 200 MHz	1 mW	0.7 %
				1 µW	0.9 %
				From 10 nW up to 100 mW	1.6 %
				More than 100 mW up to 180 W	2.1 %
			More than 200 MHz Up to 400 MHz	1 mW	0.7 %
				1 µW	0.9 %
				From 10 nW up to 100 mW	1.6 %
				More than 100 mW up to 100 W	2.1 %
			More than 400 MHz Up to 500 MHz	1 mW	0.7 %
				1 µW	0.9 %
				From 10 nW up to 100 mW	1.6 %
				More than 100 mW up to 60 W	2.1 %
			More than 500 MHz up to 1 GHz	1 mW	0.7 %
				1 µW	0.9 %
				From 10 nW up to 100 mW	1.6 %
				More than 100 mW up to 40 W	2.1 %
			More than 1 GHz up to 2 GHz	1 mW	0.7 %
				1 µW	0.9 %
				From 10 nW up to 100 mW	1.6 %
				More than 100 mW up to 20 W	2.1 %
			More than 2 GHz up to 6 GHz	1 mW	0.7 %
				1 µW	0.9 %
				From 10 nW up to 100 mW	1.6 %
			More than 6 GHz up to 12 GHz	1 mW	1.0 %
				1 µW	1.2 %
				From 10 nW up to 50 mW	1.6 %
			More than 12 GHz up to 18 GHz	1 mW	1.6 %
				1 µW	2.0 %
		Coaxial 2.9 mm	10 MHz, 30 MHz, 50 MHz, 70 MHz,	1 mW	1.1 %

			100 MHz, 300 MHz, 500 MHz, 700 MHz, 1 GHz, 2 GHz, 3 GHz, 4 GHz, 5 GHz, 6 GHz, 7 GHz, 8 GHz, 9 GHz, 10 GHz, 11 GHz, 12 GHz		
			13 GHz, 14 GHz, 15 GHz, 16 GHz, 17 GHz, 18 GHz, 19 GHz, 20 GHz, 21 GHz, 22 GHz, 23 GHz, 24 GHz, 25 GHz	1 mW	1.5 %
			26 GHz, 27 GHz, 28 GHz, 29 GHz, 30 GHz, 31 GHz, 32 GHz, 33 GHz, 34 GHz, 35 GHz, 36 GHz, 37 GHz, 38 GHz, 39 GHz, 40 GHz	1 mW	3.1 %
			From 10 MHz up to 12 GHz	1 mW	1.6 %
			More than 12 GHz up to 25 GHz	1 mW	2.3 %
			More than 25 GHz up to 40 GHz	1 mW	4.7 %
	RF Voltage Measuring Equipment	From 10 MHz up to 50 MHz		From 0.2 V up to 0.9 V	0.50 %
		More than 50 MHz up to 500 MHz		From 0.2 V up to 0.9 V	0.80 %
		More than 500 MHz up to 1000 MHz		From 0.2 V up to 0.9 V	1.2 %
	Attenuator (50 Ω)	From 10 MHz up to 1 GHz		From 0 dB up to 40 dB	0.011 dB
				More than 40 dB up to 60 dB	0.014 dB
				More than 60 dB up to 80 dB	0.020 dB
				More than 80 dB up to 100 dB	0.031 dB
		More than 1 GHz up to 12 GHz		From 0 dB up to 40 dB	0.016 dB
				More than 40 dB up to 60 dB	0.018 dB
				More than 60 dB up to 80 dB	0.028 dB
				More than 80 dB up to 100 dB	0.037 dB
		More than 12 GHz up to 18 GHz		From 0 dB up to 40 dB	0.022 dB
				More than 40 dB up to 60 dB	0.024 dB
				More than 60 dB up to 80 dB	0.039 dB
				More than 80 dB up to 100 dB	0.046 dB
		More than 18 GHz up to 40 GHz		From 0 dB up to 40 dB	0.028 dB
				More than 40 dB up to 60 dB	0.054 dB
	Attenuation Measuring Equipment	10 MHz, 30 MHz, 1 GHz		From 0 dB up to 40 dB	0.007 dB
				More than 40 dB up to 60 dB	0.010 dB
				More than 60 dB up to 80 dB	0.016 dB
				More than 80 dB up to 100 dB	0.024 dB
		12 GHz		From 0 dB up to 40 dB	0.008 dB

			More than 40 dB up to 60 dB	0.011 dB
			More than 60 dB up to 80 dB	0.027 dB
			More than 80 dB up to 100 dB	0.034 dB
		18 GHz	From 0 dB up to 40 dB	0.013 dB
			More than 40 dB up to 60 dB	0.016 dB
			More than 60 dB up to 80 dB	0.070 dB
			More than 80 dB up to 100 dB	0.058 dB
		20 GHz, 25 GHz, 30 GHz, 35 GHz, 40 GHz	From 0 dB up to 40 dB	0.020 dB
			More than 40 dB up to 60 dB	0.047 dB
		From 10 MHz up to 1 GHz	From 0 dB up to 40 dB	0.011 dB
			More than 40 dB up to 60 dB	0.014 dB
			More than 60 dB up to 80 dB	0.020 dB
			More than 80 dB up to 100 dB	0.031 dB
		More than 1 GHz up to 12 GHz	From 0 dB up to 40 dB	0.016 dB
			More than 40 dB up to 60 dB	0.018 dB
			More than 60 dB up to 80 dB	0.028 dB
			More than 80 dB up to 100 dB	0.037 dB
		More than 12 GHz up to 18 GHz	From 0 dB up to 40 dB	0.022 dB
			More than 40 dB up to 60 dB	0.024 dB
			More than 60 dB up to 80 dB	0.039 dB
			More than 80 dB up to 100 dB	0.046 dB
		More than 18 GHz up to 40 GHz	From 0 dB up to 40 dB	0.028 dB
			More than 40 dB up to 60 dB	0.054 dB

#All Calibration Procedures are in-house procedures developed by this laboratory.

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range			Expanded Uncertainty (Level of Confidence Approximately 95 %)
Radio Frequency Measuring Equipments	RF Impedance	Type-N 50 Ω Male	Reflection Coefficient |S*ii*| up to 0.1	From 9 kHz less than 40 MHz	Amplitude Um: 0.0015~0.0033 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				From 40 MHz up to 4 GHz	Amplitude Um: 0.0031~0.0038 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 4 GHz up to 8 GHz	Amplitude Um: 0.0036~0.0041 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 8 GHz up to 14 GHz	Amplitude Um: 0.0040~0.0054 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 14 GHz up to 18 GHz	Amplitude Um: 0.0049~0.0068 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
			Reflection Coefficient |S*ii*|	From 9 kHz less than 40 MHz	Amplitude Um: 0.0022~0.0037 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)

			up to 0.3	From 40 MHz up to 4 GHz	Amplitude Um: 0.0036~0.0046 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 4 GHz up to 8 GHz	Amplitude Um: 0.0042~0.0047 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 8 GHz up to 14 GHz	Amplitude Um: 0.0048~0.0060 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 14 GHz up to 18 GHz	Amplitude Um: 0.0054~0.0074 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
			Reflection Coefficient |S*ii*| up to 0.5	From 9 kHz less than 40 MHz	Amplitude Um: 0.0028~0.0042 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				From 40 MHz up to 4 GHz	Amplitude Um: 0.0041~0.0056 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 4 GHz up to 8 GHz	Amplitude Um: 0.0049~0.0058 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 8 GHz up to 14 GHz	Amplitude Um: 0.0057~0.0076 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 14 GHz up to 18 GHz	Amplitude Um: 0.0065~0.0093 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
			Reflection Coefficient |S*ii*| up to 1.0	From 9 kHz less than 40 MHz	Amplitude Um: 0.0048~0.0075 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				From 40 MHz up to 4 GHz	Amplitude Um: 0.0072~0.011 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 4 GHz up to 8 GHz	Amplitude Um: 0.0084~0.011 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 8 GHz up to 14 GHz	Amplitude Um: 0.011~0.015 (Amplitude step:0.001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 14 GHz up to 18 GHz	Amplitude Um: 0.013~0.020 (Amplitude step:0.001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
		Type-N 50 Ω Female	Reflection Coefficient |S*ii*| up to 0.1	From 9 kHz less than 40 MHz	Amplitude Um: 0.0014~0.0033 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				From 40 MHz up to 4 GHz	Amplitude Um: 0.0031~0.0039 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 4 GHz up to 8 GHz	Amplitude Um: 0.0036~0.0045 (Amplitude step:0.0001)

					Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 8 GHz up to 14 GHz	Amplitude Um: 0.0040~0.0051 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 14 GHz up to 18 GHz	Amplitude Um: 0.0045~0.0057 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
			Reflection Coefficient |S*ii*| up to 0.3	From 9 kHz less than 40 MHz	Amplitude Um: 0.0021~0.0037 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				From 40 MHz up to 4 GHz	Amplitude Um: 0.0035~0.0044 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 4 GHz up to 8 GHz	Amplitude Um: 0.0043~0.0049 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 8 GHz up to 14 GHz	Amplitude Um: 0.0045~0.0058 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 14 GHz up to 18 GHz	Amplitude Um: 0.0050~0.0068 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
			Reflection Coefficient |S*ii*| up to 0.5	From 9 kHz less than 40 MHz	Amplitude Um: 0.0027~0.0042 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				From 40 MHz up to 4 GHz	Amplitude Um: 0.0040~0.0054 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 4 GHz up to 8 GHz	Amplitude Um: 0.0050~0.0060 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 8 GHz up to 14 GHz	Amplitude Um: 0.0051~0.0070 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 14 GHz up to 18 GHz	Amplitude Um: 0.0056~0.0084 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
			Reflection Coefficient |S*ii*| up to 1.0	From 9 kHz less than 40 MHz	Amplitude Um: 0.0046~0.0075 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				From 40 MHz up to 4 GHz	Amplitude Um: 0.0069~0.010 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 4 GHz up to 8 GHz	Amplitude Um: 0.0085~0.011 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)
				More than 8 GHz up to 14 GHz	Amplitude Um: 0.0084~0.013 (Amplitude step:0.0001) Phase [°]: arcsin (Um/|Reflection Coefficient|)

				More than 14 GHz up to 18 GHz	Amplitude Um: 0.011~0.017 (Amplitude step:0.001) Phase [°]: arcsin (Um/|Reflection Coefficient|)

#All Calibration Procedures are in-house procedures developed by this laboratory.

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range			Expanded Uncertainty (Level of Confidence Approximately 95 %)
Laser Power Measuring Equipments	Optical Beam Power Meter	405 nm Band		From 10 µW less than 50 µW	0.9 %
				From 50 µW less than 100 µW	0.36 %
				From 100 µW up to 5 mW	0.29 %
		488 nm Band 515 nm Band		From 10 µW less than 50 µW	0.9 %
				From 50 µW less than 100 µW	0.36 %
				From 100 µW up to 200 mW	0.29 %
		633 nm Band		From 10 µW less than 50 µW	0.9 %
				From 50 µW less than 100 µW	0.36 %
				From 100 µW up to 10 mW	0.29 %
		660 nm Band		From 10 µW less than 50 µW	0.9 %
				From 50 µW less than 100 µW	0.36 %
				From 100 µW up to 7 mW	0.29 %
		780 nm Band		From 10 µW less than 50 µW	0.9 %
				From 50 µW less than 100 µW	0.36 %
				From 100 µW up to 10 mW	0.29 %
		850 nm Band 1310 nm Band		From 10 µW less than 50 µW	0.9 %
				From 50 µW less than 100 µW	0.36 %
				From 100 µW up to 3 mW	0.29 %
		1047 nm Band		From 10 µW less than 50 µW	0.9 %
				From 50 µW less than 100 µW	0.36 %
				From 100 µW up to 10 mW	0.29 %
		1064 nm Band		From 10 µW less than 50 µW	0.9 %
				From 50 µW less than 100 µW	0.36 %
				From 100 µW up to 10 mW	0.29 %
		1550 nm Band		From 10 µW less than 50 µW	0.9 %
				From 50 µW less than 100 µW	0.36 %
				From 100 µW up to 5 mW	0.29 %
	Optical Fiber Power Meter	850 nm Band		From 10 µW less than 50 µW	1.0 %
				From 50 µW less than 100 µW	0.5 %
				From 100 µW up to 200 µW	0.35 %
		1310 nm Band From 1520 nm Up to 1630 nm		From 10 µW less than 50 µW	1.0 %
				From 50 µW less than 100 µW	0.5 %
				From 100 µW up to 10 mW	0.35 %
		Photodiode Type	1310 nm	1 mW	0.36 %

				100 µW	0.41 %
				10 µW	0.41 %
				1 µW	0.42 %
				100 nW	0.42 %
				10 nW	0.43 %
				1 nW	0.43 %
				100 pW	0.48 %
				10 pW	0.62 %
				1 pW	1.9 %
			From 1280 nm up to 1340 nm	1 mW	0.36 %
				100 µW	0.42 %
				10 µW	0.42 %
				1 µW	0.42 %
				100 nW	0.43 %
				10 nW	0.45 %
				1 nW	0.45 %
				100 pW	0.50 %
				10 pW	0.65 %
				1 pW	1.9 %
			1550 nm	1 mW	0.36 %
				100 µW	0.39 %
				10 µW	0.39 %
				1 µW	0.39 %
				100 nW	0.39 %
				10 nW	0.40 %
				1 nW	0.40 %
				100 pW	0.45 %
				10 pW	0.50 %
				1 pW	1.5 %
			From 1520 nm up to 1630 nm	1 mW	0.36 %
				100 µW	0.42 %
				10 µW	0.42 %
				1 µW	0.43 %
				100 nW	0.43 %
				10 nW	0.43 %
				1 nW	0.43 %
				100 pW	0.48 %
				10 pW	0.54 %
				1 pW	1.5 %
	Photodiode Sensor	Optical Fiber Power Response Linearity (in dB unit relative to 0 dBm (1 mW))	1310 nm	-10 dB	0.0091 dB
				-20 dB	0.0093 dB
				-30 dB	0.0096 dB
				-40 dB	0.0099 dB
				-50 dB	0.011 dB
				-60 dB	0.011 dB
				-70 dB	0.014 dB
				-80 dB	0.023 dB
				-90 dB	0.078 dB
				-10 dB	0.0093 dB

			From 1280 nm up to 1340 nm	-20 dB	0.0098 dB
				-30 dB	0.011 dB
				-40 dB	0.011 dB
				-50 dB	0.012 dB
				-60 dB	0.013 dB
				-70 dB	0.016 dB
				-80 dB	0.024 dB
				-90 dB	0.079 dB
			1550 nm	-10 dB	0.0056 dB
				-20 dB	0.0057 dB
				-30 dB	0.0058 dB
				-40 dB	0.0059 dB
				-50 dB	0.0061 dB
				-60 dB	0.0070 dB
				-70 dB	0.013 dB
				-80 dB	0.017 dB
				-90 dB	0.062 dB
			From 1520 nm up to 1630 nm	-10 dB	0.011 dB
				-20 dB	0.011 dB
				-30 dB	0.011 dB
				-40 dB	0.011 dB
				-50 dB	0.011 dB
				-60 dB	0.011 dB
				-70 dB	0.015 dB
				-80 dB	0.018 dB
				-90 dB	0.063 dB

#All Calibration Procedures are in-house procedures developed by this laboratory.

General Field of Calibration: Force
Date of Initial Accreditation of the Field: 2010-09-03
Laboratory’s permanent facility/On-site Calibration: On-site Calibration
Calibration and Measurement Capabilities

Calibration Procedures and Type of Instruments/Materials to be calibrated		Range		Expanded Uncertainty (Level of Confidence Approximately 95 %)
Uniaxial Testing Machines	According to JIS B 7721 (ISO 7500-1) #	Compression	From 0.1 N up to 5 MN	0.20 %
		Tension	From 0.1 N up to 100 kN	0.20 %
	According to ASTM E4	Compression	From 0.1 N up to 2000 kN	0.40 %
		Tension	From 0.1 N up to 100 kN	0.30 %

JIS B 7721:2018, ISO 7500-1: 2015

General Field of Calibration: Acoustics & Ultrasound
Date of Initial Accreditation of the Field: 2005-02-21
Laboratory’s permanent facility/On-site Calibration: Laboratory’s permanent facility
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)
Acoustic Measuring Equipment etc.	Measurement Microphone (Pressure Sensitivity Level Type LS1 Microphone)	From 20 Hz less than 25 Hz	0.11 dB
		From 25 Hz less than 63 Hz	0.09 dB
		From 63 Hz up to 4000 Hz	0.08 dB
		More than 4000 Hz up to 8000 Hz	0.14 dB
		More than 8000 Hz up to 10000 Hz	0.23 dB
		More than 10000 Hz up to 12500 Hz	0.38 dB
	Measurement Microphone (Pressure Sensitivity Level Type LS2 Microphone)	20 Hz (Exact Frequency)	0.20 dB
		From 20 Hz less than 31.5 Hz	0.18 dB
		From 31.5 Hz less than 63 Hz	0.13 dB
		From 63 Hz less than 125 Hz	0.11 dB
		From 125 Hz less than 500 Hz	0.10 dB
		From 500 Hz up to 8000 Hz	0.10 dB
		More than 8000 Hz up to 12500 Hz	0.12 dB
		More than 12500 Hz up to 20000 Hz	0.29 dB
	Measurement Microphone (Free-field Sensitivity Level Type LS1 or WS1 Microphone)	From 20 Hz up to 4000 Hz	0.3 dB
		More than 4000 Hz up to 8000 Hz	0.4 dB
		More than 8000 Hz up to 10000 Hz	0.5 dB
		More than 10000 Hz up to 12500 Hz	0.6 dB
	Measurement Microphone (Free-Field Sensitivity Level Type LS2 or WS2 Microphone)	From 20 Hz up to 4000 Hz	0.3 dB
		More than 4000 Hz up to 9000 Hz	0.4 dB
		More than 9000 Hz up to 16000 Hz	0.6 dB
		More than 16000 Hz up to 20000 Hz	1.0 dB
	Sound Level Meter (Free-Field Response Level Type LS1 Microphone)	From 20 Hz up to 50 Hz	0.4 dB
		More than 50 Hz up to 3150 Hz	0.3 dB
		More than 3150 Hz up to 8000 Hz	0.5 dB
		More than 8000 Hz up to 12500 Hz	0.7 dB
	Sound Level Meter (Free-Field Response Level Type LS 2 Microphone)	From 20 Hz up to 50 Hz	0.5 dB
		More than 50 Hz up to 3150 Hz	0.3 dB
		More than 3150 Hz up to 12500 Hz	0.6 dB
		More than 12500 Hz up to 20000 Hz	0.9 dB
	Sound Level Meter (Free-Field Response Level Type LS 2 Microphone) (Exact Frequency)	From 20 Hz up to 50 Hz	0.5 dB
		More than 50 Hz up to 4000 Hz	0.4 dB
		More than 4000 Hz up to 10000 Hz	0.5 dB
		More than 10000 Hz up to 20000 Hz	0.7 dB
	Sound Calibrator (Sound Pressure Level Type LS1 or WS1 Microphone)	250 Hz	0.09 dB
		1000 Hz	0.09 dB
	Sound Calibrator (Sound Pressure Level Type LS2 or WS2 Microphone)	250 Hz	0.11 dB
		1000 Hz	0.11 dB
	Sound Calibrator with Multiple	31.5 Hz	0.14dB

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range		Expanded Uncertainty (Level of Confidence Approximately 95 %)
	Frequencies (Sound Pressure Level Type LS2 or WS2 Microphone)	63 Hz		0.12 dB
		125 Hz		0.12 dB
		250 Hz		0.12 dB
		500 Hz		0.12 dB
		1000 Hz		0.12 dB
		2000 Hz		0.12 dB
		4000 Hz		0.12 dB
		8000 Hz		0.12 dB
		12500 Hz		0.13 dB
		16000 Hz		0.32 dB
	Audiometers (WS1 Microphone)	Sound Pressure Level	From 125 Hz up to 4000 Hz	0.6 dB
			More than 4000 Hz up to 8000 Hz	0.6 dB
	Audiometers (WS2 Microphone)		From 125 Hz up to 4000 Hz	0.7 dB
			More than 4000 Hz up to 8000 Hz	0.9 dB

#All Calibration Procedures are in-house procedures developed by this laboratory.

Laboratory’s permanent facility/On-site Calibration: On-site Calibration
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)
Acoustic Measuring Equipment etc.	Sound Calibrator (Sound Pressure Level Type LS1 or WS1 Microphone)	250 Hz	0.13 dB
		1000 Hz	0.13 dB
	Sound Calibrator (Sound Pressure Level Type LS2 or WS2 Microphone)	250 Hz	0.14 dB
		1000 Hz	0.14 dB

#All Calibration Procedures are in-house procedures developed by this laboratory.

General Field of Calibration: Radiation & Radioactivity & Neutron
Date of Initial Accreditation of the Field: 1998-11-16
Laboratory's permanent facility/On-site Calibration: Laboratory's permanent facility
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range		Expanded Uncertainty (Level of Confidence Approximately 95 %)
X-ray Measuring Equipment	Exposure Measuring Equipment (Soft X-Ray)	Range of Energy: From 10 keV (1.6 fJ) up to 30 keV (4.8 fJ)		
		Exposure	From 100 nC/kg up to 30 mC/kg	3.3 %
		Exposure Rate	From 2.5 µC/(kg･h) less than 6 µC/(kg･h)	3.5 %
			From 6 µC/(kg･h) up to 100 mC/(kg･h)	3.3 %
		Air Absorbed Dose	From 3.5 µGy up to 1.0 Gy	3.3 %
		Air Absorbed Dose Rate	From 90 µGy/h less than 210 µGy/h	3.5 %
			From 210 µGy/h up to 3.5 Gy/h	3.3 %
		Air Kerma	From 3.5 µGy up to 1.0 Gy	3.3 %
		Air Kerma Rate	From 90 µGy/h less than 210 µGy/h	3.5 %
			From 210 µGy/h up to 3.5 Gy/h	3.3 %
		Dose Equivalent	From 1 µSv up to 100 mSv	5.2 %
		Dose Equivalent Rate	From 25 µSv/h up to 500 mSv/h	5.5 %
	Exposure Measuring Equipment (Medium Hard X-Ray)	Range of Energy: From 30 keV (4.8 fJ) up to 200 keV (32 fJ)		
		Exposure	From 100 nC/kg up to 60 mC/kg	3.3 %
		Exposure Rate	From 100 nC/(kg･h) less than 6 µC/(kg･h)	3.7 %
			From 6 µC/(kg･h) up to 160 mC/(kg･h)	3.3 %
		Air Absorbed Dose	From 3.5 µGy up to 1.8 Gy	3.3 %
		Air Absorbed Dose Rate	From 3.5 µGy/h less than 210 µGy/h	3.7 %
			From 210 µGy/h up to 5.2 Gy/h	3.3 %
		Air Kerma	From 3.5 µGy up to 1.8 Gy	3.3 %
		Air Kerma Rate	From 3.5 µGy/h less than 210 µGy/h	3.7 %
			From 210 µGy/h up to 5.2 Gy/h	3.3 %
		Dose Equivalent	From 3 µSv up to 200 mSv	5.2 %
		Dose Equivalent Rate	From 3 µSv/h up to 1 Sv/h	5.5 %

#All Calibration Procedures are in-house procedures developed by this laboratory.

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range		Expanded Uncertainty (Level of Confidence Approximately 95 %)
γ-ray Measuring Equipment	Exposure Measuring Equipment (^{137}Cs)	Exposure	From 52 nC/kg less than 880 nC/kg	4.2 %
			From 880 nC/kg up to 250 μC/kg	4.0 %
		Exposure Rate	From 52 nC/(kg･h) less than 800 nC/(kg･h)	4.4 %
			From 800 nC/(kg･h) less than 16 μC/(kg･h)	4.1 %
			From 16 μC/(kg･h) up to 800 μC/(kg･h)	3.8 %
		Air Absorbed Dose	From 2 μGy less than 28 μGy	4.2 %
			From 28 μGy up to 8 mGy	4.0 %
		Air Absorbed Dose Rate	From 2 μGy/h less than 25 μGy/h	4.4 %
			From 25 μGy/h less than 500 μGy/h	4.1 %
			From 500 μGy/h up to 25 mGy/h	3.8 %
		Air Kerma	From 2 μGy less than 28 μGy	4.2 %
			From 28 μGy up to 8 mGy	4.0 %
		Air Kerma Rate	From 2 μGy/h less than 25 μGy/h	4.4 %
			From 25 μGy/h less than 500 μGy/h	4.1 %
			From 500 μGy/h up to 25 mGy/h	3.8 %
		Dose Equivalent	From 2 μSv less than 35 μSv	5.8 %
			From 35 μSv up to 10 mSv	5.6 %
		Dose Equivalent Rate	From 2 μSv/h less than 30 μSv/h	5.9 %
			From 30 μSv/h less than 600 μSv/h	5.7 %
			From 600 μSv/h up to 30 mSv/h	5.5 %

#All Calibration Procedures are in-house procedures developed by this laboratory.

Attachment

General Field of Calibration: Hardness
Date of Initial Accreditation of the Field: 2006-03-01
Laboratory’s permanent facility/On-site Calibration: Laboratory’s permanent facility, On-site Calibration
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range		Expanded Uncertainty (Level of Confidence Approximately 95 %)	
				Permanent Laboratory	On-site Calibration
Rockwell Hardness Testing Machines, etc.	Rockwell Hardness Testing Machines	From 20 HRC up to 25 HRC		0.55 HRC	0.55 HRC
		More than 25 HRC up to 35 HRC		0.55 HRC	0.55 HRC
		More than 35 HRC up to 45 HRC		0.55 HRC	0.55 HRC
		More than 45 HRC up to 55 HRC		0.50 HRC	0.50 HRC
		More than 55 HRC up to 65 HRC		0.40 HRC	0.40 HRC
Vickers Hardness Testing Machines, etc.	Vickers Hardness Testing Machines	200 HV*	Test force 0.9807 N	16 %	16 %
			Test force 4.903 N	7.0 %	7.0 %
			Test force 9.807 N	5.1 %	5.1 %
			Test force 49.03 N	2.7 %	2.7 %
			Test force 98.07 N	2.6 %	2.6 %
		400 HV*	Test force 0.9807 N	22 %	22 %
			Test force 4.903 N	10 %	10 %
			Test force 9.807 N	7.0 %	7.0 %
			Test force 98.07 N	2.6 %	2.6 %
			Test force 294.2 N	2.5 %	2.5 %
		700 HV*	Test force 0.9807 N	30 %	30 %
			Test force 4.903 N	15 %	15 %
			Test force 9.807 N	9.1 %	9.1 %
			Test force 98.07 N	5.0 %	5.0 %
			Test force 294.2 N	2.7 %	2.7 %
		From 100 HV up to 800 HV except for * marked points above. (Test force from 0.9807 N up to 294.2 N)		a) *d*≦220 μm 576/*d* % b) *d*＞220 μm 994/*d* % Where: *d* is the length of a diagonal line of the indentation (μm)	a) *d*≦220 μm 576/*d* % b) *d*＞220 μm 994/*d* % Where: *d* is the length of a diagonal line of the indentation (μm)
Brinell Hardness Testing Machine, etc.	Brinell Hardness Testing Machines	200 HBW 10/3000		6 HBW	6 HBW
		350 HBW 10/3000		6 HBW	6 HBW
		500 HBW 10/3000		10 HBW	10 HBW
		200 HBW 5/750		7 HBW	7 HBW
		350 HBW 5/750		7 HBW	7 HBW
		500 HBW 5/750		10 HBW	10 HBW
		90 HBW 10/500		3 HBW	3 HBW
		100 HBW 10/500		3 HBW	3 HBW
		100 HBW 10/1000		4 HBW	4 HBW
		200 HBW 10/1000		4 HBW	4 HBW
		* Hardness Reference Blocks : Polished Surface			

#All Calibration Procedures are in-house procedures developed by this laboratory.

General Field of Calibration: Humidity
Date of Initial Accreditation of the Field: 2006-03-01
Laboratory’s permanent facility/On-site Calibration: Laboratory’s permanent facility, On-site Calibration
Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range		Expanded Uncertainty (Level of Confidence Approximately 95 %)	
				Permanent Laboratory	On-site Calibration
Humidity Measuring Instrument, etc.	Dew point hygrometers	Frost point from -30 °C up to -10 °C		0.17 °C	-
		Dew point from -10 °C up to 50 °C		0.10 °C	-
		Dew point more than 50 °C up to 85 °C		Dew point 0.11 °C	-
		Temperature Point From 5 °C up to 60 °C	Relative humidity from 5 % up to 40 %	Relative humidity 0.5 %	-
			Relative humidity more than 40 % up to 70 %	Relative humidity 0.7 %	-
			Relative humidity more than 70 % up to 98 %	Relative humidity 1.0 %	-
	Aspirated psychrometers	Temperature Point From 5 °C up to 25 °C (Dew point is from -10 °C up to 50 °C)	Relative humidity from 10 % up to 98 %	Relative humidity 1.0 %	-
	Electronic hygrometers	Temperature Point From 5 °C up to 60 °C (Dew point (Frost point) is from -30 °C up to 50 °C)	Relative humidity from 5 % up to 40 %	Relative humidity 0.5 %	-
			Relative humidity more than 40 % up to 70 %	Relative humidity 0.7 %	-
			Relative humidity more than 70 % up to 98 %	Relative humidity 1.0 %	-
		Temperature Point From 50 °C up to 95 °C (Dew point is from 15 °C up to 85 °C)	Relative humidity from 5 % up to 35 %	Relative humidity 1.6 %	-
			Relative humidity More than 35 % up to 54 %	Relative humidity 2.0 %	
			Relative humidity More than 54 % up to 98 %	Relative humidity 2.8 %	
		Frost point from -30 °C up to -10 °C		0.30 °C	-
		Dew point from -10 °C up to 50 °C		0.30 °C	
	Thermal conductivity type hygrometers	Absolute humidity from 2.4 g/m^3 up to 82.8 g/m^3 (Where dew point is from -10 °C up to 50 °C)		Absolute humidity 2.2 g/m^3	-
	Humidity generators	Frost point from -30 °C up to -10 °C		0.17 °C	0.20 °C
		Dew Point from -10 °C up to 50 °C		0.10 °C	0.20 °C
		Temperature Point From 5 °C up to 60 °C (Dew point is from -10 °C up to 50 °C)	Relative humidity from 5 % up to 95 %	Relative humidity 0.4 %	Relative humidity 1.2 %
			Relative humidity more than 95 % up to 98 %	Relative humidity 0.4 %	Relative humidity 1.4 %

#All Calibration Procedures are in-house procedures developed by this laboratory.