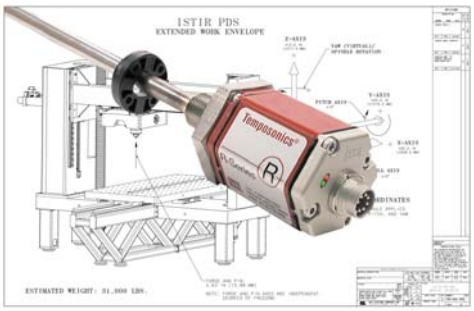
MTS Systems Corporation
Sensors Division
3001 Sheldon Drive
Cary, NC 27513
Phone 919-677-0100, Fax 919-677-0200

IMMEDIATE RELEASE
October 10, 2007, MTS358



For More Information:
Matt Hankinson
Marketing Manager
919-677-2347
matt.hankinson@mts.com

Patricia Staino, BtB Marketing
PR Account Manager
919-872-8172
patricia@btbmarketing.com

R-Series with SSI provides accuracy in positioning to MTS Systems…

MTS SENSORS ENSURE PRECISION IN FRICTION STIR WELDING APPLICATION

CARY, N.C. (October 10, 2007) – MTS Systems Corp., Sensors Division is providing the R-Series SSI encoder position sensor to its parent company MTS Systems for the ISTIR Advanced Friction Stir Welding development system, the first fully instrumented friction stir welding system capable of performing load-controlled welds along three independent axes. It has reliably produced welds with double curvature, joined materials less than 1mm and up to 30 mm thick, and joined together materials that vary in thickness.

"By using MTS Temposonics® sensors in these machines, we ensure that our customers get a much more accurate machine that's very repeatable," said John Meyer, Program Manager, MTS Systems. "We also don't need to worry about the calibration of the sensors, which saves us time in assembly and our customers' time in maintenance and upkeep. The Temposonics SSI sensors are very stable."

A solid-state welding process, friction stir welding is a combination of extruding and forging and is not actually a true welding process. The method was not created specifically for aluminum but is well-suited for it.

-more-

In the process, a hydraulic motor is coupled to a spindle. The spindle is rotated, and at the end, a drill-bit-like pin with a shoulder attached is plunged into the joint line between two metal sheets. By applying load and rotational speed, the aluminum plasticizes, but never reaches its melting point, and is extruded around the pin. This allows the operator to stir molecules from one plate of aluminum into molecules of another plate of aluminum to create a very strong, solid-state welding joint that is durable as well as environmentally friendly—there is no generation of smoke or gases as there is with standard fusion welding.

In friction stir welding, the welder stays stationary and the material moves. The MTS Temposonics sensors are used for positioning axes X, Y, and Z as the aluminum is moved into position. There is an model RH sensor (40 inches in stroke) embedded in an actuator for the X-axis that is used to position the head; an model RP sensor with a "floating" magnet (80 inches per stroke) attached to the top of the Y-axis table to position the moving part fixture base; and two ball screws for the Z-axis with an model RP sensor with floating magnet (24 inches per stroke) on each side to position the weld head vertically.

"With its higher performance SSI capability, the Temposonics R-Series provides a reliable, lower-cost alternative to typical linear encoder scales," said Temposonics Marketing Manager, Matt Hankinson. "Using the new smart sensor product platform, we are able to provide this superior performance and capability set along with improved reliability and durability all in a smaller package with lower cost."

The R-Series model RH hydraulic or "rod"-style" products are specifically designed to be embedded into high-pressure hydraulic actuators. The integral high-pressure isolation tube is designed to withstand static pressure of 210 bar (5000 psi) and peak pressures of 350 bar (10,000 psi). Using industry standard cylinders designed to accept these sensors, machine designers can add high performance IP 67-rated position (IP 68 for integral cable) and velocity feedback to their servoactuators by simply selecting the required stroke length and sensor output or control interface.

Model RP "profile"-style sensors utilize a lightweight but stiff aluminum extrusion with sensing lengths of up to 5 m (200 in.) and include two different magnet-mounting configurations: captive sliding magnet or floating magnet.

-more-

The model RP-style sensors are used in applications where installation inside a hydraulic or pneumatic cylinder is not possible. They are well-suited for space-restrictive environments where there are high levels of dust and contamination. In addition, model RP-style sensors can be externally mounted on machines via mounting brackets and configured with a variety of connector options. All these features made the Temposonics R-Series a good fit for the highly flexible functionality of the ISTIR friction stir welding machine and is IE 65-rated.

The R-Series SSI output sensor includes options for synchronized 7500 Hz update rates and position accuracy as low as +/-40 microns (+/-0.0016 inch.) standard. MTS' proprietary synchronization technology guarantees the most accurate dynamic position output while minimizing inherent system-related delays to produce smooth, precise velocity loop control. An internal measurement error-checking routine ensures high immunity to shock and vibration (up to 15 g / 10-2,000Hz, 30 g with the HVR option and 100 g peak respectively). With its unique double-shielded design, the new R-Series product also includes the industry's highest EMC immunity level (IEC/EN 50082-2, IEC/EN 61000-4-2/3/4/6, level 3/4 criterion A). This is critical in this type of machine tool and robotic application where high power servodrives are typically used. Like all R-Series model products, the SSI output product comes standard with an IP 67 housing (IP 68 with integral cable), as well as ATEX-approved explosion-proof and NEMA 4X optional housings.

For more information on Temposonics R-Series Sensors, please contact: MTS Systems Corp, Sensors Division, 3001 Sheldon Drive, Cary, NC 27513. Phone: (919) 677-0100. E-mail: info@mtssensors.com or visit their web site at http://www.mtssensors.com.

MTS Sensors, a division of MTS Systems Corp., is the global leader in the development and production of magnetostrictive linear-position and liquid-level sensors. Based on MTS' patented Temposonics® technology, the Sensors Division is continually developing new ways to apply magnetostrictive sensing technology to solve critical applications in a variety of markets worldwide. With facilities in the U.S., Germany and Japan, MTS Sensors Division is an ISO 9001 certified supplier committed to providing innovative sensing solutions that deliver customers with reliable, cost effective sensing devices.

###