

ELTEK International Laboratories

TEST LIST EIS Lab

Electrical Insulation Systems [EIS]

ELTEK Labs conducts more EIS testing than any other laboratory in the world. EIS testing is applicable to a wide range of applications and purposes. This test methodology can be beneficial to evaluate such needs as:

- A new EIS
- New processing or comparison of processing
- Reduction of thickness of insulation in an established EIS
- To compare alternate suppliers/vendors of similar materials used in manufacturing

Applications for areas such as:

- House-hold appliances
- Power tools
- Motors
- Generators
- Transformers
- Coils / solenoids
- Wind Turbine

Industries such as:

- Automotive
- Military
- Aviation
- Nuclear

ELTEK Labs conducts EIS testing in accordance with:

Institute of Electrical / Electronics Engineers [IEEE]

IEEE 117: IEEE Standard Test Procedure for Evaluation of Systems of Insulating Materials for Random-Wound AC Electric Machinery

[Key words: Motorette, General Purpose Model (GPM), EIS testing, Electrical Insulation System, Low Voltage, 600 V or less, Candidate Insulation System. Reference Insulation System, thermal classification, thermal class, rating, electrical insulating materials, EIM, IEC 61857, IEC 61858, IEC 60085]

IEEE 275 (**replaced by IEEE 1776 in 2009**): IEEE Recommended Practice for Thermal Evaluation of Insulation Systems for Alternating-Current Electric Machinery Employing Form-wound Pre-insulated Stator Coils for Machines rated 6,900 V and Below

IEEE 429 (**replaced by IEEE 1776 in 2009**): IEEE Recommended Practice for Thermal Evaluation of Sealed Insulation Systems for AC electric Machinery Employing Form-Wound Pre-insulated Stator Coils for Machines rated 6,900 V and Below

IEEE 1776: IEEE Recommended Practice for Thermal Evaluation of Unsealed or Sealed Insulation Systems for AC Electric Machinery Employing Form-Wound Pre-insulated Stator Coils for Machines Rated 15,000 V and Below

[Key words: Formette, IEEE 275, IEEE 429, Medium Voltage, High Voltage, Candidate Insulation System. Reference Insulation System, sample coils, thermal classification, thermal class, rating, EIS testing, Electrical Insulation System, electrical insulating materials, EIM]

IEEE C57.12.56 (**under revision to be replaced by revised C57.12.60**): IEEE Standard Test Procedure for Thermal Evaluation of Insulation Systems for Ventilated Dry-type Power and Distribution Transformers

IEEE C57.12.60: IEEE Standard Test Procedures for Thermal Evaluation of Insulation Systems for Dry-type Power and Distribution Transformers, Including Open-Wound, Solid-Cast and Resin Encapsulated Transformers

[Key words: IEEE C57.12.56, Medium Voltage, High Voltage, Candidate Insulation System. Reference Insulation System, sample coils, thermal classification, thermal class, rating, EIS testing, Electrical Insulation System, electrical insulating materials, EIM]

IEEE 259: IEEE Standard Test Procedures for Evaluation of Systems of Insulation for Dry-type Specialty and General Purpose Transformers

[Key words: Medium Voltage, High Voltage, Candidate Insulation System. Reference Insulation System, sample coils, thermal classification, thermal class, rating, EIS testing, Electrical Insulation System]

International Electrotechnical Commission (IEC)

IEC 60085: Electrical Insulation – Thermal evaluation and designation

[Key words: General Purpose Model (GPM), EIS testing, Electrical Insulation System, Low Voltage, 600 V or less, Candidate Insulation System. Reference Insulation System, thermal classification, thermal class, rating, electrical insulating materials, EIM, IEEE 117, IEC 61857, IEC 61858]

IEC 61857: Electrical Insulation Systems – Procedures for thermal evaluation - Part 1: General requirements – Low Voltage

[Key words: General Purpose Model (GPM), EIS testing, Electrical Insulation System, Low Voltage, 1000 V or less, Candidate Insulation System. Reference Insulation System, thermal classification, thermal class, rating, electrical insulating materials, EIM, IEEE 117, IEC 60085, IEC 61858]

IEC 61857: Electrical Insulation Systems – Procedures for thermal evaluation - Part 21: Specific requirements for general-purpose models – Wire-wound applications

[Key words: General Purpose Model (GPM), EIS testing, Electrical Insulation System, Low Voltage, 1000 V or less, Candidate Insulation System. Reference Insulation System, thermal classification, thermal class, rating, electrical insulating materials, EIM, IEEE 117, IEC 60085, IEC 61858]

IEC 61857: Electrical Insulation Systems – Procedures for thermal evaluation - Part 22: Specific requirements for encapsulated-coil model – Wire-wound electrical insulation system (EIS)

[Key words: General Purpose Model (GPM), EIS testing, Electrical Insulation System, Low Voltage, 1000 V or less, Candidate Insulation System. Reference Insulation System, thermal classification, thermal class, rating, electrical insulating materials, EIM, IEEE 117, IEC 60085, IEC 61858]

IEC 61858: Electrical Insulation Systems – Thermal evaluation of modification to an established wire-wound EIS

[Key words: General Purpose Model (GPM), EIS testing, Electrical Insulation System, Low Voltage, 1000 V or less, Candidate Insulation System. Reference Insulation System, thermal classification, thermal class, rating, electrical insulating materials, EIM, IEEE 117, IEC 60085, IEC 61857, 1-temperature EIS testing, substitution]

UL

UL 1446: Systems of Insulating Materials – General

[Key words: Motorette, EIS testing, Electrical Insulation System, Low Voltage, 1000 V or less, Candidate Insulation System. Reference Insulation System, thermal classification, thermal class, rating, electrical insulating materials, EIM, IEEE 117, IEEE 259, IEC 61857, 1-temperature EIS testing, substitution]

UL 984: Hermetic Refrigerant Motor – Compressors; Section 41 Compatibility test

[Key words: Oil, R-123, R-134A, R-22, R-11, R-404]

UL 1561: Dry-Type General Purpose and Power Transformers: Section 12: Coil Insulation

[Key words: EIS testing, Electrical Insulation System, Low Voltage, 1000 V or less, Candidate Insulation System. Reference Insulation System, thermal classification, thermal class, rating, electrical insulating materials]

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