

18 flowmeters

■ featured columnist

The key to unlocking the DP flowmeter market

Anyone who needs to do flow measurement today has a wide choice of technologies and products. New-technology flowmeters such as Coriolis and ultrasonic offer increased reliability, reduced pressure drop and high accuracy. At the same time, suppliers are making improvements to the traditional-technology meters, improving their performance. Turbine flowmeters are being made with stronger bearings, offering longer life, and improvements in pressure transmitters mean greater stability and accuracy when they are used to make pressure or flow measurements.

Market researchers sometimes produce studies that compare the amount spent on different types of flowmeters worldwide and in various geographic regions. These studies also report on how many flowmeters of different types are sold in a given period of time. Product and marketing managers from flowmeter companies use these reports as a guide to making decisions about what types of flowmeters to include in their product lines, and what features these flowmeters should have. These reports also help users understand better what types of flowmeters their colleagues are buying and for what applications.

Determining the market size for different types of flowmeters is important since it helps both suppliers and end-users understand how much is being spent on each type of flowmeter, and where these products are sold. Tracking this data over time shows how the market changes from year to year, and reveals trends that might not otherwise be apparent. Looking at past data is also a guide to future trends, and is valuable as a forecasting tool. Flowmeter market size typically includes both how many flowmeters of a given type are sold in a year, and the dollar value of those sales.

Determining the market size for a flowmeter can be fairly straightforward, when it is clear what is included

in the flowmeter. Most flowmeters have a sensor and a transmitter, along with an amplifier, transducer, and display. Typically, the transmitter generates one or more output signals that represent flowrate, and can represent other values such as pressure or temperature.

DP flowmeters are different because of the complexity of the measurement. DP flowmeters require some type of constriction in the flowstream, created by a primary element. They require a DP transmitter to provide a reading of the difference in line pressure upstream and downstream from the constriction. The primary element is essential to making the DP flow measurement. But often end-users order the primary element separately from the DP transmitter and from a different supplier, so tracking primary element sales values can be a challenge.

Types of primary elements include orifice plates, Venturi tubes, averaging Pitot tubes, flow nozzles, laminar flow elements and wedge elements. The costs associated with these products should be included in the total value of the DP flowmeter market. Simply considering the value of DP transmitters is not sufficient. And when the value of primary elements is included in the DP flowmeter market, it is among the largest of any flowmeter market in terms of revenues.

The DP flowmeter market appears to be holding its own and possibly gaining ground when other traditional technology flowmeters such as turbine meters are losing market share. There are several reasons for this. One is that DP flowmeters still have the largest installed base of any type of flowmeter. Second, pressure transmitter suppliers have been very active in incorporating technological improvements into their products. Third, the development of multivariable DP transmitters and flowmeters has enabled customers to save money and reduce installation costs. Finally, like vortex flowmeters, DP flowmeters are very versatile, and can be used to

measure liquid, gas and steam flows.

DP flowmeters are here to stay, and will continue to provide stiff competition to new-technology flowmeters. And the market might be even stronger if suppliers would look more seriously at primary elements. What the world needs now is some new and improved primary elements to go with those highly stable and accurate pressure transmitters. Only when suppliers work to improve primary elements as they have worked to improve pressure transmitters will we know the true potential of the DP flowmeter market.

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Dr. Yoder is the author of "The World Market for Differential Pressure (DP) Flowmeters and Primary Elements," which is being published in September 2006 by Flow Research.

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