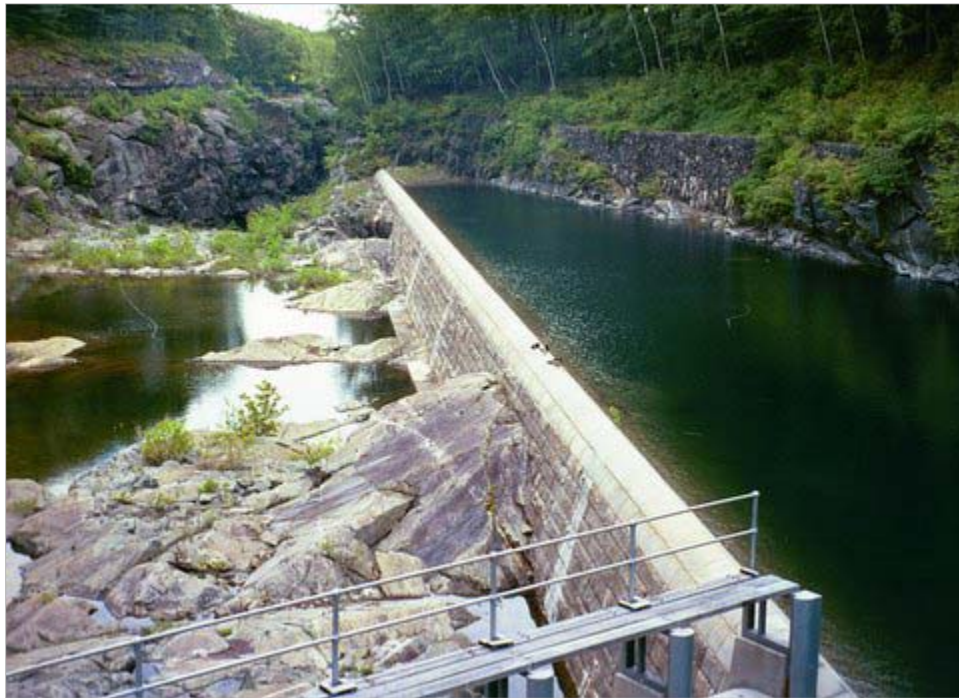


Liquid Flow Measurement in the Water & Wastewater Industry

Proposal



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Liquid Flow Measurement in the Water & Wastewater Industry

Flow Research will conduct a new market study on liquid measurement in the worldwide water & wastewater industry. The primary goal of this study is to determine the size of this market, which is one of the largest instrumentation markets today. A secondary goal is to determine precisely which types of flowmeters are used to measure liquid flow in the water & wastewater industry. In addition, forecasts through 2013 will be included.

The study is named **Liquid Flow Measurement in the Water & Wastewater Industry**.

The study will include data on the following areas of interest:

- Worldwide market size and market shares for all flowmeters used to measure liquid flow in the water & wastewater industry in 2008
- Forecasts of market growth for flowmeters used for liquid flow measurement in water & wastewater through 2013
- Identifying applications for flowmeters used for liquid flow measurement in water & wastewater
- A product analysis for the main companies selling flowmeters into the liquid flow measurement in water & wastewater market
- Strategies for flowmeter manufacturers selling into the water & wastewater industry
- Company profiles of the main suppliers of flowmeters used to measure liquid flow in the water & wastewater industry



Rationale for study

Flow measurement is often divided by fluid type into liquid, gas, and steam flow. Of these three, liquid is the predominant fluid measured, followed by gas, and then by steam. Liquid flow measurement is becoming increasingly important today.

The world's population has more than doubled since 1965, when it was 3.3 billion. Today, the world's population stands at 6.7 billion, and projections are this number will increase to 9.2 billion by 2050. At the same time, the amount of water available in the world has not increased.

While there is plenty of water in the oceans, this is not drinkable without desalination. According to the Environmental Protection Agency (EPA), nearly 97 percent of the world's water is either salty or otherwise undrinkable. Of the remaining amount, two-thirds exists frozen in glaciers and ice caps. Thus, only about one percent of the world's total water supply is suitable for drinking. While new oil can still be discovered underneath the ground, there is no corresponding "new" water waiting to be found. In fact, the water we are using today is the same water that was used by the dinosaurs millions of years ago. Hence, water is becoming among the most critical of flow measurements.

The following flowmeter types, including primary elements, are included in this study:

- Magnetic
- Ultrasonic
- Vortex
- Coriolis
- Differential Pressure (DP)
- Primary Elements
- Positive Displacement
- Turbine
- Open Channel
- Variable Area

Flow Research has already published individual studies on the some of the flowmeter technologies used to measure liquid flow in the water & wastewater industry. Chief among these is **The World Market for Magnetic Flowmeters, 4th Edition** (March 2009). Another study, **The World Market for Vortex Flowmeters, 4th Edition**, is scheduled for release in July 2009.

Chapter Detail

The following is a summary of the chapters that will appear in the study:

Chapter One – Executive Summary

Chapter Two – Scope and Method

- Background of Study
- Geographic Regions Defined: North America, Europe, Japan, Asia w/o Japan, Rest of World
- Definitions of Key Terms

How will the *Founding Sponsor Program* help me?

- You can have your specific data requirements included in the study
- You help determine the scope and final objectives
- You receive periodic updates as the research progresses
- You are among the first to receive final study results
- You receive favorable pricing and other purchase terms

See the enclosure for more information

Chapter Three – Product and Technology Analysis

- Paradigm Case Method of Flowmeter Selection
- Liquid Flow Products by Supplier *(Includes a product analysis for the leading suppliers of flowmeters to the water & wastewater market)*

Chapter Four – World Market Size and Forecasts

- Revenue Shipments of Flowmeters for Liquid Flow Measurement in the Water & Wastewater Industry Worldwide and by Region
- Unit Shipments of Flowmeters for Liquid Flow Measurement in the Water & Wastewater Industry Worldwide and by Region
- Average Selling Prices of Flowmeter for Liquid Measurement by Type

Chapter Five – Magnetic Liquid Flowmeter Market Size and Forecasts

- Types of Magnetic Flowmeters
- Suppliers of Magnetic Flowmeters for Liquid Flow Measurement
- Magnetic Flowmeters for Liquid Flow Measurement – Advantages and Limitations
- Market Size and Growth Forecasts
- Growth Factors for Magnetic Flowmeters Used for Liquid Flow
- Shipments of Magnetic Flowmeters for Liquid Flow Measurement by Region
- Average Selling Price by Region

Chapter Six – Ultrasonic Liquid Flowmeter Market Size and Forecasts

- Types of Magnetic Flowmeters
- Suppliers of Magnetic Flowmeters for Liquid Flow Measurement
- Magnetic Flowmeters for Liquid Flow Measurement – Advantages and Limitations
- Market Size and Growth Forecasts
- Growth Factors for Magnetic Flowmeters Used for Liquid Flow
- Shipments of Magnetic Flowmeters for Liquid Flow Measurement by Region
- Average Selling Price by Region

Chapter Seven – Vortex Liquid Flow Market Size and Forecasts

- Types of Vortex Flowmeters
- Suppliers of Vortex Flowmeters for Liquid Flow Measurement
- Vortex Flowmeters for Liquid Flow Measurement – Advantages and Limitations
- Market Size and Growth Forecasts
- Growth Factors for Vortex Flowmeters Used for Liquid Flow
- Shipments of Vortex Flowmeters for Liquid Flow Measurement by Region
- Average Selling Price by Region

Chapter Eight – Coriolis Liquid Flow Market Size and Forecasts

- Types of Coriolis Flowmeters
- Suppliers of Coriolis Flowmeters for Liquid Flow Measurement
- Coriolis Flowmeters for Liquid Flow Measurement – Advantages and Limitations
- Market Size and Growth Forecasts
- Growth Factors for Coriolis Flowmeters Used for Liquid Flow
- Shipments of Coriolis Flowmeters for Liquid Flow Measurement by Region
- Average Selling Price by Region

Chapter Nine – Differential Pressure Liquid Flow Market Size and Forecasts

- Types of Pressure Transmitters
- What is a Differential Pressure Flowmeter?
- Suppliers of DP Flow Transmitters for Liquid Flow Measurement in Water & Wastewater
- DP Flowmeters for Liquid Flow Measurement – Advantages and Limitations
- Market Size and Growth Forecasts
- Growth Factors for DP Flow Transmitters Used for Liquid Flow Measurement in the Water & Wastewater Industry
- Shipments of DP Flow Transmitters by Region
- Average Selling Price by Region

Chapter Ten – Primary Elements for Liquid Flow Market Size and Forecasts

- Types of Primary Elements
- Suppliers of Primary Elements for Liquid Flow Measurement
- Primary Elements for Liquid Flow Measurement in the Water & Wastewater Industry – Advantages and Limitations
- Market Size and Growth Forecasts
- Growth Factors for Primary Elements Used for Liquid Flow Measurement in the Water & Wastewater Industry
- Shipments of Primary Elements for Liquid Flow Measurement by Region
- Average Selling Price by Region

Chapter Eleven – Positive Displacement Liquid Flowmeter Market Size and Forecasts

- Types of Positive Displacement Flowmeters
- Suppliers of Positive Displacement Flowmeters for Liquid Flow Measurement
- Positive Displacement Flowmeters for Liquid Flow Measurement – Advantages and Limitations
- Market Size and Growth Forecasts
- Growth Factors for Positive Displacement Flowmeters Used for Liquid Flow
- Shipments of Positive Displacement Flowmeters for Liquid Flow Measurement by Region
- Average Selling Price by Region

Chapter Twelve – Turbine Liquid Flowmeter Market Size and Forecasts

- Types of Turbine Flowmeters
- Suppliers of Turbine Flowmeters for Liquid Flow Measurement
- Turbine Flowmeters for Liquid Flow Measurement – Advantages and Limitations
- Market Size and Growth Forecasts
- Growth Factors for Turbine Flowmeters Used for Liquid Flow
- Shipments of Turbine Flowmeters for Liquid Flow Measurement by Region
- Average Selling Price by Region

Chapter Thirteen – Open Channel Liquid Flowmeter Market Size and Forecasts

- Types of Open Channel Flowmeters
- Suppliers of Open Channel Flowmeters for Liquid Flow Measurement
- Open Channel Flowmeters for Liquid Flow Measurement – Advantages and Limitations
- Market Size and Growth Forecasts
- Growth Factors for Open Channel Flowmeters Used for Liquid Flow
- Shipments of Open Channel Flowmeters for Liquid Flow Measurement by Region
- Average Selling Price by Region

Chapter Fourteen – Variable Area Flow Market Size and Forecasts

- Types of Variable Area Flowmeters
- Suppliers of Variable Area Flowmeters for Liquid Flow Measurement
- Variable Area Flowmeters for Liquid Flow Measurement – Advantages and Limitations
- Market Size and Growth Forecasts
- Growth Factors for Variable Area Used for Liquid Flow
- Shipments of Variable Area Flowmeters for Liquid Flow Measurement by Region
- Average Selling Price by Region

Chapter Fifteen – Market Shares by Flow Technology

- Market Shares for the Leading Suppliers of Magnetic Flowmeters
- Market Shares for the Leading Suppliers of Ultrasonic Flowmeters
- Market Shares for the Leading Suppliers of Vortex Flowmeters
- Market Shares for the Leading Suppliers of Coriolis Flowmeters
- Market Shares for the Leading Suppliers of Differential Pressure Flow Transmitters
- Market Shares for the Leading Suppliers of Primary Elements
- Market Shares for the Leading Suppliers of Positive Displacement Flowmeters
- Market Shares for the Leading Suppliers of Turbine Flowmeters
- Market Shares for the Leading Suppliers of Open Channel Flowmeters
- Market Shares for the Leading Suppliers of Variable Area Flowmeters

Chapter Fifteen – Strategies for Success



Chapter Sixteen – Supplier Company Profiles

The following is a partial list of the more than 30 companies to be profiled in this study:

- ABB
- Azbil (formerly Yamatake)
- Arkon Flow Systems
- Emerson Process Management
 - Micro Motion Division
 - Rosemount Division
- Endress+Hauser
- Foxboro (Invensys Process Systems)
- Fuji Electric Company
- GE Sensing
- Honeywell
- Marsh McBirney
- McCrometer
- Oval Corporation
- Samil Industry
- Siemens
- Toshiba
- Tokyo Keiso
- Yamatake
- Yokogawa

Publication Date

This study is scheduled for publication in October 2009.

Founding Sponsorship

We are offering the opportunity for companies to become Founding Sponsors for this study. Benefits of being a Founding Sponsor include being able to participate in determining study scope and direction, being sent regular updates on study progress, and receiving a favorable discount pricing package. The Founding Sponsor program is explained for your consideration later in this document. In the meantime, please review the segmentation and let us know if there is any additional segmentation you would like to see, or if you would like to propose changes to the existing segmentation.

Thank you in advance for your input, and we hope to hear from you!

Background

Dr. Jesse Yoder is President of Flow Research Inc., a company he founded in 1998. Dr. Yoder has 22 years' experience as a writer and analyst in process control and instrumentation. Since 1990, he has written more than 100 market research studies, most of them in flow and instrumentation.

The Flow Research portfolio of products and services includes off-the-shelf and custom studies of the process control instrumentation markets and technologies. Our publications include the *Market Barometer* and *Energy Monitor* publications which have been produced on a quarterly basis since 2002. We specialize in determining the purchase patterns, attitudes, and needs of end-users worldwide.

Some of the recent and currently planned Flow Research studies are as follows:

- I. The World Market for Coriolis Flowmeters, 3rd Edition (9/08) - **New edition!**
- II. The World Market for Magnetic Flowmeters, 4th Edition (3/09)
- III. The World Market for Ultrasonic Flowmeters, 3rd Edition (1/08)
- IV. The World Market for Vortex Flowmeters, 4th Edition (7/09)
- V. The World Market for Differential Pressure (DP) Flowmeters and Primary Elements (1/07)
- VI. Worldwide Survey of Flowmeter Users, 2nd Edition (1/06)
- VII. The World Market for Positive Displacement Flowmeters (2002)
- VIII. The World Market for Turbine Flowmeters (2002)
- IX. The World Market for Pressure Transmitters, 2nd Edition (10/07)
- X. The World Market for Flowmeters, 2nd Edition (4/08)
- XI. The World Market for Gas Flow Measurement (9/04)
- XII. The World Market for Steam Flow Measurement (3/08)
- XIII. The World Market for Mass Flow Controllers (7/08)
- XIV. The World Market for Thermal Flowmeters (6/09)
- XV. Liquid Flow Measurement in the Water & Wastewater Industry (10/09)
- XVI. The World Market for Liquid Analytical Instruments (12/09)

The above studies are fully described at <http://www.flowresearch.com/flow.htm>. Dr. Yoder has also written more than 90 articles on flow and instrumentation for trade journals. Links to many of these can be found at <http://www.flowresearch.com/articles.htm>.

Norm Weeks, Market Analyst, joined Flow Research in November 2004 after a 24-year stint with Verizon. At Verizon, Norm specialized in creating innovative customer solutions, product management, and product marketing. He is now a fulltime market analyst for Flow Research, has completed several studies, and regularly contributes articles and editorial assistance to our *Market Barometer* and *Energy Monitor* publications.

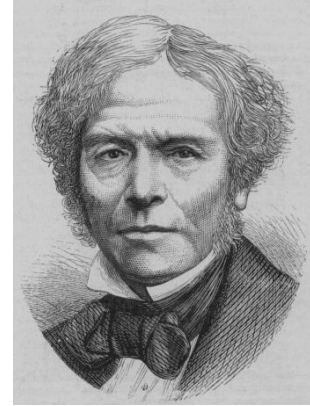
Belinda Burum, Vice President and Editor, has worked in high tech for 16 years as a technical writer and marketing communications manager. She joined the company in 2002, and has since then worked on many projects. She is a very talented writer, and has a strong customer focus. In addition to her work on market studies, Belinda is serving as associate editor of *Market Barometer* and *Energy Monitor*.

Besides writing and publishing studies of this type, Flow Research specializes in user surveys that include a detailed analysis of customer perceptions. In addition, Flow Research provides quarterly updates on the flow and energy industries in *Market Barometer* and *Energy Monitor*. *Energy Monitor* analyzes the current state of the oil & gas, refining, power, and renewables industries, and the implications for instrumentation supplier. Both reports are part of the Worldflow Monitoring Service; more details are available at www.worldflow.com.

For more information on Flow Research, please visit our website at www.flowresearch.com.



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Michael Faraday

The Flow Research *Founding Sponsor Program*

To produce studies that most closely match our clients' needs, Flow Research instituted the **Founding Sponsor Program**. This program enables companies who wish to participate at a high level in a study's research to influence its scope and segmentation. In addition, Founding Sponsors receive regular updates from Flow Research on study progress, and receive a significant discount on the regular price of the study.

Procedure

Early in the planning phase of a study, Founding Sponsors receive a proposal that includes the proposed segmentation. Founding Sponsors can propose additional segmentation, and also suggest changes to the proposed segmentation. While the decision to adopt particular segmentation ultimately lies with Flow Research, and is based on input from all contributors, we will do our best to accommodate the specific needs of each of our clients.

During the research phase of a study, Flow Research will issue regular reports that provide updates on the progress of the research. These reports will be sent to Founding Sponsors, who are then invited to provide any additional input or comments into the study.

Being a Founding Sponsor requires making an early commitment to purchase the study. However, in return, Founding Sponsors receive a significant discount off the regular price of the study. Payment can either be made in one amount at the beginning of the study, or split into two, with the second payment due upon delivery of the study.

For additional details, or to find out how the Founding Sponsor program applies to any particular study, please contact Flow Research. *We look forward to working with you!*

If you have any questions about the Founding Sponsor program, please contact Norm Weeks at (781) 245-3200, or norm@flowresearch.com.

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Why Flow Research?

- We specialize in flowmeter markets and technologies
- We have researched all flowmeter types
- We study suppliers, distributors, and end-users
- Our worldwide network of contacts provides a unique perspective
- Our mission is to supply the data to help your business succeed

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