



American Sensor Technologies, Inc.

Your sensor business partner...

FOR IMMEDIATE RELEASE

Media Contact: Jean Carl / 610-565-9913 / fjcarl@worldnet.att.net
AST Contact: Karmjit S. Sidhu / 973-398-9900 / kssidhu@astsensors.com

Pressure Transducers Stand Up to Abuse of Corrosive Hydrogen Applications

AST4600 Explosionproof Pressure Sensors Resist Hydrogen Permeation and Embrittlement

Landing, NJ, August 16, 2004... American Sensor Technologies, a manufacturer of state-of-the-art MEMS-based pressure sensors, transducers and transmitters based in Landing, NJ, offers the Model AST 4600 Explosionproof Pressure Sensor for use in hydrogen service and other hazardous applications such as refineries, water treatment plants, natural gas compressors and power generation. Employing a thick one-piece 316L diaphragm free of internal O-rings, welds and fill fluids, the AST 4600 pressure transducers perform accurately and safely in hydrogen applications without the threat of sensor failure caused by hydrogen permeation. Approved to CSA 30 (UL 1203) Class 1, Div. 1, Explosionproof, Groups A, B, C and D, units can withstand the high vibration and temperature extremes common in hydrogen applications.

“Pressure transducers employing thin diaphragms with fluid fill are prone to hydrogen permeation which leads to sensor cracks and eventual unit failure,” explains Karmjit S. Sidhu, Vice President Business Development, American Sensor Technologies. “Our Model AST4600 Explosionproof sensors feature a unique one-piece design that provides a hermetic seal against the media.”

Constructed of 316 L stainless steel wetted materials, the AST4600 Explosionproof Series provides long life and high resistance to embrittlement caused by long-term exposure to hydrogen. The high strength stainless steel construction contains no silicone oil, no welds, and no internal "O" rings, offering a full hermetic seal against corrosive media. In addition to utilizing strain gauge technology, the Company implements its own-patented [Krystal Bond™ Technology](#) to produce pressure transducers that yield a high output with low thermal errors.

The AST4600 Explosionproof pressure sensors provide measurement in sealed gauge up to 10,000 PSI. Sensors are calibrated and temperature compensated to ensure stability over specified ranges. Units offer accuracy of $< \pm 0.25\%$ BFSI at 25°C (77° F) and long-term stability of $\pm 0.25\%$ full scale output per annum. AST4600 pressure sensors are available with an output

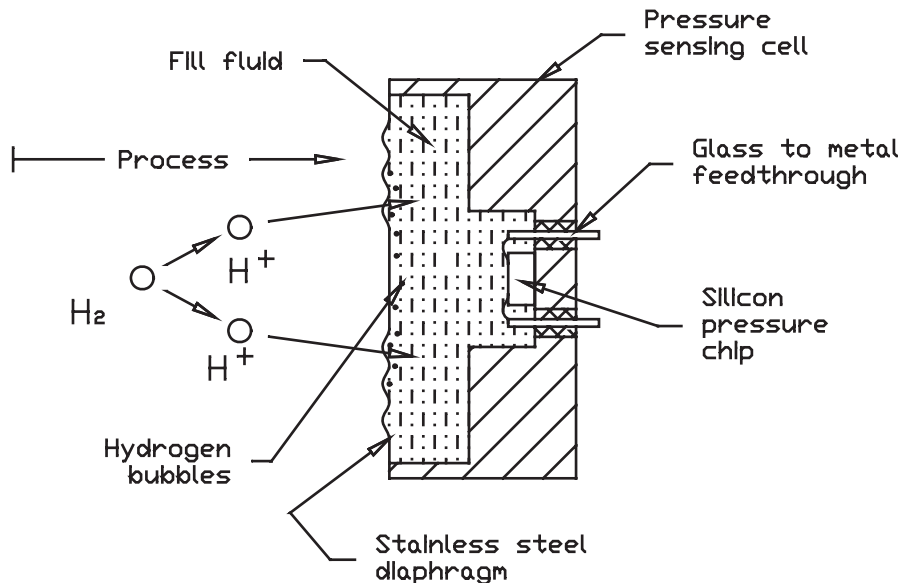
of 1-5 V, 1-6V or 4-20mA. They can be configured with a variety of pressure ports and whetted materials.

“With hydrogen gaining popularity as an alternative fuel to foreign oil supplies, there will be greater demand for sensors that can perform over time in hydrogen generation and storage applications,” notes Sidhu. “The AST4600 pressure sensors are price competitive, high quality explosionproof units that are qualified for use in these applications.”

While the AST4600 is most suitable for use in very hostile environments, any AST pressure transducer can be constructed with properties to make it suitable for use in hydrogen applications. AST offers a complete range of pressure transducers that address different performance specifications, installations and cost parameters.

About AST

AST manufacture state-of-the-art, MEMS-based pressure sensors, transducers, and transmitters that offer the best price-performance ratio in the industry. Common applications of AST sensor products are in industrial OEM, hydraulic systems, fuel cells, medical gases, HVAC/R, refrigeration (ammonia, Freon, CO₂), oil & gas exploration and production, and off-road vehicles. By combining exotic metals and AST’s exclusive, proprietary [Krystal Bond™ Technology](#) (an advanced process in which inorganic materials are molecularly diffused onto a metallic surface in the presence of certain gases), AST can produce high-performance strain gauge pressure sensors that support the specialized needs of key niche markets. Many AST products are UL listed as intrinsically safe and certified for explosion-proof required environments. Some of the world’s most highly respected industrial Fortune 500 corporations have tested and now use AST products in a wide range of critical and harsh environments. For more information on AST products and technology, go to AST’s website at www.astensors.com.



12 Orben Drive, Unit #1 * Landing, NJ 07850 * USA
Tel: (973) 398-9900 * Fax: (973) 398-9901