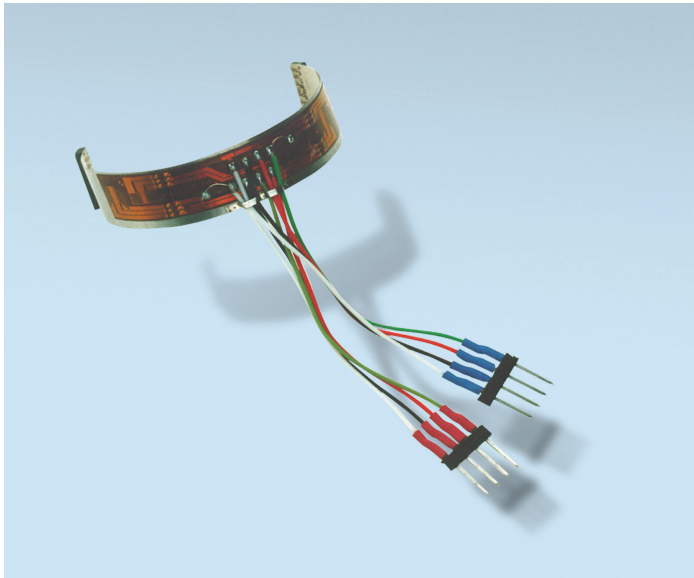


QSS

Quick Stem Sensor



Background

Utilities operating nuclear power plants agree that the correct functioning of all motor operated valves, and particularly those in safety-related systems, is of paramount importance. The Nuclear Regulatory Commission has issued Generic Letter 89-10 and other documents which relate to this concern. Operability must be demonstrated under design-basis conditions if practical. Described below is a patented transducer that improves on existing valve thrust and torque measurement transducers currently offered.

Description

The TELEDYNE TEST SERVICES (TTS) Quick Stem Sensor (QSS) is a patented device which is applied to a valve stem using a layer of adhesive. Strain gages, Wheatstone bridge circuitry and pre-wired connectors are included in the one-piece transducer. After mounting and curing, the transducer can be used with or without calibration depending on accuracy requirements. For greater accuracy the transducer is calibrated in-situ for torque and thrust using QUIKLOOK.

The TTS QSS makes possible an accurate nonintrusive direct measurement and greatly reduces installation time without comprising the quality of the measurement.

The Accuracy Standard

In field-installed load sensors for motor operated valve maintenance and diagnostics thrust and torque

Uncalibrated:

within $\pm 8.2\%$ of reading

Calibrated:

within $\pm 3.0\%$ of reading