Hellenic Accreditation System

Annex F1/13 to the Certificate No. **23**-5

SCOPE of ACCREDITATION
of the
Laboratories
of
R&D and QUALITY DEPARTMENT
of
TITAN Cement Company S.A.

Tested materials/ Products	Types of test/ Properties to be measured	Applied standards/Techniques to be used
Physical Tests		
Concrete	1.Slump test of fresh concrete	Nat. Leg. ΣΚ-309 : 1986 ASTM C143/C 143M-15 :2015
	2.Testing fresh concrete .Part 2: Slump test	ELOT EN 12350-2:2009
Aggregates	1.Particle size distribution of aggregates	ELOT EN 933-1: 2012
	2.Determination of sand equivalent of soil and fine aggregate	ASTM D 2419:2014
	3.Tests for geometrical properties of aggregates Part 8: Assesement of fines – Sand equivalent test	ELOT EN 933-8: 2012+A1:2015
	4.Tests for geometrical properties of aggregates Part 9: Assessment of fines – Methylene Blue Test	ELOT EN 933-9:2009+A1:2013

Tested materials/ Products	Types of test/ Properties to be measured	Applied standards/Techniques to be used
Aggregates(con.)	5.Tests for geometrical properties of aggregates Part 4: Determination of particle shape – Shape index	ELOT EN 933-4: 2008
	6.Tests for geometrical properties of aggregates Part 3: Determination of particle shape – Flakiness index	ELOT EN 933-3: 2012
Mechanical tests		
Concrete	1.Preparation curing, and compressive strength determination of concrete cubic specimens	Nat. Leg. ΣΚ-304 : 1986 Nat. Leg. ΣΚ-303 : 1985
		ELOT EN 12390-2:2009
	2.Testing hardened concrete - Part 3: Compressive strength of test specimens (cubic specimens up to 150.2mm dimensions)	ELOT EN 12390-3:2010
	3.Vebe test	ELOT EN 12350.03:2009
Chemical tests		
Coal	Determination of total moisture	ISO 589:2008 Method A2
Coke	Moisture determination	ISO 687:2010
Coal/Coke	Determination of total sulfur	ISO 334:2013
Solid mineral fuels	1.Determination of ash content	ISO 1171:2010
	2.Determination of total carbon, hydrogen and nitrogen	ISO 29541:2010
	3.Determination of gross calorific value and calculation of net calorific value	ISO 1928:2009

Tested materials/ Products	Types of test/ Properties to be measured	Applied standards/Techniques to be used
Raw meal	1.CO_2 determination	In house method based on ELOT EN 196-2 :2013 §4 (M43)
		In house method with the use of Differential Scanning calorimetry – Thermogravimetry (M45)
	2.Determination of major elements	In house method based on ELOT EN 196-2:2013 §4 (M44)
	3.Determination of total organic carbon (TOC)	In house method based on ELOT EN 13639:2017 §6 (M46)
Cement	1.Determination of major elements	ELOT EN 196-2:2013 §4
	2.Determination of the water –soluble chromium(VI)	ELOT EN 196-10:2016
Limestone	Determination of total organic carbon (TOC)	ELOT EN 13639:2017

Site of assessment: **Permanent laboratory premises, Kamari Plant, Elefsis**
Approved signatories: **Ioannis Giannakopoulos, Emmanouil Tzanis**

This Scope of Accreditation replaces the previous one dated 10.05.2019.
The Accreditation Certificate No. **23**-4, to ELOT EN ISO/IEC 17025:2005, is valid until 04.07.2021.

Athens, 24.02.2020

Spyridon Podaras
Managing Director, ESYD