

26 flowmeters

■ featured columnist

New-technology flowmeters: A growing trend

During the past ten years, a gradual shift has been occurring in the flowmeter market. New-technology flowmeters have been replacing traditional technology flowmeters for many applications. New-technology flowmeters were introduced after 1950 and they incorporate technological advances that avoid some of the problems inherent in earlier flowmeters. Their performance, including criteria such as accuracy, is at a higher level than that of traditional meters such as differential pressure (DP), positive displacement and turbine.

Coriolis Flowmeters

The Coriolis flowmeter market is a very active one and the major suppliers are continuing to bring out new products. With suppliers continuing to deliver technology improvements, and the need for accuracy and repeatability growing, the Coriolis flowmeter market is likely to continue to show strong growth for the foreseeable future. One important trend in this market is the trend toward Coriolis flowmeters with larger line sizes. The Coriolis flowmeter market is also benefiting from approvals by the American Gas Association (AGA) and the American Petroleum Institute (API). Both organizations have published reports containing standards for the use of Coriolis flowmeters for custody transfer applications.

Magnetic Flowmeters

A steady stream of new products has kept the magnetic flowmeter market vibrant with growth. The development of insertion meters gives more options to end-users who may hesitate to pay the high prices for large line size magnetic flowmeters. Suppliers have brought out a wide variety of liners to handle both sanitary and dirty liquids. Advanced diagnostics are making magmeters more

intelligent and more reliable. Two other important product areas for magnetic flowmeters are high-strength direct current (DC) meters and two-wire magmeters. The high-strength signal DC meters are better able to handle dirty liquids and slurries than many of the standard signal DC meters. Two-wire magmeters also offer end-users reduced power requirements and lower installation costs.

Ultrasonic Flowmeters

The fastest growing segment within the ultrasonic flowmeter market is the market for custody transfer of natural gas. Ultrasonic flowmeters are displacing DP and turbine flowmeters for many custody transfer applications, especially in natural gas pipelines. Ultrasonic flowmeters have minimal pressure drop, long-term reliability, and high accuracy. Another growth area for ultrasonic flowmeters is flare gas measurement.

Vortex Flowmeters

The market for vortex flowmeters is undergoing some important changes. After several years of work, the American Petroleum Institute (API) has formulated standards for the use of vortex flowmeters in custody transfer applications. The new standard is designed for liquid, gas and steam applications. The standard was issued in January 2007. Another important area of growth for vortex flowmeters is the development of reducer vortex flowmeters.

Thermal Flowmeters

The thermal flowmeter market is still relatively small. Even though it has been growing quite slowly, it may be in for a boost. In the early 1990s, this market experienced a boost when multipoint thermal flowmeters were

developed to meet the needs of continuous emissions monitoring (CEM). Today, there is a parallel environmental need to measure greenhouse gas emissions, and thermal flowmeters are ideally-suited for this. Look for substantial growth in the thermal flowmeter market over the next several years.

Despite the advantages of new-technology flowmeters, some end-users may decide to stick with their traditional flowmeters in this economic environment. There are always costs associated with changing technologies and some users may choose to delay this switch to save money in difficult economic times. New-technology flowmeters are often chosen for new projects, but some capital construction projects are being delayed or canceled as companies are forced to reduce costs. These factors may temporarily slow down the switch to new-technology flowmeters, but they will not reverse the long-term trend.

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