



*For a Total Solution to all of your
Materials Testing Needs*

Gas Technology Institute turns to Cal-Rite and ADMET for flexible materials testing system

Gas Technology Institute (GTI), of Des Plaines, IL, is a leading research, development and training organization serving energy markets by developing technology-based solutions for consumers, industry and government. In addition to its research and development work, the organization offers a one-source solution for testing, engineering and remediation services. Its labs perform hundreds of standard and customized tests in analytical chemistry, civil & geotechnical engineering, fracture analysis, mechanical engineering, microbial corrosion, coatings, soil testing and other areas. In addition, the lab conducts materials analysis and characterization and testing, as well as failure analysis. GTI recently turned to their local calibration service provider, Cal-Rite Corporation, of Naperville, IL, and test system manufacturer, ADMET, of Norwood, MA, for help with its materials testing. The solution was the MTESTWindows materials testing system from ADMET.

Gas Technology Institute (GTI) plays a pivotal role for the gas industry by providing third-party research & development. One of its important services is to test materials, ranging from small bolts, to valves, to pipe sections, in order to ensure their integrity.

The lab, managed by Brian Spillar, faced the challenge of conducting a range of tests to gather and report the results. The lab used a 60,000 lb. Tinius Olsen tensile testing frame. The 15 year old frame worked well but the non OEM computerized system that had been retrofitted to the machine to control the tests and report results was unnecessarily complicated to the point that it was not practical for GTI's engineers to use.

Spillar wanted to replace the test system for two reasons: first, to improve the testing process and; second, to help the lab qualify for accreditation by The American Association for Laboratory Accreditation (A2LA). "We identified the materials testing process as a key area that needed improvement," said Spillar.

Custom Testing

GTI has an unusual materials testing operation. In most manufacturing labs, random samples are pulled from production runs for testing. Labs process a high number of similar tests day-in and day-out. Test parameters are programmed into the system and methods are seldom reset.

Conversely, GTI tests a wide range of materials including cardboard, composites, fiberglass, plastics, steel, stainless steel, and more.

At GTI, engineers bring specific projects to the certified test technicians that require custom setups and may even require special fixtures, such as grips, etc., to be machined. Engineers may retest reconfigured or reinstrumented test samples during the testing process.

SOLUTION OVERVIEW

Industry: Natural Gas
ADMET Product: MTESTWindows
Calibrator: Cal-Rite

Application: Laboratory tensile testing
Customer: Gas Technology Institute

For instance, a steel pipe section may be displaced a few thousandths of an inch and then tested to see how the imposed stress/deflection affects sound waves sent through the pipe. The same pipe may also be tested for proof load, yield and failure. Tests can run according to a single procedure that takes minutes to a week-long series that requires frequent reprogramming.

Finding the solution

Spillar turned to his testing machine calibration source, Gregory Duka, president of Cal-Rite Corporation, Naperville, IL, to solve his test management problem and Duka recommended ADMET. GTI selected ADMET's MTESTWindows testing system which it found to be a cost effective and, an efficient product to use. Also, unlike other systems, MTESTWindows includes all of the tests in the core software. Other companies bundle test procedures and sell them separately.

It helped that GTI engineers had worked with MTESTWindows in other labs and were familiar with its capabilities and ease-of-use. In addition, Cal-Rite Corporation, Spillar's trusted local A2LA accredited field calibration source, would support the system.

"When ADMET's field engineer came in to conduct a demo, we saw that MTESTWindows did everything that we needed and would make life easier for our technicians. We don't make decisions just on cost but on value. ADMET won on both counts," said Spillar.

MTESTWindows is a PC/Windows-based system that controls electrohydraulic and electromechanical test frames and records test

results. Ideal for new and retrofit installations, MTESTWindows is a complete tension and compression test control and reporting system.

MTESTWindows includes an external interface box that controls test frame load and strain values, as well as crosshead position. It supports virtually every industry from metals to concrete to electronics and exceeds American Society for Testing and Materials (ASTM) standards for accuracy and repeatability.

ADMET handled the installation, tracing out the existing logic and reusing the existing motor and controller plus many other components. "ADMET is willing to work with the existing equipment to save the customer money," said Duka. "No other company out there was willing to do that."

The installation concluded with a training session for the certified operators. Spillar added, "ADMET walked us through everything. They helped us set up some of our own tests so when they left, we already had many of our tests programmed in for us. That saved us a lot of time and was a great value-added service."

MTESTWindows' simplicity helps GTI's overall efficiency. Technicians were able to come up to speed faster on the ADMET retrofitted Tinius Olsen frame. "MTESTWindows is simple to operate and we are able to very quickly set up more complex tests. It has also increased the throughput on routine tests, allowing us to test more pieces in a shorter time period," concluded Spillar.

As an added benefit, MTESTWindows also helped GTI receive its A2LA accreditation.

For More Information

For more information about ADMET products or services, please call us at 800-667-3220 in the US or Canada, email sales@admet.com or visit our Web site at <http://www.admet.com>.

For information on Cal-Rite visit <http://www.Cal-Rite.com>, call 800-356-4662 or email greg@cal-rite.com.

Additional information on Gas Technology Institute is available at <http://www.gastechnology.org>.

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