

Application News

Electromagnetic Flowmeter Used As Calibration Master Meter

Industry: Test & Measurement

Service: Flowmeter Calibration

Fluid: Water

Overview

A leading calibration laboratory in the Silicon Valley area of California contacted Flow Technology to inquire about purchasing a flowmeter that could be used as a master meter for the calibration of rotameters. The calibration facility required a flowmeter with an extended flow range and very little pressure drop.

Situation

The calibration lab application required one flow measurement instrument that would be installed in a flow loop and used as the master flowmeter to calibrate less accurate rotameters and variable area meters. The master meter needed a flow range wide enough to accommodate rotameter and variable area meter designs received for calibration certification from a variety of industries.

Solution

Flow Technology responded quickly to the customer's master flow meter requirements by supplying its EL 500 Electromagnetic Flowmeter. This meter was installed on a flow loop calibration test bench along with the device to be calibrated. The EL 500 displays the actual flow rate and provides an analog output to the lab's data acquisition system. Technicians can adjust the test bench manifold valve stack to regulate flow rates and record the indicated flow data displayed by the rotameter under test.

System Description

The EL 500 Electromagnetic Flowmeter was selected for this application because it provided the versatility required within the user's test bench system. The mag meter generated no pressure drop affecting the measurement of the other instrument in the flow loop. The EL500 was sized in accordance with the user's wide flow range, thus allowing various sizes of rotameters to be accommodated on the same test bench. Its accuracy of $\pm 0.2\%$ of reading, and $\pm 0.1\%$ repeatability, were ideal for calibration of the less accurate rotameters. Plus, the transmitter display and analog output enabled easy recording of calibration information.

Technical Information

System: 68603-BAA-AAA
Flow Meter (Model Number): EL500-010NPTSPLCA
Transmitter: MC308CCVM2D3C21N
Flow Rate: 0.260 to 12.8 GPM
Fluid: Water



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