Hellenic Accreditation System

Annex F1/18 to the Certificate No. **418**-5

SCOPE of ACCREDITATION

of the

Testing Laboratory

of

ALEXANDER ELIA PAPADOPOULOS-I.C.Lab.

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Electrical tests		
Transformer insulating oils	Breakdown voltage (BDV)	IEC 60156:2018 (Ed.3.0) ASTM D1816-12(2019)
Physical tests		
1. Transformer insulating oils 2. Lubricants	Interfacial tension (IFT)	ASTM D 971-20
	Dynamic and calculation of kinematic viscosity at 40ºC (V40)	ASTM D7042-21
	Dynamic and calculation of kinematic viscosity at 100ºC (V100)	ASTM D7042-21
	Density (D)	ASTM D7042-21
	Viscosity index calculation (VI)	ASTM D7042-21
	Visual color determination (C)	ASTM D1500-12(2017)
		ASTM D3828-16a.

	Flash Point (FP)	
Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Chemical tests		
1. Transformer insulating oils 2. Lubricants	Water content (WC)	ASTM D 1533-20
	Polychlorinated biphenyls (PCBs)	ASTM D 4059-00 (Reapproved 2018)
	Acid number (AN)	ASTM D 974-14e2
	Analysis of Gases Dissolved in Electrical Insulating Oil by Gas Chromatography (DGA)	ASTM D3612-02 (Reapproved 2017) IEC 60567:2011(Ed.4.0)
	Furanic Compounds in Electrical Insulating Liquids by High-Performance Liquid Chromatography (Fur-HPLC)	ASTM D5837-15 IEC 61198:1993 (Ed.1.0)
	Corrosive Sulfur in Electrical Insulating Oils (CS)	ASTM D1275-15
	Examination of insulating oils in the infrared (FTIR)	ASTM D2144-07(2013)
	Determination of dibenzylsulfide (DBDS)	IEC 62697-1 (2012).
	Phenolic oxidation inhibitors (antioxidants DBP & C)	ASTM D2668-07(2013) IEC 60666:2010-A&B.
	Determination of passivators in mineral oils (Pass)	IEC 60666:2010-Annex B.
Liquid Waste	Mercury (Hg)	EPA 7473-07
Samplings		
Transformer insulating oils	Sampling	IEC 60475:2011 (Ed.2.0) ASTM D 923-15
Opinions and Interpretations		
Transformer insulating oils	Interpretation of laboratory results using the accredited methods on samples of transformer insulating oils and expression of opinions on sample state and the operational state of the insulated equipment	In-house method based on IEC 60296, IEC 60422 and IEC 60599:2015

Site of assessment: **Permanent laboratory premises, 16A Persefonis Str., Elefsina, Attiki, Greece.**
Approved signatory: **Alexander E. Papadopoulos.**

This Scope of Accreditation replaces the previous one dated 04.04.2024.
The Accreditation Certificate No. **418**-5, to ELOT EN ISO/IEC 17025:2017, is valid until 08.04.2025.

Athens, 10.10.2024

Konstantinos Kourtalis
Chairman of E.SYD