

# Hellenic Accreditation System



Annex F1/7 of the Certificate No. 553-2

## SCOPE of ACCREDITATION

of the

**Testing Laboratory**

of

**LABOR S.A.**

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
I. Electrical tests		
<b>1.</b>		
Household and similar electrical appliances	<b>Dielectric strength</b> (0-4,2) kV a.c.	EN 60335-1:2012 § 13.3
Medical electrical equipment		EN 60601-1:2006 +A11:2011, § 8.8.3
Luminaries		EN 60598-1:2008 +A11:2009, § 10.2.2
Information technology equipment		EN 60950-1:2006 +A1:2010 +A11:2009 +A12:2011, +A2:2013 § 5.2
Power transformers, power supplies, reactors and similar products		EN 61558-1:2005 +A1:2009, § 18.1, 18.3
Automatic electrical controls for household and similar use		EN 60730-1:2011 § 13.2
Safety requirements for electrical equipment for measurement, control and laboratory use		EN 61010-1:2010, § 6.8
Switches for household and similar fixed electrical installations		EN 60669-1:1999 +A1:2002 +A2:2008, § 16
Safety of electric toys		EN 62115:2005 +A2:2011, § 10, 12
Plugs, socket-outlets and couplers for industrial purposes.		EN 60309-1:1999 +A1:2007, § 19

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Dentistry - Dental units		EN ISO 7494-1:2011, § 5.3.13
Plugs and socket-outlets for household and similar purposes		IEC 60884-1:2002, +A1:2006 +A2:2013 §17.2
<b>2.</b>	<b>Leakage current</b>  (0-30) mA a.c.	
Household and similar electrical appliances		EN 60335-1:2012 § 13.2
Luminaries		EN 60598-1:2008 +A11:2009, § 10.3
Information technology equipment		EN 60950-1:2006 +A1:2010 +A11:2009 +A12:2011, +A2:2013 § 5.1
Power transformers, power supplies, reactors and similar products		EN 61558-1:2005 +A1:2009, § 18.1, 18.5
Electrical equipment of non-electric appliances for household and similar purposes		EN 60335-2-102:2006 +A1:2010, § 13
Arc welding equipment		EN 60974-1:2005, § 6.3.2
Dentistry - Dental units		EN ISO 7494-1:2011, § 5.3.12
Hand-held motor-operated electric tools - Safety		EN 60745-1:2009 +A11:2010, § 13
<b>3.</b>	<b>Insulation resistance</b>  (0,1-200) MΩ with 500V d.c.	
Luminaries		EN 60598-1:2008 +A11:2009, § 10.2, 10.2.1
Edison screw lampholders		EN 60238:2004 +A1:2008 +A2:2011, § 14.4
Switches for household and similar fixed-electrical installations		EN 60669-1:1999 +A1:2002 +A2:2008, § 16
Bayonet lampholders		EN 61184:2008 +A1:2011, § 14
Safety rules for the construction and installation of lifts. Electric lifts.		EN 81-1:1998 +A1:2005 +A2:2004 +A3:2009, § 13.1.3
Safety rules for the construction and installation of lifts. Hydraulic lifts.		EN 81-2: 1998 +A1:2005 +A2:2004 +A3:2009, § 13.1.3

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Automatic electrical controls for household and similar use		EN 60730-1:2011, § 13.1
Audio, video and similar electronic apparatus		EN 60065:2002 +A1:2006 +A11:2008 +A2:2010 +A12:2011 , § 10.3
Power transformers, power supplies, reactors and similar products		EN 61558-1:2005 +A1:2009, § 18.1, 18.2
Electrical installation in ships. Special features. Control and instrumentation		IEC 60092-504:2001
Hold, ballast and dry space water level detectors and Performance Standards for Water Level Detectors on Bulk Carriers		IACS*** SC180:Sept.2003, § 4.1
Plugs and socket-outlets for household and similar purposes		IEC 60884-1:2002, +A1:2006 +A2:2013 §17.2
<b>4.</b>	<b>Input power</b> (0,05-20) kW	
Household and similar electrical appliances		EN 60335-1:2012 § 10.1
Medical electrical equipment		EN 60601-1:2006 +A11:2011, § 4.11
<b>5.</b>	<b>Tracking test</b> (0-600) V	
Method for the determination of the proof and the comparative tracking indices of solid insulating materials		EN 60112:2003 +A1:2009
Household and similar electrical appliances		EN 60335-1:2012 Annex N
Luminaries		EN 60598-1:2008 +A11:2009, § 13.4
Edison screw lampholders		EN 60238:2004 +A1:2008 +A2:2011, § 20.5
Bayonet lampholders		EN 61184:2008 +A1:2011, § 19.5
Lampholders for tubular fluorescent lamps and starterholders		EN 60400:2008 +A1:2011 , § 17.6

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Miscellaneous lampholders.  Switches for appliances  Switches for household and similar fixed electrical installations  Automatic electrical controls for household and similar use  Appliance couplers for household and similar general purposes. Plugs and socket-outlets for household and similar purposes  Plugs, socket-outlets and couplers for industrial purposes.  Power transformers, power supplies, reactors and similar products  Devices for the connection of luminaries for household and similar purposes. General requirements  Boxes and enclosures for electrical accessories for household and similar fixed electrical installations		EN 60838-1:2004 +A1:2008 +A2:2011, §16.5  EN 61058-1:2002 +A2:2008, Annex D  EN 60669-1:1999 +A1:2002 +A2:2008, § 24.2  EN 60730-1:2011, § 21.2.7  EN 60320-1:2001 +A1:2007, § 27.2  IEC 60884-1:2006, +A1:2006 +A2:2013 § 28.2 CEE 7/63, § 28b  EN 60309-1:1999 +A1:2007, § 27.5  EN 61558-1:2005 +A1:2009, Annex G  EN 61995-1:2008, § 26.2  EN 60670-1:2005, +A1:2013 § 19
<b>6.</b>  Information technology equipment  Household and similar electrical appliances	<b>Input current</b> (0-20) A	EN 60950-1:2006 +A1:2010 +A11:2009 +A12:2011, § 1.6.2  EN 60335-1:2012 § 10.2
<b>7.</b>  Luminaries  Information technology equipment  Edison screw lampholders  Bayonet lampholders  Plugs and socket-outlets for household and similar purposes	<b>Earthing resistance</b> (0-7) $\Omega$	EN 60598-1:2008 +A11:2009, § 7.2  EN 60950-1:2006 +A1:2010 +A11:2009 +A12:2011, +A2:2013 § 2.6.3.4  EN 60238:2004 +A1:2008 +A2:2011, § 11.2  EN 61184:2008 +A1:2011, § 11.3  IEC 60884-1:2002, +A1:2006 +A2:2013 §11.5

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
<p><b>8.</b></p> <p>Fire hazard testing. Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products</p> <p>Fire hazard testing. Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure</p> <p>Household and similar electrical appliances</p> <p>Luminaries</p> <p>Bayonet lampholders</p> <p>Edison screw lampholders</p> <p>Lampholders for tubular fluorescent lamps and starterholders</p> <p>Electrical accessories - Circuit breakers for overcurrent protection for household and similar installations. Circuit-breakers for a.c. operation</p> <p>Conduit systems for cable management</p> <p>Power transformers, power supplies, reactors and similar products</p> <p>Devices for the connection of luminaries for household and similar purposes. General requirements</p> <p>Plugs and socket-outlets for household and similar purposes</p>	<p><b>Glow wire test</b> (500-980) °C</p>	<p>EN 60695-2-11:2001 IEC 60695-2-11:2000</p> <p>EN 60695-2-10:2013 IEC 60695-2-10:2013</p> <p>EN 60335-1:2012 § 30.2</p> <p>EN 60598-1:2008 +A11:2009, § 13.3</p> <p>EN 61184:2008 +A1:2011, § 19.3</p> <p>EN 60238:2004 +A1:2008 +A2:2011, § 20.3</p> <p>EN 60400:2008 +A1:2011, § 17.4</p> <p>EN 60898-1:2003 +A1:2004 +A11:2005 +A12:2008 +A13:2012, § 9.15</p> <p>EN 61386-1:2008, § 13.1.3.1</p> <p>EN 61558-1:2005 +A1:2009, § 27.3.1</p> <p>EN 61995-1:2008, § 26.1</p> <p>IEC 60884-1:2002, +A1:2006 +A2:2013 §28.1.1</p>

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
<b>9.</b>  Household and similar electrical appliances  Information technology equipment  Audio, video and similar electronic apparatus  Medical electrical equipment  Luminaries	<b>Load discharge</b>  0-230 V a.c.	EN 60335-1:2012 § 22.5  EN 60950-1:2006 +A1:2010 +A11:2009 +A12:2011, +A2:2013 § 2.1.1.7  EN 60065:2002 +A1:2006 +A11:2008 +A2:2010 +A12:2011, § 9.1.6  EN 60601-1:2006 +A11:2011, § 8.4.3, § 8.4.4  EN 60598-1:2008 +A11:2009, § 8.2.7
<b>10.</b>  Fire hazard testing. Abnormal heat. Ball pressure test  Medical electrical equipment  Household and similar electrical appliances  Luminaries  Switches for household and similar fixed electrical installations  Information technology equipment  Power transformers, power supplies, reactors and similar products  Switches for appliances  Boxes and enclosures for electrical accessories for household and similar fixed electrical installations  Hand-held motor-operated electric tools – Safety  Plugs and socket-outlets for household and similar purposes	<b>Ball pressure test</b>	EN 60695-10-2:2003  EN 60601-1:2006 +A11:2011, § 8.8.4.1  EN 60335-1:2012 § 30.1  EN 60598-1:2008 +A11:2009, § 13.2.1  EN 60669-1:1999 +A1:2002 +A2:2008, § 21.2, 21.3  EN 60950-1:2006 +A1:2010 +A11:2009 +A12:2011, + A2:2013 § 4.5.5  EN 61558-1:2005 +A1:2009, § 27.1  EN 61058-1:2002 +A2:2008, ANNEX E  EN 60670-1:2005, +A1:2013 § 16.1  EN 60745-1:2009 +A11:2010, § 29.1  IEC 60884-1:2002, +A1:2006 +A2:2013 §25.2

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
<b>11.</b>  Conduit systems for cable management  Rigid conduit systems  Pliable conduit systems  Flexible conduit systems	<b>Resistance to heat test</b>	EN 61386-1:2008, § 12.2  EN 61386-21:2004, +A11:2010 § 12  EN 61386-22:2004, +A11:2010 § 12  EN 61386-23:2004, +A11:2010 § 12
<b>12.</b>  Fire hazard testing. Test flames. Needle-flame test method - Apparatus, confirmatory test arrangement and guidance  Luminaries  Safety of electric toys  Lampholders for tubular fluorescent lamps and starterholders  Bayonet lampholders  Household and similar electrical appliances  Household and similar electrical appliances. Appliances for skin or hair care  Audio, video and similar electronic apparatus  Information technology equipment	<b>Needle flame test</b>	EN 60695-11-5:2005  EN 60598-1:2008 +A11:2009, § 13.3.1  EN 62115:2005 +A2:2011, +A11:2012 Annex B  EN 60400:2008 +A1:2011, § 17.5  EN 61184:2008 +A1:2011, § 19.4  EN 60335-1:2012 § 8  EN 60335-2-23:2003 +A1:2008 +A11:2010, § 30.101  EN 60065:2002 +A1:2006 +A11:2008 +A2:2010 +A12:2011, Annex G.3  EN 60950-1:2006 +A1:2010 +A11:2009 +A12:2011, +A2:2013 § 4.6.2

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
II. Performance tests		
<b>1.</b>  Degrees of protection provided by enclosures (IP Code)  Household and similar electrical appliances  Medical electrical equipment  Luminaries  Information technology equipment  Audio, video and similar electronic apparatus  Automatic electrical controls for household and similar use  Conduit systems for cable management  Electrical installation in ships. Special features. Control and instrumentation  Maritime navigation and radiocommunication equipment and systems  Plugs and socket-outlets for household and similar purposes	<b>Test for protection against access to hazardous parts and solid foreign objects</b>	EN 60529:1991 +A1:2000, § 12, 13, 15  EN 60335-1:2012 § 22.1  EN 60601-1:2006 +A11:2011, § 5.9.2  EN 60598-1:2008 +A11:2009, § 4.13, 8.2.5, 9.2.0, 11.2.1  EN 60950-1:2006 +A1:2010 +A11:2009 +A12:2011, +A2:2013 § 2.1.1  EN 60065:2002 +A1:2006 +A11:2008 +A2:2010 +A12:2011, § 9.1.1.2  EN 60730-1:2011, § 12.1  EN 61386-1:2008, § 14.1.2  IEC 60092-504:2001  EN 60945:2002, § 4.6.1, 12.1  IEC 60884-1:2002, +A1:2006 +A2:2013 §16.2.1
<b>2.</b>  Degrees of protection provided by enclosures (IP Code)	<b>Test for protection against water</b>	EN 60529:1991 +A1:2000 § 14.2.3, § 14.2.4, § 14.2.5, § 14.2.6, § 14.2.7, § 14.2.8



Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
Household and similar electrical appliances		EN 60335-1:2012 § 15.1, § 22.1
Medical electrical equipment		EN 60601-1:2006 +A11:2011, § 11.6.5
Luminaries		EN 60598-1:2008 +A11:2009, § 9.2
Information technology equipment		EN 60950-1:2006 +A1:2010 +A11:2009 +A12:2011, +A2:2013 Annex T
Audio, video and similar electronic apparatus		EN 60065:2002 +A1:2006 +A11:2008 +A2:2010 +A12:2011, Annex A § A.10.2.1
Automatic electrical controls for household and similar use		EN 60730-1:2011, § 12.1
Conduit systems for cable management		EN 61386-1:2008, § 14.1.3
Maritime navigation and radiocommunication equipment and systems		EN 60945:2002, § 8.8, § 8.9
Electric toys - Safety		EN 62115:2005 +A2:2011, +A11:2012 § 11.1
Life-saving appliances		MSC** 70/23/Add.1 Annex 6 § 10.2.5
Dewatering of forward spaces of bulk carriers		IACS*** SC179:Sept.2003 § 6
Military Equipment		MIL-STD-810F Method 512.4****
Electrical installation in ships. Special features. Control and instrumentation		IEC 60092-504:2001
Hold, ballast and dry space water level detectors and Performance Standards for Water Level Detectors on Bulk Carriers		IACS*** SC180:Sept.2003, § 4.1
Plugs and socket-outlets for household and similar purposes		IEC 60884-1:2002, +A1:2006 +A2:2013 §16.2.2

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
<b>3.</b>  Environmental testing. Dry heat  Maritime navigation and radiocommunication equipment and systems  Household and similar electrical appliances  Low-voltage power supply devices, d.c. output  Programmable controllers  Electronic equipment for use in power installations  Hold, ballast and dry space water level detectors and Performance Standards for Water Level Detectors on Bulk Carriers  Electrical installation in ships. Special features. Control and instrumentation  Military Equipment	<b>Durability and resistance to environmental conditions - Dry heat</b>  (25 – 300) °C	EN 60068-2-2:2007  EN 60945:2002, § 8.2, Annex B.2  MSC**/Circ.980 Annex § 3.2.4  EN 60335-1:2012 § 29.3.3  EN 61204:1995 +A1:2001, § 7.2.2  EN 61131-2:2007, § 6.1.1  EN 50178:1997, § 9.4.2.1  IACS*** SC180:Sept.2003  IEC 60092-504:2001 Table 1  MIL-STD-810C:1975 Μέθοδος :501.1**** MIL-STD-810D:1983 Μέθοδος :501.2**** MIL-STD-810E:1989 Μέθοδος :501.3**** MIL-STD-810F:2000 Μέθοδος :501.4****

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
<b>III. Safety tests</b>		
<b>1.</b>	<b>Protection against electric shock</b>	
Household and similar electrical appliances		EN 60335-1:2012 § 8
Electrical equipment of non-electric appliances for household and similar purposes		EN 60335-2-102:2006 +A1:2010 , § 8
Luminaries		EN 60598-1:2008 +A11:2009, § 8.2
Edison screw lampholders		EN 60238:2004 +A1:2008 +A2:2011, § 9.2
Devices for the connection of luminaries for household and similar purposes. General requirements		EN 61995-1:2008, § 10
Lampholders for tubular fluorescent lamps and starterholders		EN 60400:2008 +A1:2011, § 8
Lamp controlgear		EN 61347-1:2008 +A1:2011, +A2:2013 § 10
Hand-held motor-operated electric tools - Safety		EN 60745-1:2009 +A11:2010, § 9
Electric irons		EN 60335-2-3:2002 +A1:2005 +A2:2008 +A11:2010, § 8
Grills, toasters and similar portable cooking appliances		EN 60335-2-9:2003 +A1:2004 +A2:2006 +A12:2007 +A13:2010, § 8
Kitchen machines		EN 60335-2-14:2006 +A1:2008 +A11:2012, § 8
Appliances for heating liquids		EN 60335-2-15:2002 +A1:2005 +A2:2008 +A11:2012, § 8
Storage water heaters		EN 60335-2-21:2003 +A1:2005 +A2:2008, § 8
Microwave ovens, including combination microwave ovens		EN 60335-2-25:2012, § 8
Plugs and socket-outlets for household and similar purposes		IEC 60884-1:2002, +A1:2006 +A2:2013 §10

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
IV. Other tests		
<b>1.</b>	<b>Inspections and tests for marking</b>	
Conduit systems for cable management		EN 61386-1:2008, § 7
Household and similar electrical appliances		EN 60335-1:2012 § 7.14
Luminaries		EN 60598-1:2008 +A11:2009, § 3.2
Domestic cooking appliances burning gas.		EN 30-1-1:2008, § 8.1, § 8.2
Safety of electric toys		EN 62115:2005 +A2:2011, +A11:2012 § 7.7
Information technology equipment		EN 60950-1:2006 +A1:2010 +A11:2009 +A12:2011, +A2:2013 § 1.7.11
Audio, video and similar electronic apparatus		EN 60065:2002 +A1:2006 +A11:2008 +A2:2010 +A12:2011, § 5
Medical electrical equipment		EN 60601-1:2006 +A11:2011, § 7.1.3
Metrological aspects of non-automatic weighing instruments		EN 45501:1992, § 7
Plugs and socket-outlets for household and similar purposes		IEC 60884-1:2002, +A1:2006 +A2:2013 §8
<b>2.</b>	<b>Test for oil resistance</b>	
Maritime navigation and radiocommunication equipment and systems		EN 60945:2002, § 8.11
Maritime equipment		IMO* :1985 Resolution MSC** 81(70) /1998, MSC** 70/23/ Add.1 Annex 6, §1.4, §2.4, §10.4.6, §11.2.5.3  IMO* :1985 Resolution A.521(13) Annex Part 1, §1.4, §5.16.2.5.3  IMO* :1985 MSC**/Circ.980/ Add.1, DE 43/18/Add.3 Annex 2 §4.3.1.9, §4.3.6.10  IMO* :1985 Resolution A.689(17) Annex Part 1, §1.4, §2.4, §3.1.13, §5.17.13.10, §7.2.17.10, §11.2.5.3

Materials / Products to be tested	Types of test / Properties to be measured	Applied methods / Techniques to be used
<b>3.</b>  Plugs and socket-outlets for household and similar purposes	<b>Resistance to rusting</b>	IEC 60884-1:2002, +A1:2006 +A2:2013, §29
<b>V. Mechanical test</b>		
<b>1.</b>  Plugs and socket-outlets for household and similar purposes	<b>Impact test at low temperature (-15<sup>0</sup>C)</b>	IEC 60884-1:2002, +A1:2006 +A2:2013, §24.4
<b>2.</b>  Plugs and socket-outlets for household and similar purposes	<b>Mechanical test for terminal with screw clamping</b>	IEC 60884-1:2002, +A1:2006 +A2:2013 , §12.2.5, §12.2.6, §12.2.7, §12.2.8, §12.3.10.

\*IMO: International Maritime Organization.

\*\* MSC: Maritime Safety Committee.

\*\*\* IACS: International Association of Classification Societies.

\*\*\*\* In-house method, based on a withdrawn Standard.

Site of assessment: **Permanent Laboratory premises, 84, Ethnikis Antistaseos Str., Pallini, Attiki, Greece.**

Approved signatories: **Antonios Politis.**

This Scope of Accreditation replaces the previous one dated June 20<sup>th</sup>, 2013.

The Accreditation Certificate No. 553-2, to ELOT EN ISO/IEC 17025: 2005, is valid until 19.5.2017.

Athens, February 20<sup>th</sup>, 2014

*Ioannis Sitaras*  
Director of the Laboratories Accreditation Division