

Piezo Cable Crucial to Olympic Taekwondo Competition



Measurement Specialties, Inc. (MEAS: NASDAQ) is at the core of an innovative Taekwondo scoring system that was used in the London Olympics this summer. Known as Truescore, this system is transparent and low cost. Embedded in the chest protector are several meters of piezo cable woven in a proprietary pattern. When a competitor is hit in the chest, the piezo cable emits a voltage signal that is filtered and integrated into the scoring system. Weighing approximately 150 grams and extremely flexible, the presence of the cable in the chest protector has negligible impact on an athlete's performance.

The [Piezo Spiral Wrapped Coaxial Cable](#) is a type of piezo polymer sensor that is designed as a coax cable. The piezo polymer is the "dielectric" between the center core and the outer braid. When the cable is compressed or stretched, a charge or voltage is generated proportional to the stress. Due to its coaxial design, the cable is self-shielding allowing its use in a high EMI environment. It is also extremely rugged and water/dirt resistant.

Mr. Jin Song, the designer of this system, stated "It is the consistency of the sensor output and its low-cost that made this scoring system possible." He has been working with Measurement Specialties for a decade now to create a product that meets the demands for [Taekwondo Olympic competitions](#). "Key to the scoring system's success", reported Mr. Song, "is the linearity of output that the cable provides and my decision to process the output at the point of impact to remove any undesirable signals."

The 2012 Olympic Taekwondo competitions took place from August 8 through August 11 at the London ExCeL Exhibition Centre. There were a total of 64 female and 64 male athletes competing in 4 weight classes. The scoring system worked flawlessly over the 4 day, 10 hour event and was controversy free.

Measurement Specialties, Inc. designs and manufactures sensors and sensor-based systems. The company produces a wide variety of sensors and transducers to measure precise ranges of physical characteristics such as pressure, force, vibration, torque, position, temperature, humidity, fluid properties, mass air flow and photo optics. Measurement Specialties uses multiple advanced technologies – including piezo-resistive, electro-optic, electro-magnetic, variable reluctance, magneto resistive, digital encoders, thermistors, thermocouples, RTDs, capacitive, resonant beam, application specific integrated circuits (ASICs), micro-electromechanical systems (MEMS), piezoelectric polymers and strain gauges to engineer sensors that operate accurately and cost-effectively in customers' applications.

For more information about Measurement Specialties and our products, e-mail pfg.cs.amer@meas-spec.com or visit us at www.meas-spec.com.