

18 flowmeters

■ featured columnist

DP flowmeters ride the wave of growth in the oil & gas industry

Differential pressure (DP) flowmeters are among the most widely used types of flowmeters. DP flowmeters are perhaps the best studied and best understood of any type of flowmeter. Their advantages include ease of installation, relative low cost, and broad familiarity among the end-user community. Despite the emergence of new-technology flowmeters, such as ultrasonic and Coriolis, DP flowmeters remain very popular in the process industries.

Flow Research has recently completed a study of the worldwide DP flowmeter and primary elements market. The goal of this study was to determine the true value of the DP flowmeter market, including primary elements. The DP flowmeter market is often undervalued because typically only DP flow transmitters are included in its value. The study examined the value of both DP transmitters and primary elements, and combined them together to form the DP flowmeter market. The results of this study will have a broad impact on the way the worldwide flowmeter market is viewed. When primary elements are included, the value of the worldwide DP flowmeter market is more than one billion dollars in 2007. This makes DP flowmeters the largest segment of the segment of the flowmeter market in terms of revenues, larger than either the magnetic or Coriolis flowmeter markets. It also means that DP flowmeters account for about 25 percent of total flowmeter revenues worldwide, more than any other type.

Other results of this study underline the importance of this market:

- The DP flowmeter market is increasing annually in the six percent range; it is not flat or declining.
- The rising worldwide demand for energy is driving

growth in the DP flowmeter market, along with the ongoing search for new sources of oil and natural gas.

- The multivariable transmitter market continues to grow rapidly, as existing suppliers bring out enhanced products and new suppliers enter this market.
- The accuracy and reliability of DP flow transmitters is increasing, as suppliers add product enhancements and new features to their transmitters.
- Venturi tubes and averaging Pitot tubes are showing strong growth, even though orifice plates remain the dominant primary element type.
- Even though much of the new product enhancements to DP flowmeters have been on the transmitter side, primary element suppliers are also introducing innovative products to improve their product lines.

Through a series of user surveys extending over eight years, Flow Research has established that DP flowmeters have the largest installed base of any type of flowmeter. That gives this technology a distinct advantage in current sales, since most end-users will not change flow technologies unless they are having a problem with their flowmeters or unless their flow measurement requirements change. Otherwise, end-users are likely to replace their DP flowmeters with new DP flowmeters when replacement is required. They also have the option of going to a different primary element, or of upgrading to a multivariable transmitter without changing to a new technology. Changing technologies often means changing suppliers, and can also cost money in terms of existing inventory. "If it ain't broke, don't fix it," could thus be the mantra of many DP flowmeter users.

DP flowmeters are widely used in the oil & gas industry, where they are used for custody transfer and billing applications, and in a wide variety of gas, steam, and liquid

applications.

There is a tremendous push today to find new sources of oil and gas, and to pump more oil and gas out of existing wells. With the price of crude oil in the \$60 per barrel range, the demand for flow measurement in the oil & gas industry is sure to continue to expand. And DP flowmeters are the workhorse of flow measurement in the oil & gas industry. So expect the demand for DP flowmeters to continue to increase, along with the need for flow measurement in the oil & gas, refining, and other process industries.

Jesse Yoder, PhD, is president of Flow Research, Inc. in Wakefield, Massachusetts (www.flowresearch.com), a company he founded in 1998. He has 20 years of experience as an analyst and writer in process control. Yoder specializes in flowmeters and other field devices, including pressure, level, and temperature products. He has written over 70 market research studies in industrial automation and process control, and has published numerous journal articles.

Dr. Yoder is the author of "The World Market for Differential Pressure (DP) Flowmeters and Primary Elements," which was published in January 2007 by Flow Research. He also recently authored "The Market for Temperature Transmitters in the Americas."



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