# Hellenic Accreditation System

Annex F2/7 to the Certificate No. **1062**-2

# SCOPE of ACCREDITATION

of the

## Calibration Laboratory

## MED CONTROL SERVICES O.E.

## PAPANIKOLAS ANTONIS & CO O.E.

| Calibration item / Parameters | Range of measurement | Expanded Measurement Uncertainty (k=2)* | Remarks |
|---|---|---|---|
| Volume Measurements | | | |
| Liquid volume / Fixed storage tanks including alcoholic beverages tanks | 0.5 $m^3$ to 10 $m^3$ | 0.13 % of nominal volume | Volumetric method using flow meter according to: ISO 4269:2001<br>Calibration medium:<br>- Water<br>- Liquid hydrocarbons (gasoline, diesel oil, bio-diesel, JET A1) – for fuel tanks only<br>Calibration is performed on site. |
| | 10 $m^3$ to 200 $m^3$ | 0.08 % of nominal volume | |
| Liquid volume / Road tankers | 0.5 $m^3$ to 10 $m^3$ | 0.13 % of nominal volume | Volumetric method using flow meter according to:<br>- ISO 4269:2001<br>- OIML R 80-2:2017 – Annex B<br>Calibration medium:<br>- Water<br>- Liquid hydrocarbons (gasoline, diesel oil, bio-diesel, JET A1)<br>Calibration is performed on site. |
| | 10 $m^3$ to 80 $m^3$ | 0.08 % of nominal volume | |
| Liquid Volume / Horizontal cylindrical tanks including alcoholic beverages tanks | 5 $m^3$ to 400 m3 | 0.03 % of nominal volume | Geometric method using strapping tape according to:<br>- ISO 12917-1:2017<br>- ISO 7507-1:2003 (other measurements)<br>Calibration is performed on site. |

<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 rowspan="3">Liquid volume / Vertical cylindrical tanks including alcoholic beverages tanks</td><td>15 $m^3$ to 200000 $m^3$<br>maximum tank diameter: 100 m</td><td><table><tr><th>Volume ($m^3$)</th><th>Uncertainty (%)</th></tr><tr><td>15</td><td>0.28</td></tr><tr><td>30</td><td>0.17</td></tr><tr><td>200</td><td>0.12</td></tr><tr><td>2000</td><td>0.12</td></tr><tr><td>≥10000</td><td>0.11</td></tr></table>of nominal volume</td><td>Geometric method using strapping tape according to: ISO 7507-1:2003<br>Calibration is performed on site.</td></tr>
<tr><td>above 250 $m^3$<br>minimum tank diameter: 8 m</td><td><table><tr><th>Volume ($m^3$)</th><th>Uncertainty (%)</th></tr><tr><td>250</td><td>0.19</td></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><tr><td>≥ 30000</td><td>0.06</td></tr></table>of nominal volume</td><td>Geometric method using total station according to:<br>- ISO 7507-3:2006<br>- ISO 7507-1:2003 (other measurements)<br>Calibration is performed on site.</td></tr>
<tr><td>above 200 $m^3$<br>minimum tank diameter: 5 m</td><td><table><tr><th>Volume ($m^3$)</th><th>Uncertainty (%)</th></tr><tr><td>200</td><td>0.16</td></tr><tr><td>2000</td><td>0.09</td></tr><tr><td>10000</td><td>0.07</td></tr><tr><td>≥ 40000</td><td>0.06</td></tr></table>of nominal volume</td><td>Geometric method using total station according to:<br>- ISO 7507-4:2010<br>- ISO 7507-1:2003 (other measurements)<br>Calibration is performed on site.</td></tr>
</table>

** 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: **Schina 37, Megara 19100, Greece**

Approved Signatories: **N. Papanikolas, S. Papanikolas**

This Scope of Accreditation replaces the previous one dated 16.03.2021.
The Accreditation Certificate No. **1062**-2, to ELOT EN ISO/IEC 17025:2017, is valid until 29.09.2024.

Athens, 18.10.2023

Christos Nestoras
*CEO of ESYD*