

Hellenic Accreditation System S.A.



ACCREDITATION CERTIFICATE

No. 18-3

The Hellenic Accreditation System S.A. (ESYD), as the national accreditation body of Greece in accordance with the Law 3066/2002,

ACCREDITS

the
Soil and Rock Mechanics Testing Laboratory
of the
Sotiropoulos and Associates S.A.
at Pallini, Attiki, Greece

under the terms of the ELOT EN ISO/IEC 17025: 2005 Standard, to carry out tests, as specified in the attached Scope of the Accreditation, which may be revised by decisions of ESYD.

The initial accreditation was issued on 23.4.2001. This Certificate is valid until 23.04.2017, provided that the accredited body will comply with the above Standard and the ESYD Criteria.

Athens, April 19th, 2013



A handwritten signature in blue ink, appearing to be 'Ioannis Sitaras', written over a faint grid background.

Ioannis Sitaras
Director of the Laboratories Accreditation Division

Hellenic Accreditation System



Annex F1/10 to the Certificate No. **18-3**

SCOPE of ACCREDITATION of Soil and Rock Mechanics Testing Laboratory of the Sotiropoulos and Associates S.A.

Materials / Products to be tested	Type of test / Properties to be measured	Applied methods / Techniques to be used
	Physical tests	
1. Soil Samples	Standard Practice for Dry Preparation of Soil Samples for laboratory testing	ASTM D 421-85 (Reapproved 2007)
	Standard test method for laboratory determination of water (moisture) content of soil and rock	ASTM D 2216-10
	Standard test method for specific gravity of soils	ASTM D 854-14
	Method of determination of liquid limit - Determination of plastic limit and plasticity index.	E-105/86 §5,§6
	Standard test method for particle-size analysis of soils.	ASTM D 422-63 (Reapproved 2007)
	Determination of bulk unit weight of cohesive soils	E-105/86 §3
2. Rock Specimen	Determination of specific gravity and (moisture) absorption of coarse aggregate	AASHTO T85-13
	Resistance to degradation and percussion of small size coarse aggregates by abrasion and impact use in the Los Angeles Machine	AASHTO T96- 02(2010)
	Porosity and density determination of rock samples using a micrometer and a vacuum pump	E 103-84§2
	Determination of the water (moisture) content of a rock sample	E 103-84§1

Materials / Products to be tested	Type of test / Properties to be measured	Applied methods / Techniques to be used
	Mechanical Tests	
1. Soil samples	Test method for laboratory compaction characteristics of soil using standard effort (12,400 ft-lbf/ft ³ (600 kN-m/m ³))	ASTM D 698-12
	Test method for laboratory compaction characteristics of soil using modified effort (56,000ft-lbf/ft ³ (2,700 kN-m/m ³))	ASTM D 1557-12
	Standard test method for cbr (california bearing ratio) of laboratory compacted soils	ASTM D 1883-14
	Standard test method for one-dimensional consolidation properties of soils	ASTM D 2435-M11
	Standard test methods for one-dimensional swell or settlement potential of cohesive soils	ASTM D 4546-14
	Standard test method for unconfined compressive strength of cohesive soil	ASTM D 2166M-13
	Standard test method for unconsolidated, undrained compressive strength of cohesive soils in triaxial compression	ASTM D 2850-03a (Reapproved 2007)
	Standard test method for consolidated-undrained triaxial compression test on cohesive soils	ASTM D 4767-11 E 105/86 §15
	Triaxial test on cohesive soils – consolidated-drained tests (§ 6.3).	E 105/86 §15
	Determination of shear strength by direct shear (small shearbox apparatus) – consolidated undrained test	E 105-86, §16
	Determination of shear strength by direct shear (small shearbox apparatus) – consolidated-drained test	ASTM D 3080-11 E 105-86 §16
	Determination of shear strength by direct shear (small shearbox apparatus) – Unconsolidated-undrained test	E 105-86 §16

Materials / Products to be tested	Type of test / Properties to be measured	Applied methods / Techniques to be used
2. Rock samples	Slake durability of shales and similar weak rocks	ASTM D4644-08
	Direct shear strength tests of rock specimens under constant normal force	ASTM D 5607-08
	Determination of the point load strength of rock samples	E 103-84-5

Site of assessment: **Permanent laboratory premises, 91 Ethnikis Antistaseos, Pallini, Attiki, Greece.**
Approved signatory: **A. Kontou, M. Vlamis.**

This Scope of Accreditation replaces the previous one dated April 4th, 2014.
The Accreditation Certificate No. **18-3**, to ELOT EN ISO/IEC 17025:2005, is valid until 22.4.2017.

Athens, October 26th, 2015



Ioannis Sitaras
Director of the Laboratories Accreditation Division