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May 1, 2007: TrueStructures Product Announcement

Turbine Technologies, LTD (TTL) today announced the introduction of its latest product for engineering education, the TrueStructures Airfoil Structures Lab.

"Through customer feedback and our own research, Turbine Technologies identified a significant void in the marketplace relating to structures education," said Mike Kutrieb, TTL Vice President. "While there are many products out there, they often focus on one or two concepts and fail to explore the big picture. What we've done is create the TrueStructures Lab that not only teaches the basics, but gives students the opportunity to combine various individual elements of structural analysis and testing into a larger, more significant problem with direct, real-world application. We also wanted to make the lab problems fun and exciting. To that end we are using actual aerospace hardware in the product. No contrived examples or simulated parts, but an actual component off of a real airplane. Aerospace, civil and even mechanical engineering students rarely get to work on real hardware or real equipment. Because of the way we've designed the lab, relevant problems can be worked just like those the students will encounter in industry upon graduation. The lab exposes students to standard design, construction and testing methods."

The TrueStructures Lab utilizes a heavy-duty framework to mount various common test articles such as beams and tubes. A manually controlled loading mechanism allows an infinite array of bending and torsion loads to be applied to the test article. A load cell indicates digitally the exact force applied. Each article is instrumented with standard foil type strain gauges. A custom strain bridge controller digitally displays measured gauge voltage. Test article deflection is readily measured on the scale adjacent to the point of load. As with the simple test articles, an instrumented aircraft wing is provided to demonstrate how beams, ribs and skins work together to form a complete structure. Designed with "openness" in mind, new strain gauges can be applied as necessary to accomplish teaching or lab goals. A comprehensive sample lab is included for reference.

Perry Kuznar, TTL Director of Sales and Marketing, has been working closely with educators and other end users to develop a meaningful product that addresses educational objectives and industry needs. "As industry demands more and better prepared engineering graduates, products like the TrueStructures Lab emphasize the same types of problems encountered in the workplace. 'What's the optimum structure to handle this load, how do I test my analysis, where do I put the strain gauges, what is the actual stress condition, what is the magnitude of the experimental uncertainty, how much do I need to increase my safety factor to account for it' and so on. The fact the students can bend a real wing helps answer these questions. Moreover, it helps foster a greater 'engineering' based understanding when they can relate what they do in the lab, to say the view out the window of an airliner as they watch the wingtip bend and flex during flight."

Turbine Technologies, LTD is a U.S. manufacturer of turnkey laboratory equipment. With hundreds of operators around the world, Turbine Technologies has established itself as the premier manufacturer of quality laboratory equipment for aerospace, thermodynamic and turbomachinery oriented engineering education and research. Other featured products include the MiniLab Gas Turbine Power System, the RankineCycler Steam Turbine Power System and the PumpLab Centrifugal Pumping Laboratory.

Additional information can be found at www.turbine technologies.com