Hellenic Accreditation System

Annex F2/14 to the Certificate No. **758**-5

SCOPE of ACCREDITATION

of the

Pressure & Chemical Analysis Calibration Laboratories

of the

Hellenic Gas Transmission System Operator (DESFA) SA

Calibration item / Parameters	Range of measurement	Expanded measurement uncertainty (k=2)*	Remarks
Pressure Measurements			
Relative pressure measuring instruments of direct reading using air medium, analog and digital	(10 to 31] kPa	5 Pa	According to guide DKD-R 6-1:2014, using pressure calibrator. Calibration can be performed on-site.
	(31 to 100] kPa	160 parts per 10^6	
	(100 to 420] kPa	66 Pa	
	(420 to 1400] kPa	160 parts per 10^6	
	(1400 to 1800] kPa	190 parts per 10^6	
	(1800 to 2100] kPa	343 Pa	
	(2100 to 7000] kPa	190 parts per 10^6	
	(7000 to 10000] kPa	225 parts per 10^6	
	(7 to 15,3] kPa	0,62 Pa	According to guide DKD-R 6-1:2014, using pressure balance.
	(15,3 to 350] kPa	0,01 Pa + 40 parts per 10^6	
	(350 to 2800] kPa	0,1 Pa + 40 parts per 10^6	
	(2800 to 11000] kPa	0,1 Pa + 45 parts per 10^6	
Absolute pressure measuring instruments of direct reading using air medium, analog and digital	(35 to 420] kPa	66 Pa	According to guide DKD-R 6-1:2014, using pressure calibrator. Calibration can be performed on-site.
	(420 to 1400] kPa	160 parts per 10^6	
	(1400 to 1800] kPa	190 parts per 10^6	
	(1800 to 2100] kPa	343 Pa	
	(2100 to 7000] kPa	190 parts per 10^6	
	(7000 to 10000] kPa	225 parts per 10^6	

Calibration item / Parameters	Range of measurement	Expanded measurement uncertainty (k=2)*	Remarks
	(7 to 15,3] kPa	1 Pa	According to guide DKD-R 6-1:2014, using pressure balance.
	(15,3 to 1750] kPa	0,7 Pa + 40 parts per 10^6	
	(1750 to 2800] kPa	10 Pa + 40 parts per 10^6	
	(2800 to 7000] kPa	1,1 Pa + 45 parts per 10^6	
	(7000 to 11000] kPa	10 Pa + 45 parts per 10^6	
Chemical Measurements			
Gas-chromatographs for natural gas analysis / Performance evaluation	amount fraction %mol/mol	amount fraction %mol/mol	According to ISO 10723:2012 Calibration can be performed on-site.
	Methane [64 to 99,4]	0,06	
	Nitrogen [0,1 to 14]	0,0035 + 0,40 %	
	Carbon dioxide [0,05 to 8]	0,0005 + 0,30 %	
	Ethane [0,1 to 14]	0,0010 + 0,30 %	
	Propane [0,05 to 8]	0,0005 + 0,40 %	
	i-Butane [0,01 to 1,2]	0,0005 + 0,40 %	
	n-Butane [0,01 to 1,2]	0,0005 + 0,40 %	
	i-Pentane [0,005 to 0,5]	0,0005 + 0,60 %	
	n-Pentane [0,005 to 0,5]	0,0005 + 0,60 %	
	n-Hexane+ [0,005 to 0,35]	0,0005 + 1,1 %	

** Where uncertainty (with a probability of 95% coverage) is accompanied by the corresponding unit, it is absolute, while where it is not accompanied by a unit, it is relative.*

Calibration & Measurement Capability (CMC), includes the measured quantity, measurement range and measurement uncertainty and expresses the smallest measurement uncertainty that can be achieved during a calibration.

Permanent Laboratory premises address: **Magoula, Patima Elefsinas, 19200, Elefsina**
Approved signatories (for Pressure): **I. Karantanas, E. Kaparakos.**
Approved signatories (for Chemical): **I. Karantanas, K.Tsakou, N. M. Moneos.**

This Scope of Accreditation replaces the previous one dated 16.01.2024.
The Accreditation Certificate No.**758**-5, to ELOT EN ISO/IEC 17025:2017, is valid until 27.07.2028.

Athens, 29.01.2024

Christos Nestoras
CEO of ESYD