About ELTEK Laboratories

Over the past 25 years, ELTEK International Laboratories has earned the reputation of being the worldwide experts in Electrical Insulation Materials (EIM) and Electrical Insulation Systems (EIS) testing. ELTEK completes more CCT and EIS programs than all other laboratories combined. ELTEK is the only internationally accredited laboratory of its kind in the world and is always developing new services to satisfy the rapidly changing global market.

ELTEK's facility is located in the heartland of America, yet we are only minutes from St. Louis Lambert International Airport. We welcome all current and potential customers to tour our facility. Come see firsthand the capabilities of our world-class lab.

Experience what we mean when we say:

ELTEK Labs is *Driven by Results!*

Industries We Serve

Our customers represent the following industries:

- Transformers
- Material Manufacturers
- Power Generation/Distribution
- Automotive
- Green Energy
- Heating and Cooling
- Household Appliances
- Military

Testing Capabilities

The ELTEK Labs facility consists of eight linked laboratories which work independently, yet share a common goal to provide accurate data. The labs are: Material Properties, LTTA/RTI, CCT, EIS, Photovoltaic, Special Projects, Calibration, and Equipment Design and Fabrication.

All test programs are run according to nationally or internationally recognized standards. ELTEK Labs' decades of experience offers a technical foundation that contributes to refinement of existing documents, as well as improving the next generation of recognized standards.

ELTEK International Laboratories

Our customers manufacture insulation materials such as resins, magnet wire, motors, transformers, generators, and more.

Working in all forms of power generation

- Solar
- Wind
- Nuclear
- Conventional

Working with National and International certification bodies

- Intertek/ETL (Electrical Test Laboratory)
- EPRI (Electrical Power Research Institute)
- TUV
- VDE
- UL (Underwriters Laboratory)

and others...

ACCREDITED

ELTEK International Laboratories

248 Hughes Lane
St. Charles, MO 63301-3260
U.S.A.
Phone: 636-949-5835
Fax: 636-723-5835
www.ELTEKLabs.com

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Driven by Results

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ELTEK International Laboratories

Helping our customers bring safe products to market

Material Properties Lab

The Material Properties Lab has the capability to perform over 300 tests on a wide variety of Electrical Insulation Materials. Some examples are: ASTM D-2303 Inclined Plane Time-to-Track, ASTM D-3638 Comparative Tracking Index, ASTM D-2132 Dust Fog Tracking and Erosion, ASTM D-150 Dissipation Factor and Capacitance, ASTM D-495 High Voltage Low Current Dry Arc Resistance, ASTM D-257 Surface & Volume Resistivity, ASTM D-3874 Hot Wire Ignition, UL 746-A/IEC 60695 Glow Wire Ignitability and Flame Test, and UL 94 Test for Flammability of Plastic Material.

Chemical Compatibility Test Lab (CCT)

The Chemical Compatibility Lab's purpose is to evaluate the effect of chemical interaction between different materials and environments. Test standards include - but are not limited to - ASTM D-5462/UL 1446 Sealed Tube Chemical Compatibility Testing and ASTM D-3455 Compatibility of Construction Materials with Insulating Oil. Our testing allows electrical system manufacturers to make material changes to already existing systems without the need of full thermal aging.

Photovoltaic Lab

ELTEK has added a new 1200 sq. ft. lab for evaluating materials and panels for the photovoltaic (PV) industry. (Photovoltaic = solar = sunlight to electricity). The most requested test equipment is Surface Flammability using the Radiant Heat Panel test unit, which evaluates and measures flame spread and the heat generated during the burning of the material or panel under test (ASTM E-162). Measurement of flame spread and heat generation, as well as data properties such as the Water Vapor Transmission and Water Permittivity of materials used in photovoltaic applications, are taken into consideration when constructing a panel.

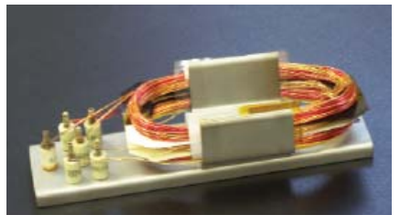
Calibration Lab

As ELTEK Labs continues to expand testing capabilities, the need to expand our internal calibration has become necessary. Our new Calibration Lab's range covers thermal, electrical, aging ovens, environmental chambers, and more. Keeping calibration in accordance with our international accreditation to ISO 17025, our internal calibration is directly linked to external calibration of our reference standards. The combination of external and internal calibration can be traced back to NIST references.

Long-Term Thermal Aging/Relative Thermal Index Lab (LTTA/RTI)

LTTA/RTI establishes a thermal rating for a "candidate" material by comparing it to a "control" material with an established thermal rating. Specimens undergo thermal aging and are then tested. A rating is established based on a comparison between the cadidate's results and that of the control's. LTTA testing is conducted in accordance with UL 746B or IEC 60216. Pictured here is the Impact Tester.

Electrical Insulation Systems Lab (EIS)



The EIS Lab offers the ability to evaluate two or more materials as a single test specimen. This General Purpose Model (GPM) allows for evaluation of interactions that may occur between the materials that cannot be evaluated when traditional Electrical Insulation Material (EIM) testing is conducted. Typical methods: IEEE-117 (low voltage), IEEE-1776 (high voltage/submersible), IEEE-259 (low voltage/transformers), and IEEE-C57 series (high voltage/transformers).

Special Projects Lab

Special projects are those which, while related to our standard testing, do not fit our traditional process. Our team of engineers have the capability to build special equipment and stations for testing outside of our typical scope, regardless of size or complexity.

Equipment Design and Fabrication Lab

Most of the equipment needed to conduct the specialized testing at ELTEK cannot be found commercially. As a result, ELTEK designs and builds much of its own test equipment. In addition to design and fabrication of new test equipment, the Equipment Design and Fabrication Group is responsible for making improvements to existing lab equipment that will increase the accuracy and efficiency of the test equipment.