

*Application Note*  
*April 2001*

**GREAT  
APPLICATION**

Application from Henry Bienvenu of Moody-Price, Inc.

**Industry:** Natural Gas Pipeline / Transportation

**Company:** Star Measurement

**Interested User:** Measurement Supervisor

**Application:**

Many natural gas pipelines operate at approximately 1500 PSIG. High-pressure pilot valves are used for safety control on such pipelines to automatically shut in the pipeline if over-pressure occurs on the gas gathering side of the valve. This acts to protect the transportation side pipeline from over-pressure damage. The pilot valves must be checked monthly for proper operation at the prescribed shut-in pressure. Industry accuracy requirement is  $\pm 0.25\%$ .

Traditional analog pressure gauges are often used for pilot valve testing but they are ill-suited for the task. They are sensitive to transportation jolts and rough handling so calibration shifts are a frequent nuisance. The tests are often tedious and time-consuming work. The technician must slowly increase the test pressure as he nears the pilot valve set point so that he can read the pressure precisely at the instant when the pilot valve actuates. This is a tricky feat with an analog gauge and re-testing is frequently necessary.

**Application Requirements:**

Accuracy:  $\pm 0.25\%$  of Full Scale

Range: 0 - 1500 PSIG

Enclosure Rating: Nema 4

Minimum / Maximum hold feature

Value Priced

Reliability, stability, low maintenance



**Meriam Solution: The model 3900 MeriGauge**

The **3900 MeriGauge** offers just the right features and performance to handle this application in a safe and efficient way! The battery-powered version has the portability and Nema 4 stainless steel case needed for field use.  $\pm 0.25\%$  FS accuracy meets the application requirement. But perhaps the best feature for the pilot valve application is the Minimum / Maximum hold. This feature lets the user forget about “eye-balling” the activation pressure so that he can concentrate on safely adjusting the applied pressure. The **MeriGauge** measures pressure and holds the maximum value so that the user gets an accurate maximum pressure reading on the first try.

**Did you know???**

The new **3910 MeriGauge** is now available with  $\pm 0.1\%$  FS accuracy! Price is \$125 more than the 3900. In addition, Meriam has recently improved the temperature effect specification of both models to  $\pm 0.01\%$  of FS per  $^{\circ}\text{C}$  (from  $\pm 0.04\%$  of FS per  $^{\circ}\text{C}$ ). This means improved accuracy and improved zero stability on all models.