

A-Guiyu meeting room (桂雨厅)

Venue A 2th, November (Beijing time: 14:00~18:00 ; UTC +08:00)

Session	No.	Theme	Chairperson	Time	Type	ID	Author	Topic	Institution
A-1	1	1	Dr. Simon Dignan from NMIA	14:00~14:20	Oral	37	Chunhui Li	The comparison of the gas flow primary standard facilities at high pressure	NIM
	2			14:20~14:40	Oral	38	Feng Peng	Influence of elbow pipe on gas measurement accuracy of ultrasonic flow meter and improvement	vermm tec International (Shanghai) Co., Ltd.
	3			14:40~14:50	Poster	84	Wenlin Chen	Design of Flow Conditioner and Research on Evaluation of Flow Adjustment Effect	Xinjiang Institute of Measurement & Testing Technology
	4			14:50~15:10	Oral	85	Wenlin Chen	Influence of Probe Local Flow Field Distortion on Measurement Results of Ultrasonic Flowmeter	Xinjiang Institute of Measurement & Testing Technology
	5			15:10~15:30	Oral	54	Fan,Sheng-Cyuan	Improvement and Analysis of Low Pressure Gas Flow Calibration System - Bell Prover	Industrial Technology Research Institute
	6			15:30~15:50	Oral	73	WANG ZHEN	Research and Realization of Mutual Verification Method between Critical Flow Sonic Nozzle Gas Flow Standard Device and Bell Type Gas Flow Standard Device	Liaoning Provincial Institute of Measurement
	7			15:50~16:00	Poster	99	weijun Liu	A calculation model of natural gas compression factor	URUMQI BRANCH OF NATIONAL STATION OF PETROLEUM&NATURAL GAS FLOW MEASUREMENT
	8			16:00~16:20	Oral	102	Xiaozhang Zhang	Measurement error of Coriolis flow meters caused by two-phase flow	Tsinghua University

16:20~16:30 Break (10min)

A-2	9	1	Dr. Simon Dignan from NMIA	16:30~16:40	Poster	108	Yang Xiang	Research on flow field characteristics of flowmeter fairing based on CFD	Chongqing Academy of Metrology and Quality Inspection
	10			16:40~16:50	Poster	124	Gao Ming	Research and Application of On-Line Measurement of Liquid Point Velocity in Closed Circular Tube	Institute of Metrology of Hebei Province
	11			16:50~17:00	Poster	136	xu de fu	Experimental and Simulation Research of Channel Flowmeter Based on Gas and Water	Xinjiang Institute of Measurement & Testing Technology
	12			17:00~17:20	Oral	114	Corinna Kroner	Fuel consumption measurements	Physikalisch-Technische Bundesanstalt
	13			17:20~17:30	Poster	144	Zhao Yumin	The study consists based on durability tests of heat meters	Shandong Institute of Metrology
	14			17:30~17:50	Oral	122	Yixin Sun	Factors Influencing the Allocation Measurement Computation Procedure of Water Cut Crude Oil	Emerson Process Control Co. LTD

Dinner (17:50~19:00)

Venue A 2th, November (Beijing time: 19:00~20:50; UTC +08:00)

A-3	15	1	Dr. Chunhui Li from NIM	19:00~19:20	Oral	131	Mingchang Guo	The Application of Measurement Reproducibility in Gas Flow Standard Devices by Master Meter Method	Nanjing Substation of National Petroleum and Natural Gas Flow Measurement Station
	16			19:20~19:30	Poster	149	Lingshan Yang	Piston Gas Flow Standard Facility	Chongqing Academy of Metrology and Quality Inspection
	17			19:30~19:40	Poster	151	Lulu Zhang	Calibration Device for Reference Leak Value by Soap Film Flowmeter	Chongqing Academy of Metrology and Quality Inspection
	18			19:40~20:00	Oral	165	Stanislav Knotek	Testing micro-flow devices for medical applications	Czech Metrology Institute
	19			20:00~20:20	Oral	318	Stanislav Knotek	Modelling of uncertainties in measurement of emission concentration in stack	Czech Metrology Institute
	20			20:20~20:30	Poster	47	Aleksei Shchelchkov	Influence of the Variable Geometry of the Diverter Nozzle on the Metrological Characteristics of a Calibration Unit with Weighing Devices	VNIIR-Affiliated branch of the Mendeleyev institute for Metrology
	21			20:30~20:50	Oral	56	CheWei Yeh	Numerical Simulation of Underwater Pipeline Leakage Noise	Industrial Technology Research Institute

Venue A 3th, November (Beijing time: 14:00~18:00; UTC +08:00)

Session	No.	Theme	Chairperso	Time	Type	ID	Author	Topic	Institution
A-4	22	1	Dr. Chunhui Li from NIM	14:00~14:20	Oral	186	Xuejing Li	A Numerical Study on the Influence of Temperature on the Measurement Performance of Lead-bismuth Electromagnetic-flowmeter	Shanghai Institute of Measurement and Testing Technology
	23			14:20~14:40	Oral	195	Xu Hong	Comparative Analysis on the Electromagnetic Flowmeters Standards for Water Flow Measurement in closed conduits at Home and Abroad	China Institute of Water Resources and Hydropower Research (IWHR)
	24			14:40~15:00	Oral	203	Lide Fang, Bangbang Han, Cong Zhou	Study on a void fraction measurement method of gas-liquid two-phase stratified flow	Hebei University
	25			15:00~15:10	Oral	208	min wei	The Effect of the Straight Pipe Length on Ultrasonic Flowmeter Measurement during Typical Baffle Interference	Oil and Gas Measurement Center of Southwest Pipeline Company
	26			15:10~15:20	Poster	216	geng xuemei	Study on the influencefactors of on-line measurementerror of portable clamp-on ultrasonic flowmeters	Zhejiang Province Institute of Metrology
	27			15:20~15:40	Oral	184	Enrico Frahm	Evaluating Inter-laboratory Comparison Data	Physikalisch-Technische Bundesanstalt (PTB)
	28			15:40~16:00	Oral	250	LEI Gong	Design of gas flow standard device for online/remote calibration of gas flow	Chongqing Academy of Metrology and Quality Inspection
	29			16:00~16:20	Oral	270	Yiwen.Liu	Exploration and Application of Opt-Sonic Correlation Measurement Technology to Realize Energy Determination for Naturl gas	Guangzhou Branch of National Station of Petroleum&Natural Gas Flow Measurement

16:20~16:30 Break (10min)

A-5	30	1	Dr. Horia Motit from Control and Instrumentation Association of Romania	16:30~16:40	Poster	217	shen huaiming	Research on monitoring method of flow field distribution based on multichannel ultrasonic flowmeter	Beijing University of Chemical Technology
	31			16:40~16:50	Poster	241	Huichao Shi · Lianfeng Cheng	Simulation Study on Measurement Method of Flow Fluctuation Signal Based on Chaotic Oscillator	Beijing University of Chemical Technology,Chinese Academy of Metrology science
	32			16:50~17:00	Poster	249	Chuangyang Yu	Standard device of natural gas real-flow detection	Chongqing Academy of Metrology and Quality Inspection
	33			17:00~17:10	Poster	289	Mpilo Dlamini	Thermal Mass Flow Controller Induced Temperature Fluctuations in a Gas Flow Calibration Line at NMISA	National Metrology Institute of South Africa
	34			17:10~17:20	Poster	272	shijie wu	Influence of Different Treatment Methods of Neopentane in Natural Gas Components on Measurement Accuracy	Nanjing Branch of National Station of Petroleum & Natural Gas Flow Measurement
	35			17:20~17:40	Oral	294	Sonja Schmelter	Comparison of different slug frequency calculation methods for the validation of two-phase flow simulations	Physikalisch-Technische Bundesanstalt (PTB)
	36			17:40~18:00	Oral	298	Yueyuan Liu	A New Type of Flow Measurement Device with Vortex Street and Velocity Averaging Tube	College of Quality and Technical Supervision, Hebei University

Dinner (18:00~19:00)

Venue A 3th, November(Beijing time: 19:00~21:00; UTC +08:00)

	37			19:00~19:10	Poster	295	Ning Zhao	Void Fraction Measurement using the Coaxial Line Phase Technique in the Vertical Gas-Liquid Slug Flow	College of Quality and Technical Supervision, Hebei University
	38			19:10~19:30	oral	304	YAN Haiming	Research on the calibration of sonic nozzles by HPPP	Wuhan Metrology Research Center of West to East Gas Transmission Company of PipeChina
	39			19:30~19:50	oral	305	HOU Yang	Study on the effect of pressure on gas ultrasonic flowmeter	Wuhan Metrology Research Center of West to East Gas Transmission Company of PipeChina

A-6	40	1	Dr. Chris Mills from NEL	19:50~20:00	Poster	306	PEI Quanbin	Discussion on measurement and evaluation method of natural gas flow computer	Wuhan Metrology Research Center of West to East Gas Transmission Company of PipeChina
	41			20:00~20:20	oral	307	WANG Kexu	Numerical simulation-based experimental study on the effect of different disturbed flow components on ultrasonic flowmeter metering performance	Wuhan Metrology Research Center of West to East Gas Transmission Company of PipeChina
	42			20:20~20:30	Poster	310	yumin zhao	Research on traceability verification technology of hot water flow standard device value based on mobile comparison method	Shandong Institute of Metrology, No.28
	43			20:30~20:50	oral	313	Ning Zhao	Effect of System Pressure on Liquid Film Behavior in Horizontal Annular Flow	College of Quality and Technical Supervision, Hebei University
	44			20:50~21:00	Poster	315	Zhiyue Zhao	Void Fraction Measurement using the Coaxial Line Phase Sensor in the horizontal Gas-Liquid Flow	College of Quality and Technical Supervision, Hebei University, Baoding 071002, China

B-Jinxu meeting room-1 (锦绣厅-1)

Venue B 2th, November (Beijing time: 14:00~17:40; UTC +08:00)

Session	No.	Theme	Chairperso	Time	Type	ID	Author	Topic	Institution
B-1	45	1	Dr. Marc de Huu from Metas	14:00~14:20	Oral	321	weijie chen	Optimization of electrode and contraction section of 90° bent electromagnetic flowmeter using CFD simulation	China Jiliang University
	46			14:20~14:40	Oral	329	Cenwei Sun	Experimental Investigation on Measurement Characteristics of WMS for Gas-Liquid Slug Flow	Tianjin Key Laboratory of Process Measurement and Control, School of Electrical and Information Engineering, Tianjin University
	47			14:40~15:00	Oral	330	Huimin Ma	A Void Fraction Measurement Method of Gas-water Flow Based on Microwave Method	School of Quality and Technical Supervision, Hebei University
	48			15:00~15:20	Oral	331	Rongji Zuo	Water holdup measurement of oil-water two-phase flow using dual-mode microwave method	Tianjin Key Laboratory of Process Measurement and Control, School of Electrical and Information Engineering, Tianjin University
	49			15:20~15:40	Oral	332	Yumeng Zhang	The research on discharge coefficient equation of a non-standard Venturi meter with a swirler	University of Warwick
	50			15:40~16:00	Oral	343	Steve Dixon	Clamp-on transit time flow meter	RISE
	51			16:00~16:20	Oral	160	Oliver Buker	Characterisation of flow meters for fuel consumption measurements in realistic drive cycle tests	

16:20~16:30 Break (10min)

B-2	1	12	Dr. Marc de Huu from Metas	16:30~16:40	Poster	199	Bo Wu	Research on Online Value Checking Method of Flow Calibration System Based on Double Standard Flowmeter Checking Technology	Guangzhou Institute of Energy Testing
	2			16:40~16:50	Poster	248	Li Haiyang	Study on Numerical Simulation Method of Piston Type Micro Liquid Flow Standard Device	Shanghai Institute of Measurement and Testing Technology
	3			16:50~17:00	Poster	325	Bruno Gobi	CFD Verification through comparison with LDP measurements of under-expanded gas leak	Universidade Federal do Espírito Santo
B-3	1	2		17:00~17:20	Oral	275	Aya Iwai	Uncertainty Evaluation of Fluid Density at High Air Speed Standard in NMIJ	National Metrology Institute of Japan
	2			17:20~17:40	Oral	121	Miyue Zhao	Research of large diameter gas flow rate measurement method	Shenyang Xingya Metrology and Calibration Technology Co., Ltd.

Dinner (17:40~19:00)

Venue B 2th, November (Beijing time: 19:00~20:40; UTC +08:00)

B-3	3	2	Dr. Isabelle Care from LNE-LADG	19:00~19:20	Oral	139	Woong Kang	Smokestack Gas Velocity Measurements using 3-D Pitot tubes in a Coal-Fired Power Plant	KRISS
	4			19:20~19:30	Poster	219	yang youtao	Research on Flow sensor of Ultrasonic Gas Meter	Beijing Institute of Metrology
	5			19:30~19:50	Oral	72	Jan Gersl	Insertion depth effect for vane anemometers	Czech Metrology Institute
	6			19:50~20:00	Poster	324	zheng zhang	Study on the influence of installation angle on pitot tube in wind tunnel	Shandong special inspection measurement and Testing Co., Ltd
	7			20:00~20:20	Oral	345	Steve Dixon	Ultrasonic anemometry	University of Warwick
	8			20:20~20:40	Oral	154	Nguyen Ngoc Hai	Two new primary standard systems: LDA and piston prover in	Vietnam Metrology Institute

Venue B 3th, November (Beijing time: 14:00~18:00; UTC +08:00)

Session	No.	Theme	Chairperso	Time	Type	ID	Author	Topic	Institution
B-4	1	3	Dr. Chun-lin Chiang from CMS	14:00~14:20	Oral	77	Liu Yuan	Experimental Investigations of Boundary Layer Thickness Using Ultrasonic Transit Time Method	National Institute of Metrology
	2			14:20~14:30	Poster	125	Nuolin Xiang	Study on the dynamic characteristics of orifice plate impulse response based on CFD simulation	College of Quality and Technical Supervision, Hebei University
	3			14:30~14:40	Poster	302	Y Liu	Traceability of ultrasonic transit time based on relative displacement method	National Institute of Metrology of China
	4			14:40~15:00	Oral	138	D. L. Liu	Influence of Medium Type on Measurement Performance for Vortex Flowmeter	Xinjiang Uygur Autonomous Region Research Institute of Measurement & Testing
	5			15:00~15:20	Oral	88	Hugo Bissig	Comparison of inline measurement of dynamic viscosity of liquids	Federal Institute of Metrology METAS
	6			15:20~15:40	Oral	89	Hugo Bissig	METAS pipe viscometer	Federal Institute of Metrology METAS
	7			15:40~16:00	Oral	226	SeokHwan Lee	Bilateral comparison of viscosity measurement standard system between KRISS and PTB	KRISS

16:00~16:10 Break (10min)

B-5	1	7	Dr. Chun-lin Chiang from CMS	16:10~16:30	Oral	59	M.D. Schakel	Traceable uncertainty of exhaust flow meters embedded in portable emission measurement systems	National Metrology Institute (VSL), Delft, The Netherlands
	2			16:30~16:50	Oral	262	Giorgio Ficco	Verification of thermal energy meters	University of Cassino
	3			16:50~17:10	Oral	323	Giorgio Ficco	Metering and submetering for cooling applications	University of Cassino
	4			17:10~17:20	Poster	334	yang fan	Systematic study on the reappearance of the horizontal position of Standard Metal Gauge and related problems	Hubei Institute of Measurement and Testing Technology
B-6	1	10		17:20~17:40	Oral	90	Hugo Bissig	Dynamic flow profile down to 20 nL/min	Federal Institute of Metrology METAS
	2			17:40~18:00	Oral	169	Elsa Batista	MFMET project - Establishing metrology standards in microfluidic devices	Portuguese Institute for Quality

Dinner (17:50~19:00)

Venue B 3th, November (Beijing time: 19:00~20:40; UTC +08:00)

B-6	3	10	Dr. Marcos Pereira from University of São Paulo	19:00~19:10	Poster	74	Li Liu	Research on methods to reduce the influence of medium evaporation on liquid micro-flow facility	Guangzhou Institute of Energy Testing
	4			19:10~19:20	Poster	87	Hai-Bo Zhao	Development on in-situ flow measurement technology of high performance liquid chromatography	Beijing Institute of Metrology
	5			19:20~20:30	Poster	212	Xiaobin Huang	Development of a portable small gas flow transfer standard based on laminar flow technology	Nantong Institute of Metrology and Measurement
	6			19:30~19:40	Poster	215	Fan Chen	Design and Optimization of Graphene Membrane Differential Pressure Microflowmeter Based on CFD	School of Information Science and Technology, Beijing University of Chemical Technology
	7			19:40~20:00	Oral	227	SeokHwan Lee	Inter-comparison of micro-liquid flow standard system in APMP	KRISS

	8			20:00~20:20	Oral	243	Tao Meng	Establishment of Micro Liquid Flow facility at NIM	National Institute of Metrology, China
	9			20:20~20:40	Oral	283	Ryouji Doihara	Evaluation of Microflow Calibration Rig using Static Weighing System with Flying Start-and-Finish Method	National Metrology Institute of Japan (NMIJ), AIST
C-Jinxiu meeting room-2 (锦绣厅-2)									
Venue C 2th, November (Beijing time: 14:00~17:50; UTC +08:00)									
Session	No.	Theme	Chairperso	Time	Type	ID	Author	Topic	Institution
C-1	1	5	Dr. Jan Gersl from CMI	14:00~14:20	Oral	57	Biyu Zhu	Study on the Comparison of Three Typical Gas Flow Standards for Calibrating Low Gas Flowmeter	Shanghai Institute of Measurement and Testing Technology
	2			14:20~14:30	Poster	80	HAN ZHANG	Uncertainty Evaluation and Capability Verification of the City Gas Flow Standard Facility	Beijing Gas Group Company Limited
	3			14:30~14:40	Poster	82	Liu Yuan	Evaluation of ADCP Streamflow Measurements in Open Channel	National Institute of Metrology
	4			14:40~14:50	Poster	147	jun ma	Influence of Verification Volume and Flow rate on Verification Facility for Water Meters of Piston	Ningbo Institute of Measurement and Testing
	5			14:50~15:10	Oral	200	Mengna LI	The comparison of the gas flow secondary standard facilities at high pressure	NIM
	6			15:10~15:30	Oral	282	Kai Wen	The development of fully automated controller for the real-flow calibration of natural gas flowmeters	China University of Petroleum-Beijing
	7			15:30~15:50	Oral	162	Primož Žibret	Implementation of the dynamic flying start-stop method in the pVTt gas flow standard	University of Ljubljana, Faculty of Mechanical Engineering, Slovenia
	8			15:50~16:10	Poster	222	Wei Liu	Flow performance test device for air sampler	National thermal flow instrument quality supervision and inspection center of Chongqing Institute of measurement quality inspection
	9			16:10~16:20	Poster	231	Chaojain Tao, Jiaodan Chen, Liqiong Huang	Research on temperature control technology of high-pressure loop gas flow standard facility	Tancy Instrument Group Co., Ltd
16:20~16:30 Break (10min)									
C-2	10	5	Dr. Jan Gersl from CMI	16:30~16:50	Oral	229	Wanli Yang	Research on Mathematical Model and Optimal Flow Characteristics of Steering Diverter	University of Shanghai for Science and Technology
	11			16:50~17:10	Oral	244	Tao Meng	Method for direction diagnosis of multiple fluctuation sources on the flow standard facility	National Institute of Metrology, China
	12			17:10~17:30	Oral	260	Leopoldo Cordova	Considering Covariance in Reference Flow Meter Based Calibration Facilities	Endress+Hauser Flow
	13			17:30~17:50	Oral	280	WEI HAN	Capacity improvement of MT primary standard facility	PipeChina West East Gas Pipeline Company,Nanjing Branch of National Station of Petroleum & Natural G
Dinner (17:50~19:00)									
Venue C 2th, November (Beijign time: 19:00~21:00; UTC +08:00)									
C-3	14	5	Dr. Chris Mills from NEL	19:00~19:20	Oral	115	Marc deHuu	Extending the functionality of the METAS primary standard in gas flow to a pressure-regulated measuring mode	METAS
	15			19:20~19:40	Oral	327	Wang Lei	Remote Calibration Research of Large Flow Samplers	National Institute of Metrology
	16			19:40~20:00	Oral	336	Dannal Cheng	Probe into methods about the comparison of gas flowmeters	SIERRA Instruments (Shanghai) Co., Ltd.
	17			20:00~20:20	Oral	350	HEMING HU	Ultrasonic Transit-time Discharge Determination in Rectangular Open Channel	NIM
	18			20:20~20:40	Oral	182	Heiko Warnecke	New metrological capabilities for measurements of dynamic liquid flows	Physikalisch-Technische Bundesanstalt
	19			20:40~21:00	Oral	183	Abir BOUDAQUD	Development of a Primary System for the Measurement of Nano-flow Rates of Liquids	CETIAT
Venue C 3th, November(Beijing time: 14:00~17:40; UTC +08:00)									
Session	No.	Theme	Chairperso	Time	Type	ID	Author	Topic	Institution
C-4	1	11	Dr. Woong Kang from KRISS	14:00~14:20	Oral	53	X. Zheng	Multi Parameters Calibrator for Ventilator Tester Based on Reciprocating Plunger	China Jiliang University
	2			14:20~14:40	Oral	60	Jingfang Xing	Simulation study on methane combustion chamber optimization	Institute of Metrology of Hebei Province
	3			14:40~14:50	Poster	145	Jin Song	Investigation on Sampling Flow Rate Calibration Method of Air Sampler	Shanghai Institute of Measurement and Testing Technology
	4			14:50~15:10	Oral	252	Liang Zhang	Performance Improvement of Stack Simulator	National Institute of Metrology China
	5			15:10~15:30	Oral	309	Jiguang Zhu	Validity of Measurement Data of Large-Diameter Heat Meters in the Application of Heating System in China	harbin institute of metrology
	6			15:30~15:50	Oral	132	KarHooi Cheong	Multi Parameters Calibrator for Ventilator Tester Based on Reciprocating Plunger	Measurement of the Infusion Flow Rate Produced by a Novel Non-electric-powered Infusion Pump
	7			15:50~16:10	Oral	170	Elsa Batista	Metrology for Drug Delivery project – results and impact	Portuguese Institute for Quality
16:10~16:20 Break (10min)									
C-5	1	6	Dr. Woong Kang from KRISS	16:20~16:40	Oral	190	Chunhui Li	The upstream flow condition effect on the premature unchoking phenomena of the sonic nozzles	NIM
	2			16:40~17:00	Oral	103	Naoki TAKEGAWA	Velocity measurement in critical flow nozzle and its response using recovery temperature anemometry (RTA)	National Metrology Institute of Japan
	3			17:00~17:20	Oral	110	Sebastian Weiss	Numerical investigation of boundary layer effects within cylindrical critical flow Venturi nozzles	PTB Berlin
	4			17:20~17:40	Oral	161	Gregor Bobovnik	Flow coefficients of critical flow venturi nozzles calibrated with hydrogen and other gases	University of Ljubljana, Faculty of Mechanical Engineering
Dinner (17:40~19:00)									
Venue C 3th, November (19:00~20:40 p.m.)									
C-5	5	6	Dr. Lishui Cui from NIM	19:00~19:20	Oral	86	Peijuan Cao	Effect of Different Conditions on the Boundary Layer Transition of Sonic Nozzle	Hebei normal university
	6			19:20~19:40	Oral	290	Peijuan Cao	Influence of temperature distribution at throat on discharge coefficient of sonic nozzle	Hebei normal university
	7			19:40~19:50	Poster	32	Feng Gao	Effect of the stagnation pressure on CBPR of the sonic nozzle by positive pressure method	NIM
C-6	1	4	Dr. Lishui Cui from NIM	19:50~20:10	Oral	68	Xingen Wang	Review on Computational Models of High-Pressure Hydrogen Compressibility factor	University of Shanghai for Science and Technology
	2			20:10~20:20	Poster	205	Huancheng Yang	Study of Calibration System for Liquefied Natural Gas (LNG) Dispenser Verification Device Based on Quality Method	Inner Mongolia Institute of Metrology and Testing
	3			20:20~20:40	Oral	322	Giorgio Ficco	Unaccounted for gas in transmission networks	University of Cassino
D-Lianhua meeting room (莲花厅)									
Venue D 2th, November (Beijing time: 14:00~18:00; UTC +08:00)									
Session	No.	Theme	Chairperso	Time	Type	ID	Author	Topic	Institution
	1			14:00~14:10	Poster	43	Liu Yajie	Research on Measurement Performance Change of Water Meter in Use Based on Multi-stage Sampling Inspection	Guangzhou Institute of Energy Testing

D-1	2	9	Dr. Takashi Shimada from NMIJ	14:10~14:30	Oral	61	liu zhe	Exploration and industrial application of intelligent technology for natural gas metrological verification	PipeChina West East Gas Pipeline Company
	3			14:30~14:50	Oral	76	Xiao Ming	Pipe Flow Control and Flow Metering	Nanjing University of Aeronautics and Astronautics
	4			14:50~15:10	Oral	83	Xuejing Li	A Numerical Study on the Influence of Temperature on the Measurement Performance of Lead-bismuth Electromagnetic- Study on the relationship between the size change and the measured flow value of the Parshall flumes open channel weir tank flowmeter	Shanghai Institute of Measurement and Testing Technology
	5			14:50~15:00	Poster	116	kefu zhang		Chongqing Academy of Metrology and Quality Inspection
	6			15:00~15:20	Oral	120	Wenqing Hu	Investigation of the pVTI Gas Flow Standard with Active Thermal Compensation	China Jiliang University
	7			15:20~15:40	Oral	69	Alexander Borchling	Electronic and mechanical domestic water meters	Physikalisch-Technische Bundesanstalt
	8			15:40~16:00	Oral	127	Motit Horia Mihai	Developments by a new flow measurement structure based on reaction force. Extended reaction flowmeters	Control and Instrumentation Association of Romania
	9			16:00~16:20	Oral	130	M.D. Schakel, F. Gugole, D. Schakel	Traceable liquefied hydrogen flow measurement	National Metrology Institute (VSL), Delft, The Netherlands
16:20~16:30 Break (10min)									
D-2	10	9	Dr. Takashi Shimada from NMIJ	16:30~16:50	Oral	156	liu xun	Research on intelligent ultrasonic gas meter based on Lora communication technology	Technology Research Institute, Chengdu Qianjia Technology Co., Ltd
	11			16:50~17:10	Oral	185	Enrico Frahm	Characterisation of transfer flow meter under different ambient conditions	Physikalisch-Technische Bundesanstalt
	12			17:10~17:20	Poster	198	Bo Wu	Research on Technology Status and Development Direction of Large Diameter Water Flow Standard Facility in China	Guangzhou Institute of Energy Testing
	13			17:20~17:40	Oral	246	Zhou Yi	Development of Movable Testing Device for Gas Flow equipping with the Critical Flow Venturi Nozzles	Calibration and Testing Center for Gas Flow of Jiangsu
	14			17:40~18:00	Oral	204	chaofan song	Application of integrity management method to improve the management level of gas flow standard facility	Nanjing Flow Measurement Station of West-East Gas Pipeline Company,PipeChina Co.,Ltd.,China
Dinner (18:00~19:00)									
Venue D 2th, November (Beijing time: 19:00~21:30; UTC +08:00)									
D-3	15	9	Dr. Pier Giorgio Spazzini from INRIM	19:00~19:10	Poster	236	Huichao Shi , Xiao Huang	Research on error compensation method of multi-channel ultrasonic flowmeter based on SVM	Beijing University of Chemical Technology
	16			19:10~19:30	Oral	238	Alfred Rieder	Laboratory and Field Validation of a New Coriolis Metering Concept for Better Measurement Uncertainty, Reliability and Process Insight	Endress+Hauser Flow
	17			19:30~19:50	Oral	239	Iryna Gryshanova	Investigation of the Correction Factor for Ultrasonic Flow Meters	National Technical University of Ukraine
	18			19:50~20:10	Oral	201	Mengna LI	In-use Measurement of Ultrasonic Flowmeter based on Machine Learning	NIM
	19			20:10~20:30	Oral	251	Sun Limin	Research and application of ultrasonic gas flow meter performance on-line audit	Natural Gas Yuji Pipeline Branch of China Petroleum & Chemical Co., Ltd.
	20			20:30~20:50	Oral	254	Chuanbo Zheng	Research on Countermeasures of Internal fouling in Turbine Flowmeter	Nanjing Branch of National Station of Petroleum & Natural Gas
	21			20:50~21:10	Oral	267	jin zhongxiang	Talking about the influence of pressure deviation on the measurement results of natural gas flowmeter	Nanjing Flow Measurement Station of West-East Gas Pipeline Company,PipeChina Co.,Ltd.,China
	22			21:10~21:20	Poster	273	X. L. Dong	Technical Research and Uncertainty Evaluation of the City Gas Energy Measurement	Beijing Gas Group Company Limited 2National City Gas Flowrate Metering Station
	23			21:20~21:30	Poster	281	Lianfeng Cheng	Control Method And Experimental Verification Of Pipeline Flow Fluctuation Generator	Beijing University of Chemical Technology
Venue D 3th, November (Beijing time: 14:00~17:50; UTC +08:00)									
Session	No.	Theme	Chairperso	Time	Type	ID	Author	Topic	Institution
D-4	24	9	Dr. Bodo Mickan from PTB	14:00~14:20	Oral	256	Ziyan Tang	Measurement of Gas-Liquid Flows in Vertical Pipes Using Turbine Flowmeter and Conductance Sensor	School of Electrical and Information Engineering, Tianjin University
	25			14:20~14:40	Oral	258	Landi Bai	Measurement of oil-water flows by conductance cross-correlation flowmeter with center body in a small pipe	School of Electrical and Information Engineering, Tianjin University
	26			14:40~15:00	Oral	259	Lei OuYang	A Software Technique for Oil-Water Two-Phase Flow Measurement: CapsNet with Multi-task Learning	School of Electrical and Information Engineering, Tianjin University
	27			15:00~15:10	Poster	297	Chengze Lv	Research on In-use Verification Method of Ultrasonic Gas Flow Meter Based on Supervised Learning	NIM
	28			15:10~15:20	Poster	328	Lianghua Mao	Exploration of Natural Gas Remote Metrology Technology	LiShui Institute for Quality Inspection and Testing
	29	15:20~15:40		Oral	319	ZHUO Yinjie	Research on Standard Device of Liquid Hydrogen Flow Driven by Air Pressure	College of Metrology and Measurement Engineering China Jiliang University	
	1	8		15:40~16:00	Oral	39	Liu Yuan	Uncertainty Evaluation Method of Rotating Element Current Meters	National Institute of Metrology
	2			16:00~16:10	Poster	65	Zhang Yuwen	Study on the uncertainty of the Doppler frequency for the Calibration of LDV within the speed of (0.1~340) m/s	NIM
	3			16:10~16:20	Poster	153	lei tan	Evaluation of Uncertainty in Measurement of the Surper-heated Steam Density based on Monte Carlo Method	Yichang Metrology and Verification Testing Institute
16:20~16:30 Break (10min)									
D-5	4	8	Dr. Bodo Mickan from PTB	16:30~16:50	Oral	192	PierGiorgio Spazzini	FLOW LEAKS RENORMALIZATION	INRIM
	5			16:50~17:10	Oral	223	Wei Liu	Uncertainty analysis of flow measurement of VOC sampler	National thermal flow instrument quality supervision and inspection center of Chongqing Institute of measurement quality inspection
	1	13		17:10~17:20	Poster	148	Yongsheng Zhang	Development of Dynamic Response Characteristics Calibration Device for Liquid Flowmeter	Changcheng Institute of Metrology & Measurement
	2			17:20~17:30	Poster	284	Fan Luo	Research on zero drift of master meter in calibrating the hydrogen dispenser on site	National Institute of Measurement and Testing Technology
	3			17:30~17:50	Oral	196	Chris Mills	Flow Measurement in Support of Carbon Capture, Utilisation and Storage	TUV SUD National Engineering Laboratory
Dinner (17:50~19:00)									
Venue D 3th, November (Beijing time: 19:00~21:20; UTC +08:00)									
D-6	4	13	Dr. John Wright from NIST	19:00~19:20	Oral	98	Marc deHuu	Design and calibration of critical flow Venturi nozzles for high-pressure hydrogen applications	METAS
	5			19:20~19:40	Oral	106	Marc deHuu	Key comparison of gravimetric standards for hydrogen refuelling stations	METAS
	6			19:40~20:00	Oral	263	Bodo Mickan	Bodo Mickan	Transferability of calibration results obtained with conventional gases for application with hydrogen
	7			20:00~20:20	Oral	286	Benjamin Boeckler	Metrology infrastructure for high-pressure gas and liquified hydrogen flows	Physikalisch-Technische Bundesanstalt (PTB)
	8			20:20~20:40	Oral	189	Remy MAURY	Secondary standard for hydrogen refuelling station verification: Method and requirements	CESAME EXADEBIT
	9			20:40~21:00	Oral	197	Marc MacDonald	A model for flow measurement uncertainty at hydrogen refuelling stations	TÜV SÜD National Engineering Laboratory

	10			21:00~21:20	Oral	341	Toshihiro Morioka	Performance evaluation test of Coriolis flow meters for hydrogen metering at high pressure	NMIJ
	30	9		21:20~21:30	Poster	312	Bruno Moura	Stability Analysis of the Howland Current Source with NIC by the Normalized Determinant Function Method	Universidade Federal de Catalão

Themes									
1	Liquid, gas & multi-phase flows								
2	Air speed, volume								
3	Fluid properties								
4	Hydrocarbon flows, e.g.: LNG, CNG and so forth								
5	Primary standards, new calibration, and inter-comparison facilities								
6	Critical Flow Venturi Nozzles								
7	Legal Metrology in Flow Measurement								
8	Analysis and assessment of uncertainties								
9	Development and performance of flow metering technology								
10	Micro-flow technology								
11	New applications in healthcare, saving energy and protecting the environment								
12	Computer-modelling applications								
13	New fields, such as Hydrogen, CO2 and so forth								

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