Hellenic Accreditation System S.A.

Annex F1/9 to the Certificate No. **1123**-6

SCOPE of ACCREDITATION

of the

Testing Laboratory

HERACLES RESEARCH TECHNOLOGY CENTER (EKET)

of the

HERACLES GENERAL CEMENT COMPANY

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Physical Tests		
Concrete	Testing fresh concrete – Part 2 : Slump Test	EN 12350-2 / 2019
	Testing fresh concrete – Part 6 : Density	EN 12350-6 / 2019
	Testing Hardened Concrete – Part 2: Making and Curing Specimens for Strength Tests	EN 12390-02 / 2019
Aggregates	Tests for geometrical properties of aggregates - Part 1: Determination of particle size distribution - Sieving method	ELOT EN 933-1/E2:2012
	Tests for mechanical and physical properties of aggregates - Part 2: Methods for the determination of resistance to fragmentation (Los Angeles method	ELOT EN 1097-2/E2:2020
	Tests for mechanical and physical properties of aggregates – Annex G: Alternative narrow range classification for the Los Angeles test of 16/32mm recycled aggregates	ELOT EN 1097-2/annex G:2020

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Aggregates (cont.)	Tests for mechanical and physical properties of aggregates – Part 6: Determination of particle density and water absorption	EN 1097-6: 2022
	Tests for mechanical and physical properties of aggregates – Annex C: Determination of particle density and water absorption of lightweight aggregates	EN 1097-6 / annex C:2022
	Tests for geometrical properties of aggregates – Part 11: Classification test for the constituents of coarse recycled aggregates.	EN 933-11 / 2009
Mechanical tests		
Concrete	Testing Hardened Concrete – Part 3: Compressive Strength of Test Specimens	EN 12390-3 / 2019
	Standard Test Method for Static Modulus of Elasticity of Concrete	ASTM C469 / 2014
	Testing Hardened Concrete – Depth of penetration of water under pressure	EN 12390-8 / 2019
Chemical Tests		
Cement/ Clinker/ Raw Meal	Chemical analysis of cement/clinker/raw meal by X-ray fluorescence (Determination of CaO, MgO)	ISO 29581-2:2010
Raw meal and raw materials	Determination of carbon dioxide	In house method MDX-2 based on European Standard EN 196-2: 2013 (§ 4.5.17)
	Determination of Total Organic Carbon in raw meal and raw materials of cement	In house method MDX-10 based on European Standards EN 13639:2017 clause 8 and ISO 29541:2010
Solid mineral fuels	Determination of gross calorific value by the bomb calorimetric method and calculation of net calorific value	ISO 1928: 2020
	Determination of total carbon, hydrogen and nitrogen	ISO 29541: 2010
	Determination of moisture in the general analysis test sample (coke)	ISO 687: 2010
	Determination of ash	ISO 1171: 2010

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Solid recovered fuels	Determination of calorific value	EN ISO 21654:2021
	Determination of chlorine (Cl)	EN 15408: 2011 and ISO 9297: 1989
	Determination of moisture content using the oven dry method. Moisture in general analysis sample	ISO 21660-3:2021
	Determination of ash content of SRF	EN ISO 21656:2021
	Determination of carbon (C), hydrogen (H) and nitrogen (N) content of SRF	EN ISO 21663:2020
Raw materials, solid mineral fuels and solid recovered fuels	Determination of total mercury in raw materials, solid mineral fuels and solid recovered fuels	In house method MDX-9 based on Lafarge method “Determination of total mercury in solid and liquid samples”v.1, Sept 2012

Site of assessment: **Permanent laboratory premises, 1 A.Kontopoulou Street, Drapetsona, Attiki, Greece.**
Approved signatories: **Maria Nomikou, Christina-Amalia Drosou, Ioannis Zagkoutis.**

This Scope of Accreditation replaces the previous one dated 23.03.2023.
The Accreditation Certificate No. **1123**-6, to ELOT EN ISO/IEC 17025:2017, is valid until 11.04.2027.

Athens, 02.09.2024

Christos Nestoras
CEO of E.SY.D.