

Hellenic Accreditation System



Annex F2/9 to the Certificate No. **738-3**

SCOPE of ACCREDITATION of the Volumetric Vessel and Meter Calibration Laboratory of METRON S.A.

Measurand / Calibration item	Range of measurement	Calibration & Measurement Capability (k=2)*	Remarks
Volume measurements			
Liquid volume / Steel fixed tanks	[2 - 30] m ³	0,11 %	Volumetric method using volumetric vessels
	(30 - 100] m ³	0,10 %	Calibration medium: potable water
	(100 - 200] m ³	0,09 %	Standards followed: EURAMET/cg-21/v.01
	[2 - 10] m ³	0,14 %	Volumetric method using volume meter
	(10 - 100] m ³	0,13 %	Calibration medium: potable water
	(100 - 200] m ³	0,12 %	Standards followed: ISO 4269:2001
	[2 - 10] m ³	0,14 %	Volumetric method using volume meter
	(10 - 30] m ³	0,13 %	Calibration Medium: liquid refined products and lubricant oils according to API MPMS
	(30 - 200] m ³	0,12 %	Standards followed: ISO 4269:2001
	All uncertainties refer to the nominal tank volume All calibrations are performed on-site		

Measurand / Calibration item	Range of measurement	Calibration & Measurement Capability (k=2)*	Remarks
Liquid volume / Steel volumetric vessels of types "to contain" and "to deliver"	[10 – 100) l	0,06%	Volumetric method using volumetric vessels
	[100 – 500) l	0,04%	Calibration medium: potable water
	[500 -5000) l	0,05%	Standards followed: API MPMS CHAPTER 4: Proving Systems SECTION 4: Tank provers (1998)
	[5000 – 10000] l	0,06%	SECTION 7: Field Standard Test Measures (2009) Calibration can also be performed on site
Volumetric flow measurements			
Liquid Flow / Volume meters	[2,4 – 120] m ³ /h	0,08 %	Volumetric method using volumetric vessels Calibration medium: liquid refined products and lubricant oils. according to API MPMS Standards followed: API MPMS CHAPTER 4: Proving Systems SECTION 5: Master Meter Provers (2016) SECTION 8: Operation of Proving Systems (2013) Calibration can also be performed on site

Measurand / Calibration item	Range of measurement	Calibration & Measurement Capability (k=2)*	Remarks
Liquid Flow / Positive displacement volume meters	[2,4 – 120] m ³ /h	0,11 %	Volumetric method using positive displacement master meter. Calibration medium: liquid refined products and lubricant oils according to API MPMS. Standards followed: API MPMS CHAPTER 4: Proving Systems SECTION 5: Master Meter Provers (2016) SECTION 8: Operation of Proving Systems (2013) Calibration can also be performed on site
	[2,4 - 120] m ³ /h	0,10%	Volumetric method using volumetric vessels. Calibration medium: potable water. Standards followed: ISO 4269:2001 Calibration can also be performed on site

* Where uncertainty is accompanied by the corresponding unit, it is absolute, while where it is not accompanied by a unit, is relative.

Site of assessment: **Permanent laboratory premises, 45 D. Rigou Str. 19018 Magoula, Greece.**

Approved Signatories: **S. Valsamos, A. Boutos, I. Filiopoulos, M. Neroutsopoulos.**

This Scope of Accreditation replaces the previous one dated 30.05.2019

The Accreditation Certificate No. **738-3**, to ELOT EN ISO/IEC 17025: 2005, is valid until 26.05.2023.

Athens, 10.10.2019



Konstantinos Voutsinas
Managing Director of ESYD