

Accelerated Exposure Testing

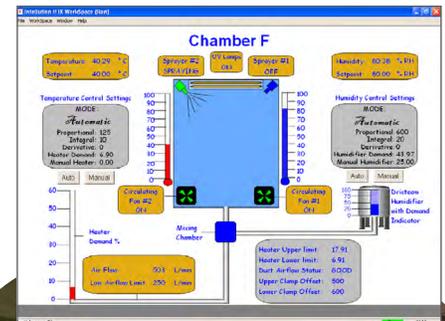
Accelerated exposure testing has become increasingly important in qualifying new materials and designs and in determining the long-term reliability of electrical and non-electrical products. Southwest Research Institute® (SwRI®) offers a full range of testing services for evaluating lifetime exposures.

Capabilities

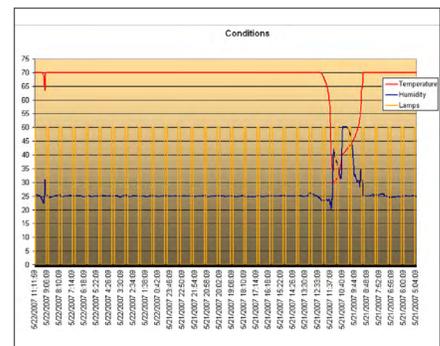
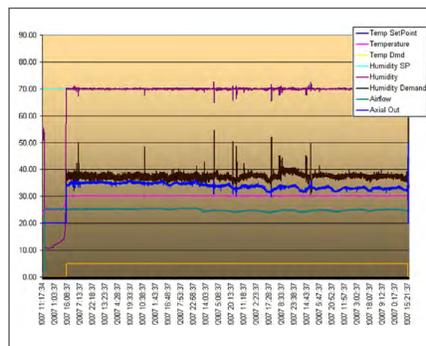
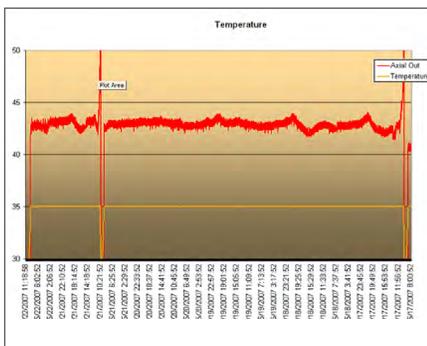
- Continuous monitoring of temperature, humidity, weight gain, and gas concentrations
- Single or multi-component gas exposures including chlorine, hydrogen sulfide, sulfur dioxide, nitrogen dioxide, carbon monoxide, carbon dioxide, ozone, and others
- Development of custom tests for applications such as metal corrosion and protective coatings
- Atmospheric exposure testing of equipment for a wide range of items from the telecommunications and electronics industries
- Complete engineering and testing services for Telcordia's Network Equipment Building System (NEBS) compliance protocol

Testing Standards

- American Society for Testing and Materials (ASTM)
- Telcordia (Bellcore)
- European Telecommunications Standardization Institute (ETSI)
- Electronic Industries Alliance (EIA)
- Institute of Electrical and Electronics Engineers (IEEE)
- Uniform Building Code for the International Conference of Building Officials Evaluation Service (ICBO ES)
- American National Standards Institute (ANSI)
- International Engineering Consortium (IEC)
- Underwriters Laboratories (UL)
- Deutsche Norm (DIN)



Variables such as temperature, humidity, corrosive salt solution, and ultraviolet radiation can be programmed dynamically to test requirements.



A process control system developed at SwRI constantly collects environmental test data for real-time analysis and reporting.

Facilities

- Test chambers for simulating lifetime exposure of equipment in an environmentally controlled corrosive atmosphere
- Chambers designed and calibrated per ASTM B-827, Mixed Flowing Gas Test
- Multiple chambers to accommodate test items from <1 ft to 8 ft in height and <1 ft to 5 ft in width

Additional Capabilities

- Natural environments simulation
- Corrosion evaluation and mitigation technologies
- Thermal stability testing
- Thermal analysis and laboratory validation
- Electromagnetic compatibility (EMC) evaluation
- Structural analysis and verification
- Materials research and evaluation
- Fire performance evaluation
- Fire testing
- Electrical measurement
- Laboratory earthquake simulation

- Vibration testing
- Component design
- Failure analysis

Accreditations

- SwRI is certified by Verizon Communications as an independent testing laboratory (ITL) for performing NEBS testing.
- SwRI is accredited by the Occupational Safety and Health Administration as a Nationally Recognized Testing Laboratory (NRTL), which includes testing and third-party quality assurance services.
- The Chemistry and Chemical Engineering Division is ISO 9001:2008 and ISO 17025:2005 certified.



SwRI has developed a gaseous contaminants facility to test a wide range of materials and their ability to withstand exposure to atmospheric and industrial airborne pollutants on pollutants.



We welcome your inquiries.

For additional information, please contact:

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Southwest Research Institute is an independent, nonprofit, applied engineering and physical sciences research and development organization using multidisciplinary approaches to problem solving. The Institute occupies 1,200 acres in San Antonio, Texas, and provides more than 2 million square feet of laboratories, test facilities, workshops, and offices for nearly 3,000 employees who perform contract work for industry and government clients.

Find us on



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