Easily Document Pressure Testing for Transmission System Pipelines

Within the natural gas system, one of the largest sections is the transmission system. The transmission system is composed of various diameter pipelines, and it moves large amounts of natural gas thousands of miles from the gathering systems to local distribution companies. As these pipelines are carrying materials that need to be contained within the pipe, maintaining the integrity of these pipelines is essential. One of the tests required to verify the pipelines safety is a hydrostatic pressure test.

A hydrostatic pressure test involves isolating a section of the pipe and filling it with fluid. The fluid is then pressurized to a level higher than the pipe should ever experience in use. The test pressure is then held and monitored for a set period, typically 8 hours. These tests are conducted prior to the pipe being put into service, and periodically while in service. While some hydrostatic tests require pressure testing only, depending on local regulations, other tests require pressure and temperature, and some even pressure and two temperatures. AMETEK STC has several solutions available to quickly, accurately, and safely perform hydrostatic tests for all situations, both prior to and after a pipeline has been placed into service.

Measuring and Recording Solutions

▶ XP2i

The XP2i is an easy-to-use, rugged, digital test gauge that is used by many companies to both read and document hydrostatic tests. The standard XP2i is designed for the rough, in-the-field, environments where many piplines are located. They are temperature compensated, so the accuracy of the gauge will not be degraded if it's used between -10 to 50°C (14 to 122°F). The datalogging version of the XP2i will record the readings at up to 1 per second, and then download the data to a spreadsheet for easy storage on a computer.

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The XP2i Digital Pressure Gauge

nVision

The nVision is a reference recorder that was designed for high-speed datalogging and can collect both pressure and temperature data. The recorded readings can be displayed graphically on the unit so quick trends and anomalies can be seen in the field, and then the data can also be downloaded to a PC in either a spreadsheet or a secure pdf file. The nVision compensates accuracy from -20 to 50°C and recording speed can be set to match the test requirements. With storage capacity of 1 million data points, multiple hydrostatic tests can be completed and stored in the nVision prior to downloading the data.

AMETEK STC (Sensors, Test, & Calibration) is among the world's leading manufacturers of calibration instruments for temperature, pressure, and process signals. For more information on the full line of JOFRA and Crystal Engineering calibration products visit www.ametekcalibration.com.

The nVision Digital Reference Recorder