

CERTIFICATE OF ACCREDITATION

WOOJIN FTEC

Accreditation No. : KC03-162

Corporation Registration No. : 131311-0278311

Address of Laboratory : 22, Oseongsandan-ro Cheongbuk-eup, Pyeonhtaek-si,
Gyeonggi-do, Republic of Korea

Date of Initial Accreditation : Oct. 30, 2003.

Validity of Accreditation : Dec. 21, 2020 ~ Dec. 20, 2024

Scope of Accreditation : Attached Annex

Date of issue : April. 1, 2022.

This Calibration laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025 : 2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to Joint ISO-ILAC-IAF Communiqué).



Sanghoon Lee

Head

Korea Laboratory Accreditation Scheme

SCOPE OF ACCREDITATION TO ISO/IEC 17025-2017 & KS Q ISO/IEC 17025-2017

WOJIN INC

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CALIBRATION

Valid To : Dec. 20, 2024

Accreditation No. : KC03-162 (1/3)

In recognition of the successful completion of the KOLAS evaluation process,
 accreditation is granted to this laboratory to perform the following calibrations

Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site
209. Fluid Flow								
20906	Liquid flowmeter calibrators; volumetric	Y						
20908	Gas flowmeters; differential pressure	N						
20909	Liquid flowmeters; differential pressure	Y						
20910	Liquid flowmeters; electromagnetic	Y						
20911	Gas flowmeters; thermal mass, etc	N						
20912	Liquid flowmeters; Coriolis, etc	Y						
20913	Liquid flowmeters; open channel, etc	N						
20914	Gas flowmeters; positive displacement	N						
20915	Liquid flowmeters; positive displacement	Y						
20916	Gas flowmeters; turbine	N						
20917	Liquid flowmeters; turbine	Y						
20918	Gas flowmeters; ultrasonic	N						
20919	Liquid flowmeters; ultrasonic	Y						
20922	Gas flowmeters; vortex	N						
20923	Liquid flowmeters; vortex	Y						

Note

1. This laboratory provides calibration services in permanent standard laboratory and at on-site.
2. Laboratory conducts on-site calibration should meet requirements of KOLAS-SR-008.
3. On-site calibration is allowed to items with marking 'Y', not allowed to items with marking 'N'.
4. Calibration and Measurement Capability (CMC) means capabilities provided by accredited calibration laboratories. It expresses the lowest uncertainty of measurement that can be achieved during a calibration. CMC normally is quoted as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of $k=2$.
5. Due to the calibration environment such as reference standards or customers' facilities, it is note that uncertainty of measurement on a calibration certificate may be expressed larger than CMC on scope of accreditation in general.

209. Fluid Flow Field

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Liquid flowmeter calibrators;volumetric	20906	(10 ~ 20 000) L	3.0×10^{-4}	Master tank/WJCP-TT1100 WJCP-W1100
		(400 ~ 20 000) L	3.0×10^{-4}	Master meter/WJCP-M1100
Gas flowmeters; differential pressure	20908	(13 ~ 13 000) m ³ /h	4.0×10^{-3}	Master meter/WJCP-M-20908
Liquid flowmeters; differential pressure	20909	(0.03 ~ 1 500) m ³ /h	8.0×10^{-4}	Weighing/WJCP-W-20909
		(0.03 ~ 50) m ³ /h	1.5×10^{-3}	Master tank/WJCP-TF1100
		(0.5 ~ 12 000) m ³ /h	1.5×10^{-3}	Master meter/WJCP-M-20909
		(30 ~ 12 000) m ³ /h	1.5×10^{-3}	Pipe prover&Master meter /WJCP-M200&WJCP-M-20909
Liquid flowmeters; electromagnetic	20910	(0.03 ~ 1 500) m ³ /h	8.0×10^{-4}	Weighing/WJCP-W-20910
		(0.03 ~ 50) m ³ /h	1.5×10^{-3}	Master tank/WJCP-TF1100
		(0.5 ~ 12 000) m ³ /h	1.5×10^{-3}	Master meter/WJCP-M-20910
		(30 ~ 12 000) m ³ /h	1.5×10^{-3}	Pipe prover&Master meter /WJCP-M200&WJCP-M-20910
Gas flowmeters; thermal mass, etc	20911	(13 ~ 13 000) m ³ /h	4.0×10^{-3}	Master meter/WJCP-M-20911
Liquid flowmeters; Coriolis, etc	20912	(30 ~ 1 500 000) kg/h	8.0×10^{-4}	Weighing/WJCP-W-20912
		(30 ~ 50 000) kg/h	1.5×10^{-3}	Master tank/WJCP-TF1100
		(500 ~ 1 500 000) kg/h	1.5×10^{-3}	Master meter/WJCP-M-20912
		(100 000 ~ 1 000 000) kg/h	4.0×10^{-4}	Pipe prover/WJCP-M200
Liquid flowmeters; open channel, etc	20913	(5 ~ 600) m ³ /h	2.0×10^{-2}	Master meter/WJCP-M-20913
Gas flowmeters; positive displacement	20914	(13 ~ 13 000) m ³ /h	4.0×10^{-3}	Master meter/WJCP-M-20914

209. Fluid Flow Field

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Liquid flowmeters; positive displacement	20915	(0.03 ~ 1 500) m ³ /h	8.0×10^{-4}	Weighing/WJCP-W-20915
		(0.03 ~ 50) m ³ /h	1.5×10^{-3}	Master tank/WJCP-TF1100

		(0.5 ~ 3 000) m ³ /h	1.5×10^{-3}	Master meter/WJCP-M-20915
		(30 ~ 1 500) m ³ /h	4.0×10^{-4}	Pipe prover&Master meter /WJCP-M200&WJCP-M-20915
Gas flowmeters; turbine	20916	(13 ~ 13 000) m ³ /h	4.0×10^{-3}	Master meter/WJCP-M-20916
Liquid flowmeters; turbine	20917	(0.03 ~ 1 500) m ³ /h	8.0×10^{-4}	Weighing/WJCP-W-20917
		(0.03 ~ 50) m ³ /h	1.5×10^{-3}	Master tank/WJCP-TF1100
		(0.5 ~ 12 000) m ³ /h	1.5×10^{-3}	Master meter/WJCP-M-20917
		(30 ~ 12 000) m ³ /h	1.5×10^{-3}	Pipe prover&Master meter /WJCP-M200&WJCP-M-20917
		(30 ~ 1 500) m ³ /h	4.0×10^{-4}	Pipe prover/WJCP-M200
Gas flowmeters; ultrasonic	20918	(13 ~ 13 000) m ³ /h	4.0×10^{-3}	Master meter/WJCP-M-20918
Liquid flowmeters; ultrasonic	20919	(0.03 ~ 1 500) m ³ /h	8.0×10^{-4}	Weighing/WJCP-W-20919
		(0.03 ~ 50) m ³ /h	1.5×10^{-3}	Master tank/WJCP-TF1100
		(0.5 ~ 12 000) m ³ /h	1.5×10^{-3}	Master meter/WJCP-M-20919
		(30 ~ 12 000) m ³ /h	1.5×10^{-3}	Pipe prover&Master meter /WJCP-M200&WJCP-M-20919
		(30 ~ 1 500) m ³ /h	4.0×10^{-4}	Pipe prover/WJCP-M200
Gas flowmeters; vortex	20922	(13 ~ 13 000) m ³ /h	4.0×10^{-3}	Master meter/WJCP-M-20922
Liquid flowmeters; vortex	20923	(0.03 ~ 1 500) m ³ /h	8.0×10^{-4}	Weighing/WJCP-W-20923
		(0.03 ~ 50) m ³ /h	1.5×10^{-3}	Master tank/WJCP-TF1100
		(0.5 ~ 12 000) m ³ /h	1.5×10^{-3}	Master meter/WJCP-M-20923
		(30 ~ 12 000) m ³ /h	4.0×10^{-4}	Pipe prover&Master meter /WJCP-M200&WJCP-M-20923