

Military-Grade Vibration Testing for an Aerospace Transformer

Reliable, highly actionable vibration testing is built on a combination of top-of-the-line equipment with advanced fixturing abilities, detailed data input and analysis, and both experienced and superior reporting. Vibration sweep testing, which exposes a product to frequency spectra at a specified rate in order to identify resonant frequencies, necessitates particularly clear and certified expertise. Additional complexity can occur when vibration testing is combined with other environmental test applications, including thermal testing, in an effort to achieve even greater product edge.

A global manufacturer of custom magnetics, reed switches, and sensors for the medical, military, industrial, and automotive markets, Standex Electronics succeeds by meeting stringent customer and regulatory requirements. While it operates its own product line testing equipment, Standex relies on expert, accredited testing services for time-

sensitive, large-capacity, and uniquely sophisticated scenarios.

Among other electronic products, Standex manufactures transformers for a variety of industries. Transformers fulfill critical functions in powering electronic equipment. Consequently, failure due to environmental stress can be catastrophic. Responding to a customer request for rapid yet complete military-grade transformer vibration testing for an aerospace application, Standex confidently turned to CSZ (Cincinnati Sub-Zero, Inc.).

"We're like kids in a candy store over there. Everything is top-of-the-line because they actually make the equipment. It's good to know the special testing options are there," said Mark Faulhaber.

CSZ delivers validation, overflow, and completely customized testing services to the most demanding industries. Like its customers, CSZ meets the critical needs of tough markets that include aerospace, automotive, medical, military, and telecommunications, among others. They are A2LA-accredited, ISO/IEC compliant, and stands solidly on 20 years of customer satisfaction. When Standex looked to CSZ, the fit was perfect.

"Our [end] customer knew of CSZ by reputation, giving us instant credibility," said Mark Faulhaber, Engineering Manager at Standex. The sought-after test required very precise equipment and highly customized fixturing. As a result, successful testing—and usable reporting—hinged on how the multiple hundred pounds of parts were fixed to the vibration table as well as how well the behavior was analyzed. For this particular situation, "CSZ had a better set up, met our timing and, ultimately, saved us time. Their equipment is highly

advanced, its software very up-to-date, and its reporting skills highly professional,” said Faulhaber. “We called with very short notice and they were able to get us testing time on their

equipment.” “Plus,” he continued, “CSZ ran the tests at night and facilitated our end-customer witnessing the test on-site, making sure we all were able to know the results immediately.”



On behalf of Standex and its aerospace-industry end customer, CSZ performed the test in accordance with Military Standard 202G, Method 204D (Vibration, High Frequency). The test entailed 20-minute-cycle frequency ranges of 10-2000 Hz, repeated 12 times, in each of three directions, over a 12-hour period and a 50g peak.

And, because CSZ testing is a division of Cincinnati Sub-Zero, the manufacturer of a long line of temperature-based products



THERMAL CYCLE TESTING

and thermal testing chambers, Standex knew it also had the option of conducting thermal cycling, cold-hot shock, testing as well. “We’re like kids in a candy

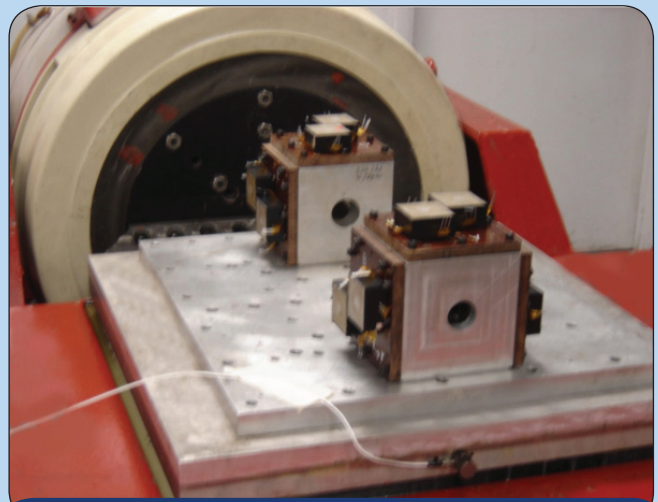
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No matter how great the equipment, failures in data analysis and reporting can eradicate even the most advanced testing capabilities. With industry-leading software and highly experienced staff, CSZ delivered follow-up reports that fully documented and analyzed testing, giving Standex the documentation it needs for customer and regulatory purposes.

“We are very happy with CSZ” said Faulhaber. “We’ve gone to the company often; they always have available capacity and we always receive quality service. The reports are beautiful, there is a lot of integrity in the data, they have an advanced understanding of requirements - and better equipment. There’s a lot of value in CSZ’s services.”

Standex Electronics, a division of Standex International (NYSE: SXI), has plants in five countries and specializes in electro-mechanical engineered solutions. Standex Electronics manufactures electronic components and assemblies, including reed switches, proximity sensors, fluid-level sensors, transformers, antenna coils, inductors, chokes, connectors, progressive die stampings, insert-molded plastic components, and custom products combining many of these components. For more information, visit www.standexelectronics.com.

CSZ testing operates as a division of Cincinnati Sub-Zero, Inc. to deliver tests specially suited for design verification, product performance, regulatory compliance, failure analysis, life cycle, and environmental stress testing. A2LA-accredited, CSZ offers a wide range of ready, sophisticated, environmental testing services, including climatic (temperature, humidity), salt-spray, shock, thermal, and vibration testing. CSZ Industrial division, manufactures a wide range of environmental test chambers, from bench-top to full walk-in rooms. For more information or to inquire about CSZ in-house testing division, please visit... www.csztesting.com.



VIBRATION TESTING

Note: Effective January 2009, ESSC Test Laboratory changed the company name to CSZ Testing. The company still operates as a division of Cincinnati Sub-Zero. Customer testimonials contained herein have been updated to reflect the new company name.



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12-01-08