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For immediate release

New Flow Research Study Finds Strong Growth in the Vortex Flowmeter Market

Wakefield, Massachusetts; January 31, 2015 — A new Flow Research study finds that the vortex flowmeter market has increased significantly in the last few years. According to *The World Market for Vortex Flowmeters, 5th Edition* (www.flowvortex.com) the worldwide vortex market in Western Europe totaled $78.0 million in 2013. Other regions showing strong growth include China and Asia/Pacific.

One reason for the increase in the vortex flowmeter market size is growth in the multivariable vortex flowmeter segment. Sierra Instruments introduced the first multivariable vortex flowmeter in 1997. This meter included an RTD temperature sensor and a pressure transducer with a vortex shedding flowmeter. By using the information from these sensors, the flowmeter can determine volumetric flow, temperature, pressure, fluid density, and mass flow. Multivariable vortex flowmeters accounted for close to 24 percent of total vortex revenues in Western Europe in 2013.

In recent years, a number of new suppliers have introduced multivariable vortex flowmeters. These include ABB, Yokogawa, KROHNE, Spirax Sarco, and Endress+Hauser. While multivariable flowmeters are somewhat more expensive than their single-variable counterparts, they enable users to obtain significantly more

information about the process than a single-variable volumetric meter. This additional information can result in increased efficiencies that more than make up for the additional cost of the multivariable flowmeter. Multivariable vortex flowmeters also have the capability of measuring mass flow, and this makes them especially attractive for steam and gas flow measurement.

The approval by the American Petroleum Institute (API) of a draft standard for the use of vortex flowmeters for custody transfer applications has also helped market growth. Industry approvals have played a major role in the growth of other flowmeter markets, including ultrasonic and Coriolis. While it has taken time for suppliers to respond to the approval of a draft standard for vortex flowmeters, it is likely to increase the use of vortex flowmeters in the future. One area where it has already had an impact is in the use of custody transfer flowmeters for steam applications.

Another area of growth for the vortex flowmeter market is in flanged vortex meters. Wafer, flanged, and insertion are the three mounting types of vortex flowmeters. Revenues from flanged vortex meters are projected to grow at a faster pace than either wafer-style or insertion vortex meters, with a CAGR of 7.4 percent through 2018. Flanged meters have an advantage in being able to accommodate higher pressures, giving this configuration more versatility. Wafer flowmeters do not have flanges, and are typically less expensive than flanged meters. Insertion meters are used in large line sizes where the cost of an inline flowmeter is high.

Flow Research (http://www.flowresearch.com) projects a compound annual growth rate (CAGR) in revenues for the Western European vortex flowmeter market of 6.7 percent through 2018. By 2018, the vortex flowmeter market in Western Europe is projected to reach $108.1 million. The most rapid market growth is occurring where new process plants are being built, primarily in China, the Middle East, and in developing Asian countries.

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

> "One of the great strengths of vortex flowmeters is their versatility. They can measure liquid, gas, and steam flow with equal ease. They are widely used for steam flow measurement, and can handle the high temperatures of superheated steam. With more suppliers entering the market and a growing demand for gas flow measurement, vortex flowmeters are uniquely positioned for strong growth in the future. Innovations like reduced bore vortex meters along with dual sensor and dual vortex meters calibrated together are providing new prospects for growth in this market."

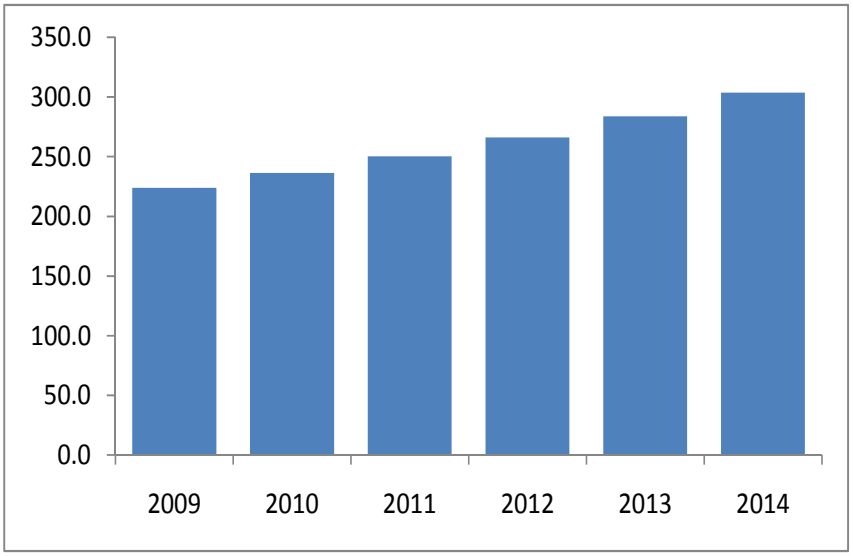
About Flow Research

Flow Research, with headquarters in Wakefield, Massachusetts, is the only independent market research company whose primary mission is to research flowmeter and other instrumentation products and markets worldwide. Flow Research specializes in flow measurement devices, and conducts market research studies in a wide variety of instrumentation areas that can be purchased by anyone interested in the topics. These studies are developed through interviews with suppliers, distributors, and end-users. Topics include all of the flowmeter technologies - both new and traditional - as well as temperature sensors, temperature transmitters, level products, and pressure transmitters. The company has a special focus on the energy industries, especially on oil and gas production and measurement. A series of quarterly reports called the Worldflow Monitoring Service provide regular updates on both the flowmeter markets and the energy industries (http://www.worldflow.com).

In 2015, Flow Research is doing the 3rd Edition of its classic series on the gas flowmeter market. This series is made up of a Core Study and six additional studies called modules. Areas of specific focus include custody transfer, multiphase measurement, and liquefied natural gas (LNG). Flow Research is also publishing two new studies on liquid and gas flow calibration (http://www.flowcalibration.org).

For more information, visit http://www.flowresearch.com or call +1 781 245-3200. For information on the vortex flowmeter study, visit http://www.flowvortex.com.

Total Shipments of Vortex Flowmeters Worldwide
(Millions of Dollars)
2009 - 2014



Compound Annual Growth Rate (CAGR) = 6.3%

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