

Name of Accreditation Program	JCSS Accreditation Program
Accreditation Identification	JCSS 0025 Calibration
Date of Initial Accreditation	1994-03-01
Effective Date of Accreditation	2020-02-17
Expiry Date of Accreditation	2024-02-16
Name and Location of Conformity Assessment Body	Thermometer Calibration Laboratory, Isehara Plant, Tanaka Kikinzoku Kogyo K. K. 26 Suzukawa, Isehara-shi, Kanagawa 259-1146, Japan
Name of Legal Entity	Tanaka Kikinzoku Kogyo K. K. JCN 6010001127950
Inquiry Point	Thermometer Calibration Laboratory Tel: +81-463-94-5811      FAX: +81-463-94-3114
Accreditation Requirements	ISO/IEC 17025:2017 and Accreditation Requirements in the Section 6 of Accreditation Scheme (JCSS) 2nd Edition (Calibration)
Accreditation Scope	As attached

\*JCN : Japan Corporate Number

## General Field of Calibration : Temperature

Date of Initial Accreditation of the Field: 1994-03-01

Permanent Laboratory/On-site Calibration: Permanent Laboratory

## 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	Fixed point apparatus	Triple point of Mercury	2.0 mK			
		Triple point of water	1.0 mK			
		Melting point of Gallium	1.5 mK			
		Freezing point of Indium	2.5 mK			
		Freezing point of Tin	2.5 mK			
		Freezing point of Zinc	3.0 mK			
	Resistance thermometer (Fixed point calibration)	(25 Ω)		$W(T_{90})(*1)$	$R(T_{90})(*2)$	
			Triple point of Mercury	2.0 mK	2.5 mK	
			Triple point of water	-	1.5 mK	
			Melting point of Gallium	2.0 mK	2.5 mK	
			Freezing point of Indium	3.0 mK	3.5 mK	
			Freezing point of Tin	3.0 mK	3.5 mK	
			Freezing point of Zinc	4.0 mK	4.5 mK	
			(100 Ω)	Triple point of Mercury	2.0 mK	3.0 mK
				Triple point of water	-	1.5 mK
				Melting point of Gallium	2.0 mK	3.0 mK
				Freezing point of Indium	3.0 mK	4.0 mK
			Resistance thermometer (Comparison calibration)		From -40 °C up to 160 °C	10 mK
		More than 160 °C up to 230 °C			12 mK	
		More than 230 °C up to 420 °C			25 mK	
	Resistance thermometers with 3-wires	From -40 °C up to 420 °C		50 mK		
Thermocouple (Fixed point calibration)		Triple point of Mercury		0.3 K		
		Melting point of Gallium				
		Freezing point of Indium				
		Freezing point of Tin				
		Freezing point of Zinc				
	Type R Type S	Freezing point of Aluminum	0.4 K			
		Freezing point of Silver				
		Freezing point of Gold				
Thermocouple (Comparison calibration)	Comparison with Platinum resistance thermometer	From -40 °C up to 420 °C	0.3 K			
Temperature sensors with display unit (Comparison calibration)	indicator to 1 mK	From -40 °C up to 420 °C	50 mK			
	indicator to 10 mK		0.1 K			
	indicator less than 0.1 K		2 dig			

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

(\*1): Temperature converted from the ratio of the resistance  $R(T_{90})$  to  $R(273.16K)$ ,  $W(T_{90})$ (\*2): Temperature converted from resistance  $R(T_{90})$