Hellenic Accreditation System

Annex F2/10 to the Certificate No. **1107**-3

SCOPE of ACCREDITATION

of the

Calibration Laboratory

KOTSADAM PANAGIOTA – CALIBRATION SERVICES

<table>
<tr><th>Calibration item / Parameters</th><th>Range of measurement</th><th>Expanded measurement uncertainty (k=2)*</th><th>Remarks</th></tr>
<tr><td colspan="4">Volume Measurements</td></tr>
<tr><td rowspan="3">Volume / Vertical cylindrical tanks</td><td>Up to 12000 m^3
Maximum tank diameter 28 m</td><td><table><tr><th>Volume (m^3)</th><th>Uncertainty (%)</th></tr><tr><td>30</td><td>0,16</td></tr><tr><td>500</td><td>0,12</td></tr><tr><td>5000</td><td>0,11</td></tr><tr><td>12000</td><td>0,11</td></tr></table>on nominal tank volume</td><td>Calibration according to ISO 7507-1:2003
Bottom volume measurement according to:
- ISO 4269:2001
- ISO 7507-1:2003 (Physical Survey)
Calibration is performed on-site.</td></tr>
<tr><td>Up to 150000 m^3
Minimum tank diameter 8 m</td><td><table><tr><th>Volume (m^3)</th><th>Uncertainty (%)</th></tr><tr><td>500</td><td>0,15</td></tr><tr><td>2000</td><td>0,09</td></tr><tr><td>10000</td><td>0,07</td></tr><tr><td>50000</td><td>0,06</td></tr><tr><td>100000</td><td>0,06</td></tr><tr><td>150000</td><td>0,05</td></tr></table>on nominal tank volume</td><td>Calibration according to ISO 7507-3:2006
Measurement of reference circumference, volumetric table calculation and other measurements according to ISO 7507-1: 2003
Bottom volume measurement according to:
- ISO 4269:2001
- ISO 7507-1:2003 (Physical Survey)
Calibration is performed on-site.</td></tr>
<tr><td>Up to 10000 m^3
Minimum tank diameter 8 m</td><td><table><tr><th>Volume (m^3)</th><th>Uncertainty (%)</th></tr><tr><td>500</td><td>0,13</td></tr><tr><td>2000</td><td>0,09</td></tr><tr><td>10000</td><td>0,07</td></tr></table>on nominal tank volume</td><td>In-house calibration method based on combination of ISO 7507-3:2006 and ISO 7507-1:2003
Measurement of reference circumference, volumetric table calculation and other measurements according to ISO 7507-1: 2003
Bottom volume measurement according to:
- ISO 4269:2001
- ISO 7507-1:2003 (Physical Survey)
Calibration is performed on-site.</td></tr>
<tr><td>Calibration item /</td><td>Range of</td><td>Expanded measurement uncertainty</td><td>Remarks</td></tr>
</table>

<table>
<tr><th>Parameters</th><th>measurement</th><th>(k=2)*</th><th></th></tr>
<tr><td>Volume / Vertical cylindrical tanks
(continued)</td><td>Up to 150000 m^3
Minimum tank diameter 5 m</td><td><table><tr><th>Volume (m^3)</th><th>Uncertainty (%)</th></tr><tr><td>500</td><td>0,12</td></tr><tr><td>2000</td><td>0,10</td></tr><tr><td>10000</td><td>0,06</td></tr><tr><td>50000</td><td>0,06</td></tr><tr><td>100000</td><td>0,06</td></tr><tr><td>150000</td><td>0,05</td></tr></table>on nominal tank volume</td><td>Calibration according to ISO 7507-4:2010
Volumetric table calculation and other measurements according to ISO 7507-1: 2003
Bottom volume measurement according to:
- ISO 4269:2001
- ISO 7507-1:2003 (Physical Survey)
Calibration is performed on-site.</td></tr>
<tr><td rowspan="2">Volume / Horizontal cylindrical tanks</td><td>Up to 15.000 m^3</td><td><table><tr><th>Volume (m^3)</th><th>Uncertainty (%)</th></tr><tr><td>50</td><td>0,11</td></tr><tr><td>100</td><td>0,11</td></tr><tr><td>500</td><td>0,11</td></tr><tr><td>2.500</td><td>0,12</td></tr><tr><td>7.500</td><td>0,05</td></tr><tr><td>15.000</td><td>0,05</td></tr></table>on nominal tank volume</td><td>External calibration according to ISO 12917-1:2017
Calibration is performed on-site.</td></tr>
<tr><td>Up to 15.000 m^3
Minimum tank diameter 2 m</td><td><table><tr><th>Volume (m^3)</th><th>Uncertainty (%)</th></tr><tr><td>50</td><td>0,13</td></tr><tr><td>100</td><td>0,09</td></tr><tr><td>500</td><td>0,08</td></tr><tr><td>2.500</td><td>0,06</td></tr><tr><td>7.500</td><td>0,05</td></tr><tr><td>15.000</td><td>0,05</td></tr></table>on nominal tank volume</td><td>Internal calibration according to ISO 12917-2: 2002
Calibration is performed on-site.</td></tr>
<tr><td rowspan="2">Volume / Spherical tanks</td><td rowspan="2">Up to 6.000 m^3</td><td><table><tr><th>Volume (m3)</th><th>Uncertainty (%)</th></tr><tr><td>200</td><td>0,35</td></tr><tr><td>500</td><td>0,22</td></tr><tr><td>2.000</td><td>0,12</td></tr><tr><td>6.000</td><td>0,07</td></tr></table>on nominal tank volume</td><td>Calibration using strapping according to API 2552:1965
Calibration is performed on-site.</td></tr>
<tr><td><table><tr><th>Volume (m^3)</th><th>Uncertainty (%)</th></tr><tr><td>200</td><td>0,38</td></tr><tr><td>500</td><td>0,24</td></tr><tr><td>2.000</td><td>0,12</td></tr><tr><td>6.000</td><td>0,08</td></tr></table>on nominal tank volume</td><td>In-house electro-optical distance ranging method using total station, based on API 2552:1965
Calibration is performed on-site.</td></tr>
<tr><th>Calibration item / Parameters</th><th>Range of measurement</th><th>Expanded measurement uncertainty (k=2)*</th><th>Remarks</th></tr>
</table>

Volume / Fixed tanks	0,5 m^3 to 10 m^3	0,11 % of nominal tank volume	Volumetric method using flow meter according to ISO 4269:2001 Calibration medium: Tap water Calibration is performed on site.
	10 m^3 to 60 m^3	0,10 % of nominal tank volume	
Volume / Road tankers	0,5 m^3 to 10 m^3	0,11 % of nominal tank volume	Volumetric method using flow meter according to: - ISO 4269:2001 - OIML R 80-2: 2017 - Annex B Calibration medium: Tap water Calibration is performed on site.
	10 m^3 to 50 m^3	0,10 % of nominal tank volume	

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

The Calibration Measurement Capability (CMC) includes the measured quantity, the measurement range and the measurement uncertainty, expressing the minimum measurement uncertainty which can be achieved in a calibration.

Permanent laboratory premises address**: Anemonon 14, Alimos 17456, Attiki, Greece**

Road tank calibration site, 3 km Isthmos - Epidaurus, Isthmia Korinthias 20150

Approved Signatories: **N. Tsalamandris**

This Scope of Accreditation replaces the previous one dated 17.02.2026.
The Accreditation Certificate No. **1107**-3, to ELOT EN ISO/IEC 17025:2017, has been extended according to ESYD's decision and it is valid until 19.06.2026.

Athens, 14.05.2026

Konstantinou Evangelos Apostolos
CEO of ESYD