# **Hellenic Accreditation System**



# Annex F1C/1 to the Certificate No. 90-7

### **SCOPE of ACCREDITATION**

of the

# **Testing Laboratory**

of the

# Innovation Hub (DKK) of PPC S.A.

| Materials/ Products to be tested   | Types of test / Properties to be measured   | Applied methods / Techniques to be used   |  |  |
|--|---|---|--|--|
| Mechanical tests   |   |   |  |  |
| Concrete specimens with dimensions according to the Method "Ministry for the Environment, Physical Planning and Public Works SK-303":  1. Cubes: - 150 X 150 X150 mm - 200 X 200 X200 mm  2. Cylinders: - 100 X 200 mm | Compressive strength test   | Specification: HMEPPPW<br>SK-303, SK-304  |  |  |
| Concrete specimens with dimensions: Cubes: 150 X 150 X 150 mm  | Compressive strength test   | EAOT EN 12390-3:2019                      |  |  |
| Physical tests   |   |   |  |  |
| Soil samples   | Dry preparation of soil samples   | Specification: HMEPPPW*<br>E 105:1986, §1 |  |  |
| Soil samples (specimens)   | <ul><li>1. Determination of moisture of soil:</li><li>- Moisture</li></ul>  | Specification: HMEPPPW<br>E 105:1986, §2  |  |  |
|  | <ul> <li>2. Determination of moisture – density relation (PROCTOR standard method):</li> <li>Moisture</li> <li>Density</li> </ul> | Specification: HMEPPPW<br>E 105:1986, §10 |  |  |
| Soils  | Specific gravity of soils/specific gravity  | Specification: HMEPPPW<br>E105:1986 §4    |  |  |
|  | 2. Liquid limit   | Specification: HMEPPPW<br>E105:1986 §5    |  |  |

| Materials/ Products to be tested | Types of test / Properties to be measured  | Applied methods / Techniques to be used                                |
|----------------------------------|--|--|
|                                  | 3. Determination of plastic limit and plasticity index   | Specification: HMEPPPW<br>E105:1986 §6                                 |
|                                  | 4. Sieve analysis of fine and coarse soils (dry method) / Amount of passing material   | Specification: HMEPPPW E105:1986 §7                                    |
|                                  | 5. Determination of material of soils finer than the No 200 (75µm) sieve / Amount of passing material                                | Specification: HMEPPPW E105:1986 §8                                    |
| Aggregates                       | 1. Determination of materials finer than No 200 (75 μm) sieve in mineral aggregates by washing / Amount of material finer than 75 μm | ASTM C117:2017   |
|                                  | 2. Resistance to degradation of coarse aggregates by abrasion and impact in the Los Angeles machine / Amount of loss of weight       | ASTM C131/C131M : 2020<br>ASTM C535: 2016                              |
|                                  | 3. Reducing field samples of aggregate to testing size   | ASTM C702/C702M:2018<br>ΕΛΟΤ EN 932-2: 2000<br>Except §7, 12           |
|                                  | 4. Determination of particle size distribution - Sieving method  | ELOT EN 933-1: 2012  |
|                                  | 5. Assessment of fines – Methylene blue test   | ELOT EN 933-9:2022   |
|                                  | 6. Determination of resistance to fragmentation-Los Angeles Method   | ELOT EN 1097-2:2020, except<br>Annex A                                 |
|                                  | 7. Determination of particle density and water absorption of aggregates  | ELOT EN 1097-6:2022, §8, 9   |
|                                  | 1. Sieve analysis of fine aggregates /<br>Amount of passing material   | ASTM C136/C136M: 2019,<br>§7.3, 8, 9                                   |
| Fine aggregates                  | 2. Determination of specific gravity of fine aggregates / Specific gravity   | ASTM C128: 2015,<br>§8, 9, 10.2  |
|                                  | 3. Determination of absorption of fine aggregates /Amount of absorbed moisture   | ASTM C128: 2015,<br>§8, 9, 10.3  |
| Coarse aggregates                | 1. Sieve analysis of coarse aggregates/<br>Amount of passing material  | ASTM C136/C136M: 2019, §7.4, 8, 9                                      |
|                                  | 2. Determination of specific gravity of coarse aggregates / Specific gravity   | Specification: HMEPPPW<br>SK – 301: 1985 §5, 6, 7.1<br>ASTM C127: 2015 |
|                                  | 3. Determination of absorption of coarse aggregates / Amount of absorbed moisture  | Specification: HMEPPPW<br>SK – 301:1985 §5, 6, 7.3<br>ASTM C127: 2015  |
| Fresh concrete                   | 1. Slump of concrete / Measure of height of specimen   | Specification: HMEPPPW<br>SK – 309:1986                                |
|                                  | 2. Determination of air content of freshly mixed concrete by the pressure method/air percent   | ASTM C231/C231M: 2017a   |
|                                  | 3. Determination of density (unit weight) of concrete / Unit weight  | ASTM C138/C138M: 2017a   |
|                                  | 4. Slump test  | ЕЛОТ EN12350-2:2019  |

| Materials/ Products to be tested | Types of test / Properties to be measured   | Applied methods / Techniques to be used |  |  |
|----------------------------------|---|---|--|--|
| Concrete specimens               | <ul><li>1. Preparation and curing of concrete specimens:</li><li>- Dimensions</li><li>- Density</li></ul> | Specification: HMEPPPW<br>SK-303:1985   |  |  |
|                                  | 2. Making and curing specimens for strength test  | ELOT EN 12390-2:2019                    |  |  |
|                                  | 3. Density of hardened concrete   | ELOT EN 12390-7:2020, except<br>§6.5    |  |  |
| Sampling                         |   |   |  |  |
| Fresh concrete                   | Sampling of fresh concrete  | ЕЛОТ EN12350-1:2019                     |  |  |

Site of assessment: Laboratory permanent premises, 9 Leondariou Str., Kantza, Pallini, Attiki, Greece.

Approved signatories: A. Papathanasiou, A. Koukiasa, A. Kontou.

This Scope of Accreditation replaces the previous one dated 07.09.2023. The Accreditation Certificate No. **90**-7, to ELOT EN ISO/IEC 17025: 2017, is valid until 02.07.2027.

Athens, 01.07.2024

Christos Nestoras CEO of ESYD