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For Immediate Release

Flow Research: World Energy Markets Drive Coriolis Flowmeter Growth in Gas Flow Measurement

Wakefield, Massachusetts; March 24, 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.

The Market for Custody Transfer of Natural Gas is a Growth Market for Coriolis

Custody transfer of natural gas is a fast-growing market, especially with the increased popularity of natural gas as an energy source. Natural gas changes hands, or ownership, at a number of points between the producer and the end-user. These transfers occur at custody transfer points, and are tightly regulated by standards groups such as the American Gas Association (AGA). Other geographic regions have their own regulatory bodies.

Technology Improvements Continue

Suppliers have made a number of improvements in Coriolis technology over the past five years. Coriolis meters are now much better able to measure gases than previously. The majority of Coriolis suppliers now have meters that can measure gas flow. Straight tube meters have become more accurate and reliable, thereby addressing some of the drawbacks of bent tube

meters. These include pressure drop, the ability to measure high-speed fluids, and the tendency of bent tubes to impede the progress of fluids. And both Micro Motion and Endress+Hauser have broken the price barrier, offering Coriolis meters for considerably less than they were previously.

Straight Tube Meters Reduce Fluid Build-up and Pressure Drop

Up until 1994, all Coriolis meters were bent tube meters. While bent tube meters still have advantages over many traditional meters, they do introduce pressure drop into the system. Pressure drop is an issue because in many cases the fluid has to be speeded up back to its original velocity. This costs money, as it requires the use of pumps. Another issue has to do with the tendency for build-up to occur around pipe curvatures. This can especially be a problem for sanitary applications. Having a bent pipe also slows down the fluid, making it more difficult to meter high-velocity fluids.

Growth in Coriolis Meters for Larger Line Sizes

More than any other meter, Coriolis meters have line size limitations. Due to the nature of the technology, Coriolis meters get large and unwieldy once they reach the six-inch size. Even two-inch, three-inch, and four-inch meters are quite large. Four-inch meters represent only about two percent of Coriolis meters sold worldwide, and even fewer six-inch meters are sold. Close to 70 percent of Coriolis meters sold are in the 0 to 1 inch diameter ranges.

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.