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For Immediate Release

Flow Research: World Energy Markets Drive Growth in Differential Pressure Gas Flow Measurement

Wakefield, Massachusetts; April 8, 2016 — A new research study from Flow Research finds substantial growth in the gas flow measurement market. According to this new study, *The World Market for Gas Flow Measurement, 3rd Edition*, by Flow Research (www.flowresearch.com), the worldwide market exceeded $1.7 billion in 2014. New-technology gas flowmeters made up $788 million of this total, while traditional technology gas flowmeters revenues were $930 million. Coriolis and ultrasonic are the fastest growing gas flowmeter markets.

Multivariable Transmitters Offer Enhanced Flexibility

Multivariable transmitters can be used to reduce the need to buy a separate flow computer to perform the flow calculation. In some cases, the multivariable transmitter measures one or two pressure values and temperature, then outputs these values to a flow computer that performs the flow calculation. In other cases, the computing power of the flow computer is brought on board the multivariable transmitter, which also performs the flow calculation. Emerson Rosemount has also introduced a multivariable transmitter that includes an integrated primary element, resulting in a full-fledged multivariable flowmeter. The trend towards multivariable transmitters can be expected to continue in the DP transmitter and flowmeter markets. These products typically sell for less than it would cost to buy the transmitters separately, with an average selling price in the $2,000 range

Plant Renovations and Upgrades

The process of retrofit and renovation is an ongoing process in manufacturing plants throughout the Americas, Europe, and Asia. Competition is a driving force behind the continuing need for companies to retrofit and renovate their plants. The prices of chemicals, petroleum products, paper products, automobiles, and other manufactured goods are always under pressure as consumers remain price conscious and as cost reductions by one company can force competitors to follow suit. In many cases, renovating a manufacturing plant can result in substantial cost savings. And when plants are renovated, companies are much more likely to install modern electronic equipment rather than outdated pneumatic equipment. Modern electronic systems are likely to incorporate more measuring points due to the need for greater efficiency and better control. As a result, plant renovations and upgrades are a real growth factor for the flowmeter market.

A Large Installed Base Favors Differential Pressure Transmitters

The total size of the worldwide differential pressure transmitter market is one of the largest among flowmeter types, especially when the value of primary elements is included. But annual sales do not tell the whole story of the differential pressure transmitter market. The size of the installed base is a major reason why the differential pressure transmitter market will continue to hold its own within the instrumentation world.

DP flow transmitters have been around for more than 100 years, and this has resulted in a very large installed base for DP flow within the process industries. Because of the tendency to "replace like with like," many end-users can be counted on to continue to rely on pressure transmitters to make DP flow measurements. This means that they will continue to order new DP flow transmitters to replace DP flowmeters even where alternative technologies are available. In some cases, they will also order new primary elements when those are needed to maintain a DP flowmeter measurement.

According to Dr. Jesse Yoder, president of Flow Research:

"The entire flowmeter market experienced a downturn in 2008 and 2009, along with the whole economy. By 2011, many companies found that their sales had returned to 2008 levels. However,

a different kind of downturn occurred in 2014 when oil & gas prices began to decline. This had a negative impact on flowmeter suppliers selling into the oil & gas market, especially in 2015. While the future is difficult to predict, indications are that both oil & gas prices are on their way back up. In the meantime, some gas flowmeter suppliers are looking to industries such as chemical, food & beverage, and pharmaceutical on an interim basis until oil & gas prices ramp up again to more profitable levels. Given these many options and current market conditions, we see continued strong growth for the gas flowmeter market."

About Flow Research

Flow Research, with headquarters in Wakefield, Massachusetts, is the only independent market research company whose primary mission is to research flowmeters and other instrumentation products and markets worldwide. Flow Research has years of experience in doing both off-the-shelf studies and custom work. Published studies can be purchased by anyone interested in the topics. These studies are developed through interviews with suppliers, distributors, and end-users, and are presented in a clear and consistent manner. Topics include all of the flowmeter technologies – both new and traditional – as well as temperature sensors, temperature transmitters, level products, and pressure transmitters.

A growing area of interest – especially related to custody transfer – is flowmeter calibration. Flow Research has recently completed two studies, one on gas and one on liquid, of flow calibration facilities and markets (http://www.flowcalibration.org).

The company also focuses on the energy industries, especially on oil and gas production and measurement. Special topics include custody transfer, multiphase measurement, and liquefied natural gas (LNG). A series of quarterly reports called the Worldflow Monitoring Service provides regular updates on both the flowmeter markets and the energy industries (http://www.worldflow.com).

For more information, visit http://www.flowresearch.com or call +1 781-245-3200.