

The World Market for Oil Flow Measurement

Overviews of Core Study + Modules A through E



*Pumping station outside Denver, Colorado
Photo by Flow Research*

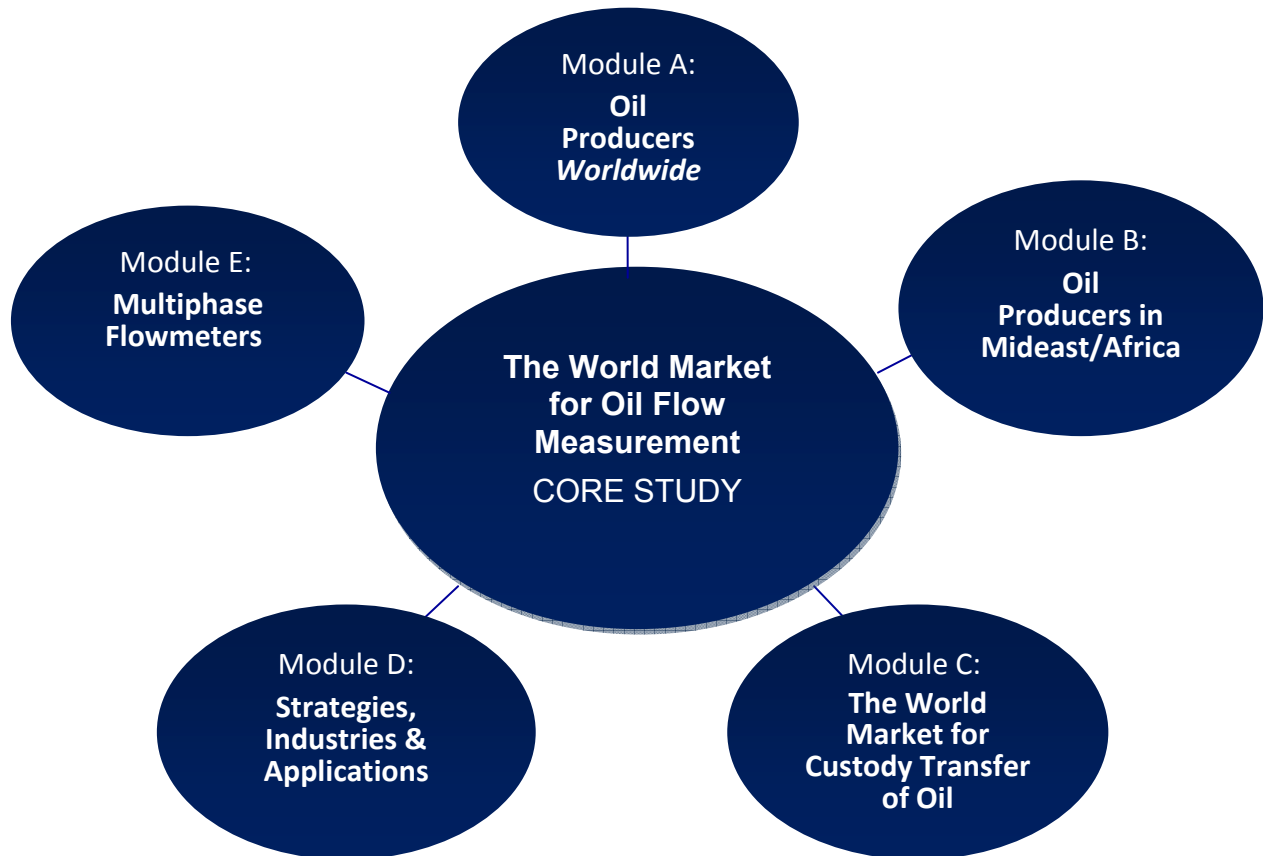


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Core Study & Modules A-E
The World Market for Oil Flow Measurement
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The World Market for Oil Flow Measurement



A Modular Approach to the Oil Flow Market

The World Market for Oil Flow Measurement features a core oil flow measurement study and five modules that can be ordered as add-on or standalone reports. Together they provide a comprehensive picture of the oil flow market from multiple perspectives. It shows where growth is occurring (and where it is not) and where to expect the highest returns. The in-depth research in the modules complements and builds on the detailed results of the Core Study.

This modular study has multiple goals:

- Determine worldwide supplier market size for oil flow measurement in 2012 for each technology type
- Forecast market growth through 2017 for all seven types of flowmeters used in this market

- Identify the industries and applications where oil flow measurement is used and provide shipments by application and industry
- Identify market growth sectors
- Create company and country profiles of the main suppliers into the oil flow measurement market as well as the main oil providers throughout the world, with a special focus on the Mideast
- Analyze products for the main companies selling into the oil flow measurement market
- Provide product description and average selling prices in this market
- Offer strategies to manufacturers for selling into the oil flow measurement market
- Analyze the custody transfer market for oil
- Analyze the multiphase flowmeter markets for the oil industry

We believe Flow Research has the perfect qualifications for doing this study. We have been following the oil market regularly. We provide periodic updates in our *Market Barometer* and *Energy Monitor* publications (www.worldflow.com). We have also done user interviews that show that the interest in oil flow measurement remains at a very high level. You can trust Flow Research to give you data and insights you can use today.



*Pumping station outside Denver, Colorado
Photo by Flow Research*

The World Market for Oil Flow Measurement Core Study

Oil is hotter – and more expensive – than ever, and that means oil flow measurement is also on the rise. Oil flow measurement and its associated revenues have grown significantly during the last few years.

Oil is a major source of energy worldwide. New technology is making recovery and delivery of oil more feasible than ever before, even from subsea wells.

In addition to the expansion in demand for oil and related energy products, market drivers include significant new capital project growth in large regional economies such as India, China, and the Mideast.

Flow Research believes this is an optimal time to quantify the growth in the oil flow market, and to take an in-depth look at an expanding market.

The World Market for Oil Flow Measurement determines the size of the oil flow measurement market in 2012. It shows where growth is occurring (and where it is not) and where to expect the highest returns. The Core Study has multiple goals:

- Determine worldwide market size for oil flow measurement in 2012
 - Determine worldwide market shares for the oil flow measurement market in 2012
 - Forecast market growth through 2017 for all seven types of flowmeters used in this market
 - Identify market growth sectors
 - Create company profiles of the main suppliers into the oil flow measurement market
- What's in this for my company?**

 - Identify emerging applications
 - Pinpoint growth areas
 - Understand world and regional markets
 - Get to know your competition – what other suppliers manufacture, where, and for whom
 - Use the best information to make the best decisions
- Analyze products for the main companies selling into the oil flow measurement market
 - Provide product descriptions and average selling prices in this market
 - Analyze factors contributing to and limiting growth

The Core Study determines the market size of the oil flow measurement market in 2012, with forecasts to 2017 for each technology type. It also determines worldwide market shares for the oil flow measurement market in 2012.

The study covers the following technologies used in oil flow:

- Coriolis
- Ultrasonic
- Vortex
- Differential Pressure
- Primary Elements
- Positive Displacement
- Turbine



*A Coriolis Flowmeter being Calibrated at CEESI
Photo by Flow Research*

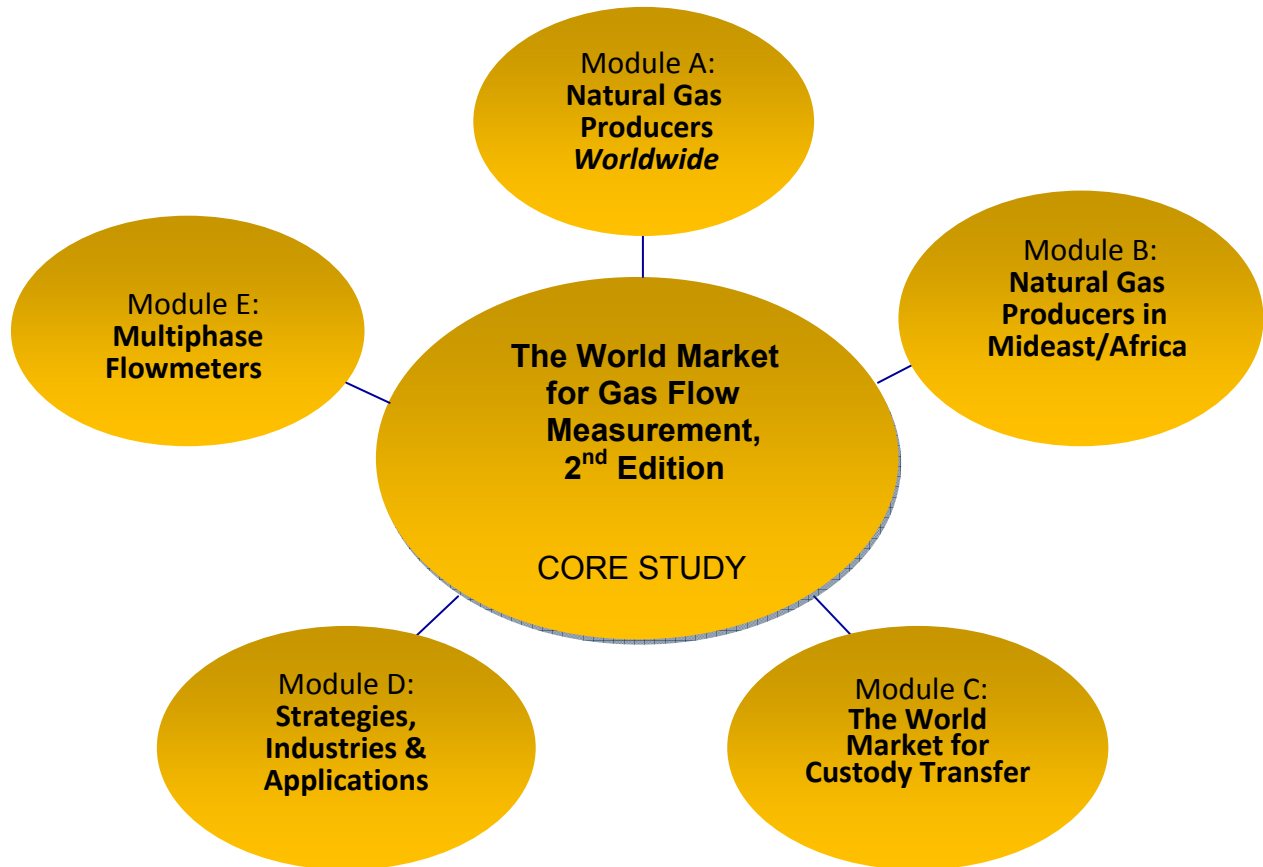
The study provides the following geographic breakouts for each of the flowmeter technologies:

- Worldwide
- North America
- Europe, including Eastern Europe and FSU
- Mideast/Africa
- Japan
- China
- Rest of Asia
- Latin America



*Dr. Jesse Yoder checking out a novel mode of transportation in the
United Arab Emirates*

The World Market for Gas Flow Measurement



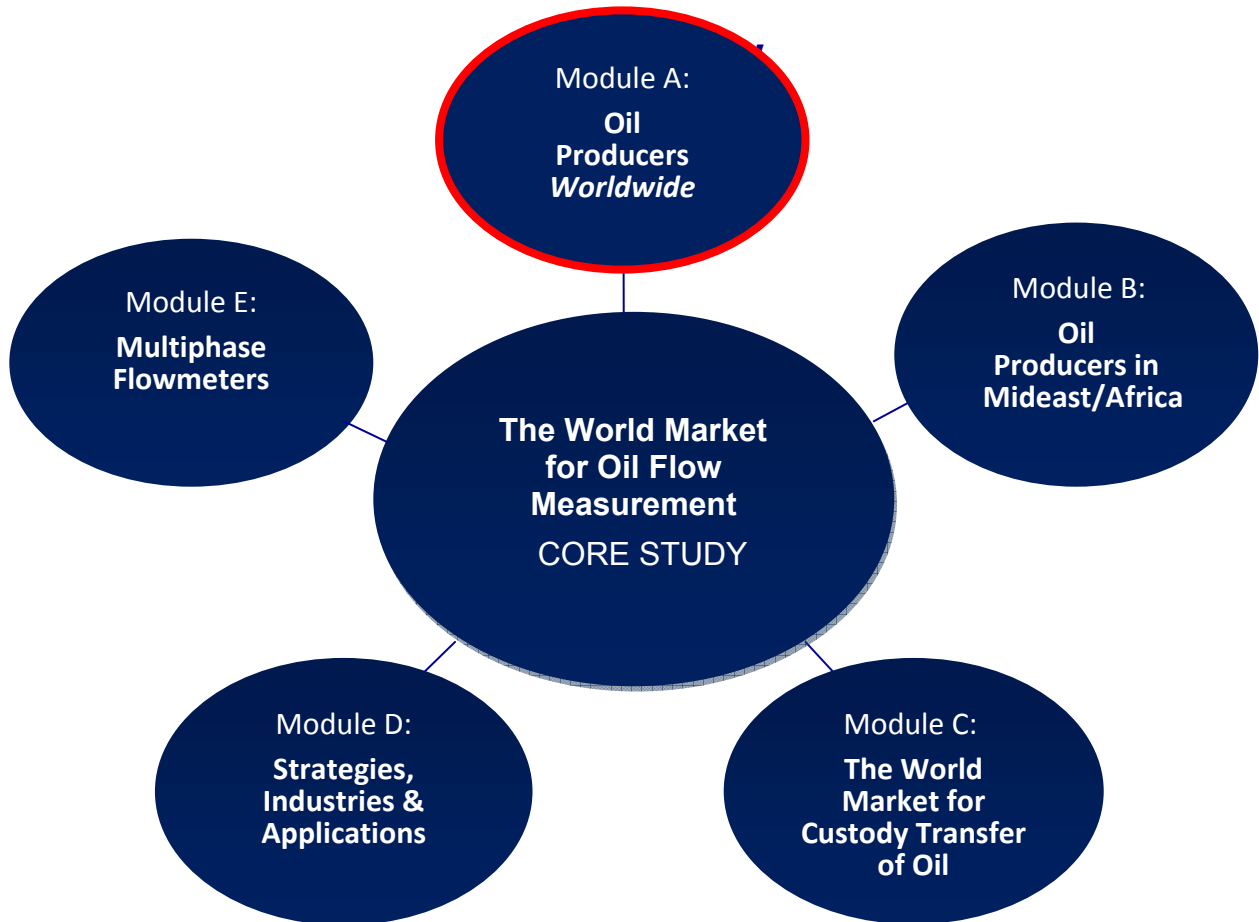
Now Shipping!

The core study and all five modules of this ground-breaking study are now shipping!

For more information, please see www.gasflows.com.

Module A Oil Producers Worldwide

Overview



Publication Date: Q1/Q2 2013



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Module A

Oil Producers Worldwide

Flow Research is proud to present a new study on oil producers worldwide. *Module A: Oil Producers Worldwide*, is a component of a broader study, *The World Market for Oil Flow Measurement*, which examines suppliers, producers, applications, industries, custody transfer, and multiphase flowmeters. It is oriented towards companies that want to enhance their instrumentation sales worldwide to the larger oil producers but also sheds light on the entire flowmeter market for oil producers. Module A has multiple purposes:

- Identify the major producers of oil in various regions worldwide
- Provide detailed descriptions of company history, organization, and business interests, including pipelines and field reserves
- Determine company partnerships and affiliations
- Specify what types of technologies these companies are using and where
- Determine the amount of produced oil being exported and imported
- Determine the amount of oil being produced and consumed

Rationale for Study

Oil flow measurement applications and their associated revenues have grown significantly during the last few years. A major driver of this growth worldwide has been the expansion in demand for oil and related energy products. There has also been significant new capital projects growth in large regional economies such as India, China, and the Mideast during this time as well. Given the recent volatility of the major oil countries in the Mideast and Africa, we believe that this is an optimal time to quantify the growth in this market, and to take another in-depth look at an expanding market.

Key topics addressed in Module A

- Oil imports, exports, consumption, and reserves by country, region, and worldwide
- Flowmeter data by type and region
- Company and country/regional profiles of the large producers
- Relationships among the companies
- Strategies for marketing to producers
- Trends in flow measurement relative to these large companies

Oil and Flowmeter Data by Regions and Countries

Module A provides significant data on flowmeter usage and the oil market. The study highlights oil developments by region, country, and suppliers. An overview chapter features comparison data on the largest suppliers. The study also provides country-by-country data:

- Gross oil production
- Proved reserves of oil
- Imports of oil
- Exports of oil

Module A covers the market size and forecast through 2017 for the seven flowmeter types used in the oil industry:

- Coriolis
- Ultrasonic
- Vortex
- Differential Pressure
- Primary Elements
- Positive Displacement
- Turbine

Our analysts also share regional trends underlying growth in the various technologies.

Chapters on the regions contain profiles on major oil-producing countries as well as companies:

North America

- United States: Chevron, ConocoPhillips, ExxonMobil
- Canada

Europe

- France: Total
- Netherlands: Royal Dutch Shell
- Norway: Statoil
- Russia: Rosneft
- UK: BP Corporation

Mideast and Africa

- Iran: National Iranian Oil Co.
- Saudi Arabia: Saudi Aramco
- Algeria: Sonatrach

Japan

China: China National Petroleum Corp., PetroChina

Rest of Asia

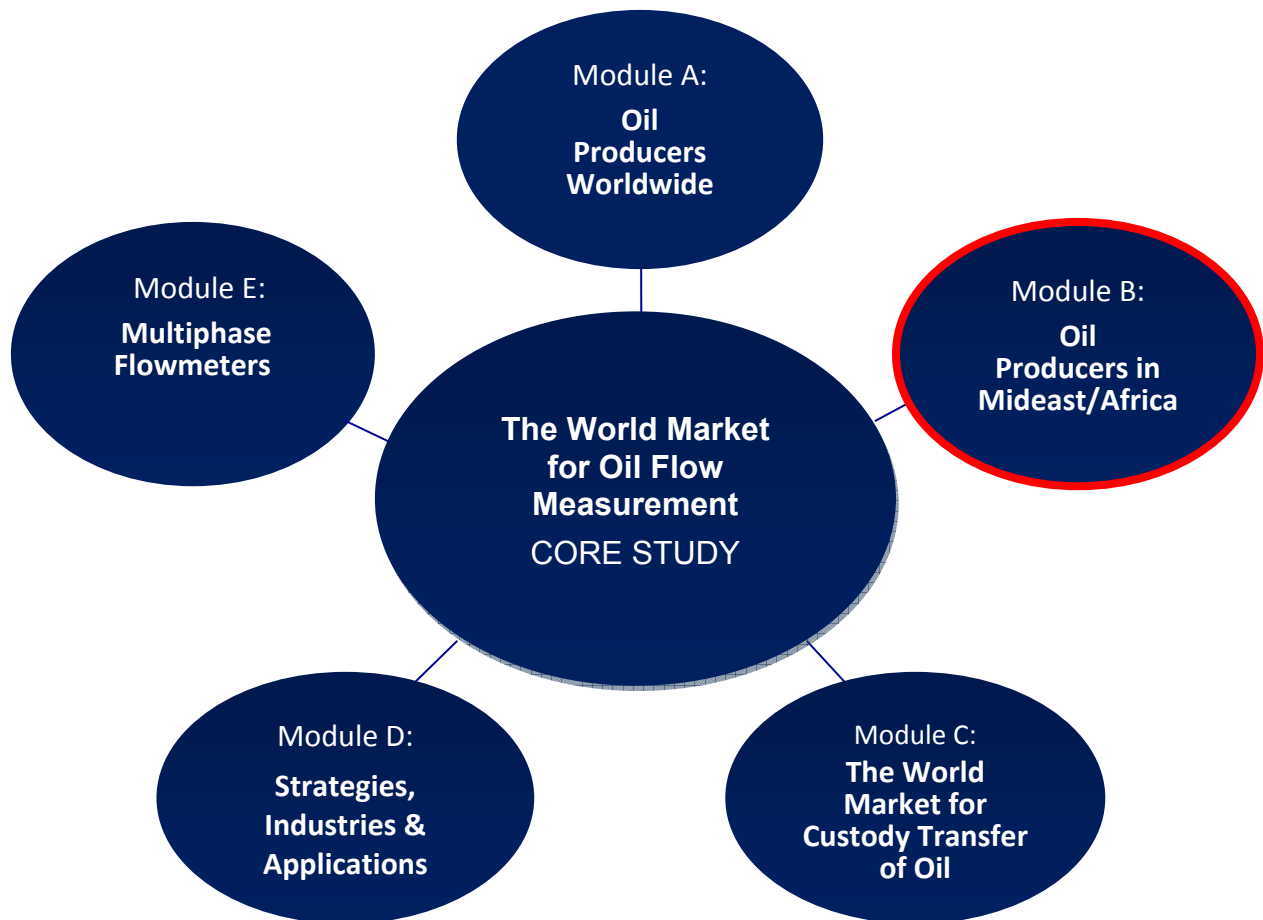
- Australia
- India
- Indonesia: Pertamina
- Japan
- Malaysia: Petronas
- South Korea
- Thailand

Latin America

- Mexico: Petroleas Mexicanos (PEMEX)
- Caribbean
- South America
 - Brazil: Petróleo Brasileiro S.A. (Petrobras)
 - Colombia
 - Ecuador
 - Venezuela: Petróleos de Venezuela S.A. (PDVSA)

Module B Oil Producers in the Mideast and Africa

Overview



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Module B

Oil Producers in the Mideast and Africa

Flow Research is proud to present a new study on oil producers worldwide. **Module B: Oil Producers in the Mideast and Africa**, is a component of a broader study, *The World Market for Oil Flow Measurement*, which examines suppliers, producers, applications, industries, custody transfer, and multiphase flowmeters. Module B is oriented towards instrumentation companies that want to increase their sales to the Mideast.

This module is based on extensive research – including onsite interviews with 15 oil producers in the United Arab Emirates (UAE), Saudi Arabia, Qatar, and Oman to better understand oil flow measurement trends in this region. We asked companies what kinds of flowmeters they are using and what their expectations are for the future. The result provides a very clear picture of flowmeter usage in the Mideast. The module includes:

- Flowmeter usage in the Mideast and Africa
- Oil imports, exports, consumption, and reserves by country
- Relationships among the companies
- Flowmeter usage and expectations for the future
- Strategies for marketing to producers
- Country summaries and company profiles of the largest producers

Rationale for Study

Oil flow measurement applications and their associated revenues have grown significantly during the last few years. A major driver of this growth worldwide has been the expansion in demand for oil and related energy products. There has also been significant new capital projects growth in the Mideast during this time as well. Given the recent volatility of the major oil countries in the Mideast and Africa, we believe that this is an optimal time to quantify the growth in this market, and to take another in-depth look at an expanding market.

Key topics addressed in Module B

- Oil imports, exports, consumption, and reserves by country and region
- Flowmeter data by type and region
- Company and country/regional profiles of the large producers
- Relationships among the companies
- Strategies for marketing to producers
- Trends in flow measurement relative to these large companies

Oil and Flowmeter Data by Regions and Countries

Module B provides significant data on flowmeter usage and the oil market. The study highlights oil developments by region, country, and suppliers. An overview chapter features comparison data on the largest suppliers. The study also provides country-by-country data:

- Gross oil production
- Proved reserves of oil
- Oil imports
- Oil exports
- Oil consumption

Module B covers the market size and forecast through 2017 for the seven flowmeter types used in the oil industry:

- Coriolis
- Ultrasonic
- Vortex
- Differential Pressure
- Primary Elements
- Positive Displacement
- Turbine



Our analysts also share regional trends underlying growth in the various technologies.

Chapters on the regions contain profiles on major oil-producing countries as well as companies:

Mideast

Bahrain: Bahrain Petroleum Company (Bapco)

Iran: National Iranian Oil Company (NIOC)

Iraq: Ministry of Oil

- North Oil Company (NOC)
- South Oil Company
- Missan Oil Company (MOC)

Kuwait: Kuwait Petroleum Corporation (KPC)

Oman: Petroleum Development Oman (PDO)

Qatar: Qatar Petroleum General Corporation

Saudi Arabia: Saudi Aramco

Syria

Turkey

United Arab Emirates: Abu Dhabi National Oil Company (ADNOC)

Yemen

Africa

Algeria: Sonatrach

Angola: Sociedade Nacional de Combustiveis de Angola (Sonangol) (NOC)

Egypt: The Egyptian General Petroleum Company (EGPC)

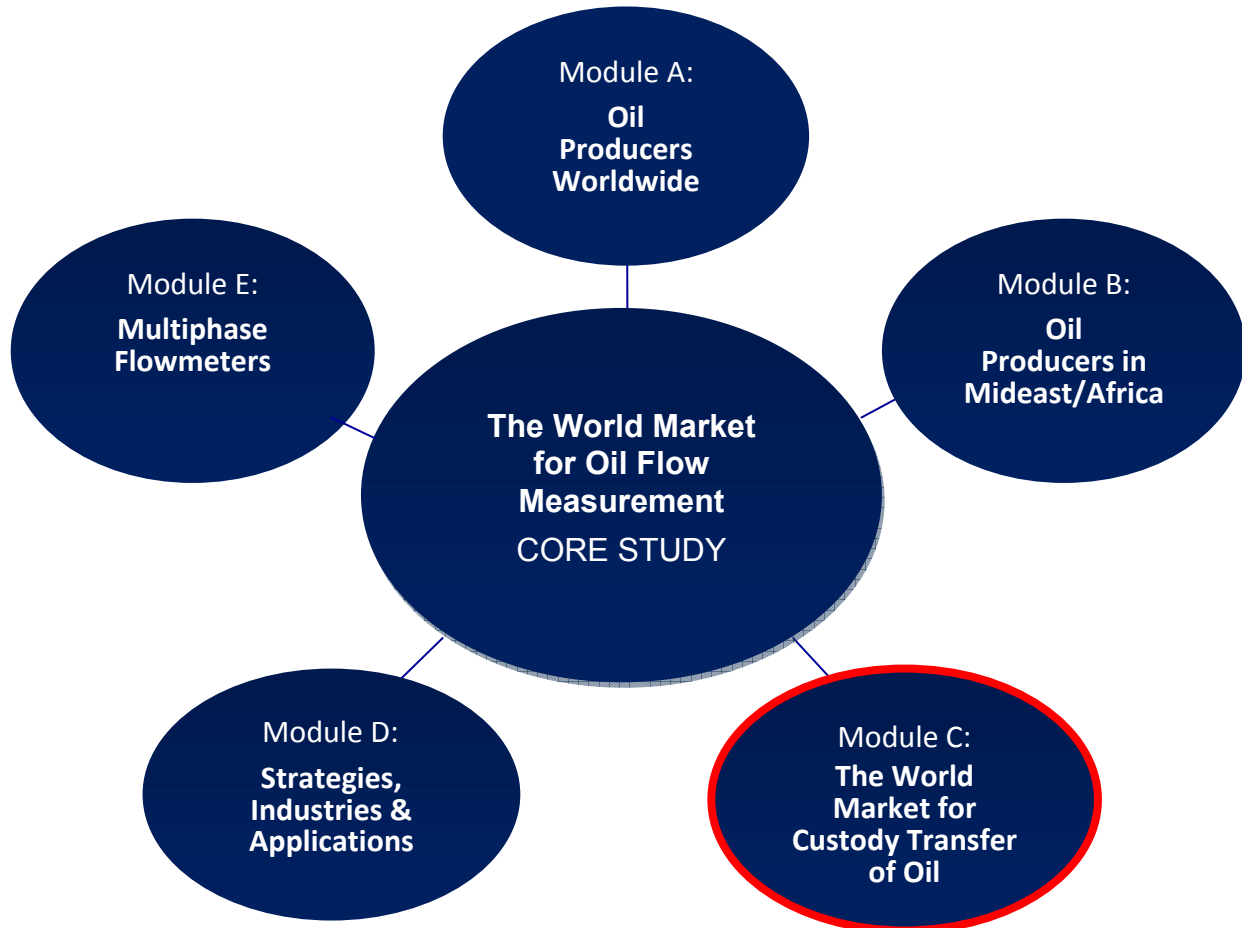
Libya: The National Oil Corporation (NOC)

Nigeria: Nigerian National Petroleum Corporation (NNPC)

Module C

The World Market for Custody Transfer of Oil

Overview



Publication Date: Q1/Q2 2013



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www.CustodyTransfer.com/oilflow_2011/welcome.htm

Module C

The World Market for Custody Transfer of Oil

Flow Research is conducting a new study on the worldwide custody transfer of oil, *The World Market for Custody Transfer of Oil*. This study is Module C of the broader study, *The World Market for Oil Flow Measurement*.

The study has multiple purposes:

- To determine worldwide market size and market shares for custody transfer of oil in 2012
- To forecast market growth for all types of custody transfer flowmeters through 2017
- To identify the industries and applications where custody transfer flowmeters are used, and to identify market growth sectors
- To provide a product analysis for the main companies selling into the custody transfer flowmeter market
- To provide strategies to manufacturers for selling into this flowmeter market
- To provide company profiles of the main suppliers of custody transfer flowmeters.



A pump jack near Houston.

Rationale for Study

Flow Research published the 3rd edition of our worldwide study of all flowmeter types in October 2010. We have been reporting on all fourteen flowmeter technologies for more than a decade in our comprehensive studies, in consultation with a wide spectrum of flowmeter manufacturers, by way of our two quarterly publications (*Market Barometer* and *Energy Monitor*), and through our regular contributions to industry journals such as *Flow Control* and *Processing* magazines. We are entirely focused on the business of industrial process flow, pressure, temperature, and analytical instrumentation.

Consumption of Oil Rising Fast

The demand for oil measurement is increasing substantially. Custody transfer is obviously one of the most integral steps in the supplier to consumer process chain. Oil changes hands, or ownership, at a number of points between the producer and the end-user. There are several flowmeter technologies in this market: some are well-established, whereas others are emerging.

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.

Optimal time to quantify custody transfer flowmeter market

We believe that this is an optimal time to quantify the existing size and future growth in the custody transfer flowmeter market, and to take an in-depth look at the new technologies, manufacturers, and applications in what promises to be one of the fastest growing markets in the worldwide flowmeter industry.

Module C contains market data on Coriolis, DP, turbine, and ultrasonic flowmeters for custody transfer of oil, compares their use, and projects the growth in these technologies through 2017. What's included:

- Market data on Coriolis, ultrasonic, turbine, and differential pressure (DP) flowmeters used for custody transfer applications
- Market shares worldwide and by geographic region for each flowmeter type
- Shipments by geographic region, industry and application

Company Profiles

Complete company profiles on the leading custody transfer flowmeter suppliers will be included. The following is a partial list of the companies to be profiled in this study:

- | | |
|-------------------------------|-------------------|
| • Accusonic | • Foxboro |
| • Actaris | • GE Sensing |
| • Cameron Measurement Systems | • Heinrichs |
| • Emerson Process-Daniel | • KROHNE |
| • Endress+Hauser | • Liquid Controls |
| • Faure Herman | • Micro Motion |
| • Flow Technology | • Rittmeyer |
| • FMC Technologies | • Other |

- Comparison of flowmeter types in custody transfer
- Flowmeter growth projections through 2017
- Strategies for selling into this market

In conducting this study, we are contacting all known manufacturers of custody transfer flowmeters worldwide. Flow Research has already identified recent entrants into this growing market and plans to report detailed information about each company. In so doing, we plan to assemble a comprehensive picture of the total custody transfer flowmeter market.

We will be asking suppliers to provide detailed information about geographic segmentation, industries sold into, types of flowmeters sold, and many other product segments. As a result, the study will identify where growth is occurring in the market, as well as the underlying factors for that growth. Our already completed end-user survey provides additional perspectives on this market.

Publication Date

The target date for publication of this study is Q1/Q2 2013. It is part of two clusters of studies on oil and gas measurement that are described in this document.

Proposed Segmentation

The proposed segmentation for this study is as follows:

Geographic Segmentation

- North America (United States and Canada)
- Europe (including Central Europe and Former Soviet Union)
- Mideast/Africa
- Japan
- China
- Asia without Japan/China
- Latin America (Mexico, Central America, and South America)



Flowmeters by Type

- Coriolis
- Ultrasonic
- Turbine
- Differential Pressure (DP)
- Primary Elements



Custody Transfer Flowmeters by Application

- Upstream
- Downstream

Flowmeters by Sales Channel

- Direct Sales
- Independent Representatives
- Distributors
- E-Business

Flowmeters by Customer Type

- End-Users
- OEMs
- Systems Integrators
- Engineers/Consultants

Strategies for Success

- Discussion of market forces at work
- Technical developments
- Strategic action perspectives
- Forming alliances to enhance product offerings

Also included:

- Average price data
- Obstacles to growth
- Reasons behind custody transfer metering success
- Quantified growth rates worldwide and by region

Market Size by Geographic Region

This study will provide market size by the following geographic regions:

- Worldwide
- North America (United States and Canada)
- Europe (including Central Europe and Former Soviet Union)
- Mideast/Africa
- Japan
- China
- Asia without Japan/China
- Latin America (Central America and South America)

Key Issues Addressed in The World Market for Oil Flow Measurement

The Core Study and its modules address the following key issues:

- What is the technological state of the market today?
- Which applications are growing – and which are not?
- What regions of the world hold the greatest growth prospects – and why?
- Are there new competing technologies to the traditional devices – and what are they?
- What is the current breakdown in use between insertion and inline device types?
- Are there new flow measurement standards that must be understood?
- What industries represent the greatest growth potential – and why?
- What are the features that end-users are looking for in oil flow measurement?

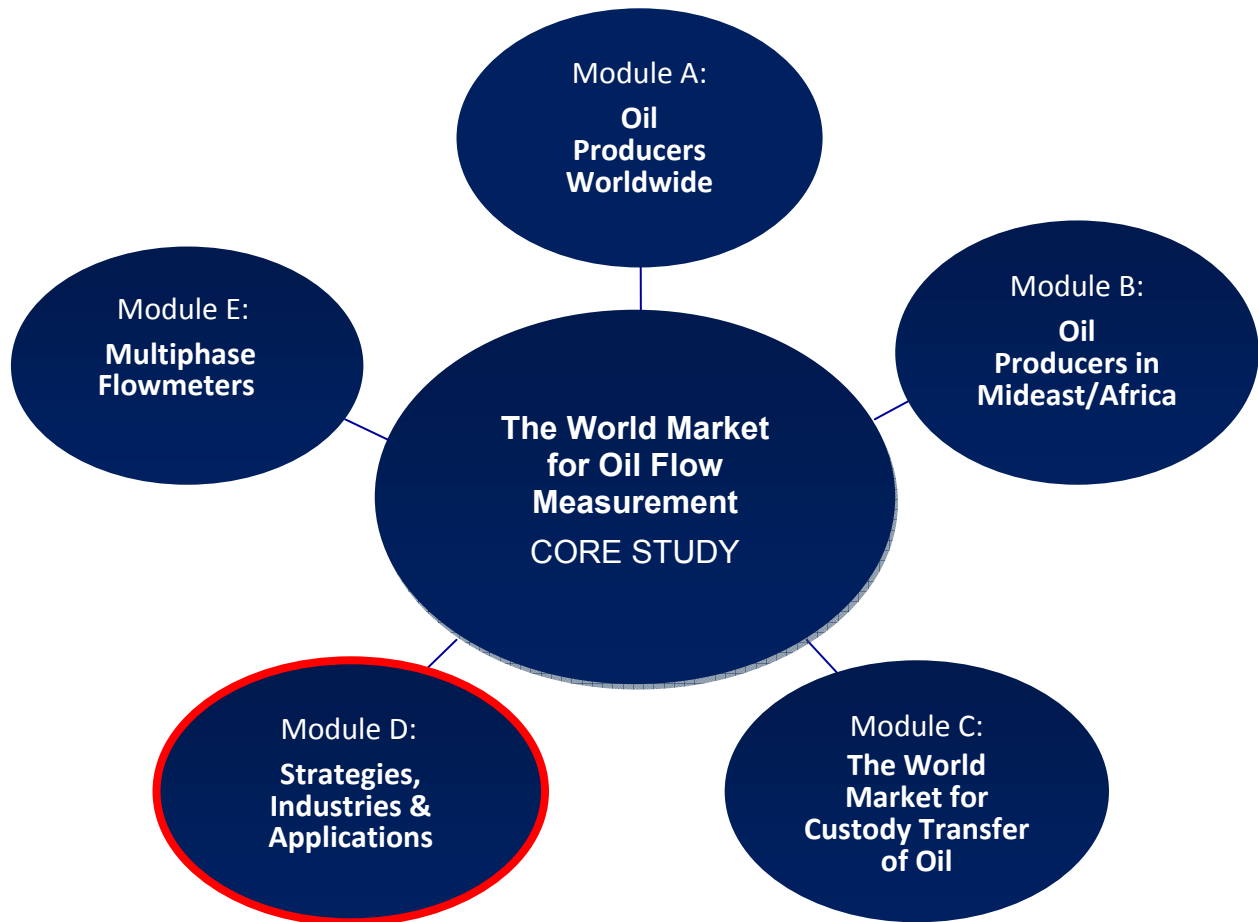


*CEESI flow calibration facility, Garner, Iowa
Photo by Flow Research*

Module D

Strategies, Industries, & Applications

Overview



Publication Date: Q1/Q2 2013



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Module D **Strategies, Industries, & Applications**

Flow Research is proud to present a new study on oil producers worldwide. **Module D: Strategies, Industries, & Applications**, is a component of a broader study, **The World Market for Oil Flow Measurement**, which examines suppliers, producers, applications, industries, custody transfer, and multiphase flowmeters. This module provides strategies for companies already in the flowmeter market as well as for those considering joining. Module D has multiple purposes:

- Provide a world view of the market and identify future growth areas
- Discuss recent political developments and how they may affect market forces in the near future
- Report on product lines and shipments worldwide for Coriolis, ultrasonic, vortex, differential pressure, primary elements, positive displacement, and turbine flowmeters
- Discuss distribution channels and customer types
- Provide forecasted growth rates by both application and industry
- Provide realistic strategies for success for those entering or already in the flowmeter market

Rationale for Study

Oil flow measurement applications and their associated revenues have grown significantly during the last few years. A major driver of this growth worldwide has been the expansion in demand for oil and related energy products. There has also been significant new capital projects growth in large regional economies such as India, China, and the Mideast during this time as well. Given the recent volatility of the major oil and gas countries in the Mideast and Africa, we believe that this is an optimal time to quantify the growth in this market, and to take another in-depth look at an expanding market.

Key topics addressed in Module D

- Tactical and strategic recommendations for suppliers in each market segment
- Discussion of market forces at work
- Best areas for future growth
- Strategic action perspectives
- Real world success stories

Module D provides shipments by application and industry for Coriolis, ultrasonic, vortex, differential pressure, primary elements, positive displacement, and turbine flowmeters, as well as essential information on:

- Application areas
- Sales by distribution channel
- Oil measurement sales by customer type
- Tactical and strategic recommendations for suppliers in each market

Breakouts by industry and application

For each technology, the module provides shipments by industry and application for the following geographic breakouts:

- Worldwide
- North America
- Europe (including Central Europe and the FSU)
- Mideast/Africa
- Japan
- Asia without Japan
- Latin America

Data includes dollars and percentages of shipments by flowmeter type in 2012 and forecasted for 2017 in the following industries:

- Oil & Gas
- Refining
- Chemical
- Food & Beverage
- Pharmaceutical
- Pulp & Paper
- Metals & Mining
- Power
- Water/Wastewater
- Other

Also included:

Sales by distribution channel:

- Direct Sales
- Independent Representatives
- Distributors
- E-Business

Oil measurement sales by customer type:

- End-users
- OEMs
- Systems integrators
- Engineering and consulting firms

Applications by Oil Flowmeter Type

This study segments applications differently for each type of oil flowmeter. The following are the applications included for each type of flowmeter.

New-Technology Flowmeter Applications

Coriolis

- Downstream Custody Transfer
- Upstream Allocation Metering
- Process Oil Measurement
- Other

Ultrasonic

- Custody Transfer of Oil
- Check Metering (oil)
- Process Oil Measurement
- Allocation Metering
- Other

Vortex

- Custody Transfer of Oil
- Process Oil Measurement
- Other

Traditional Tech Flowmeter Applications

Differential Pressure (DP) Transmitters and Primary Elements

- Custody Transfer of Oil
- Upstream Allocation Metering
- Fiscal Metering (billing)
- Other

Positive Displacement

- Custody Transfer of Oil
- Utility/Billing
- Processing (in a plant)
- Fuel Metering
- Other

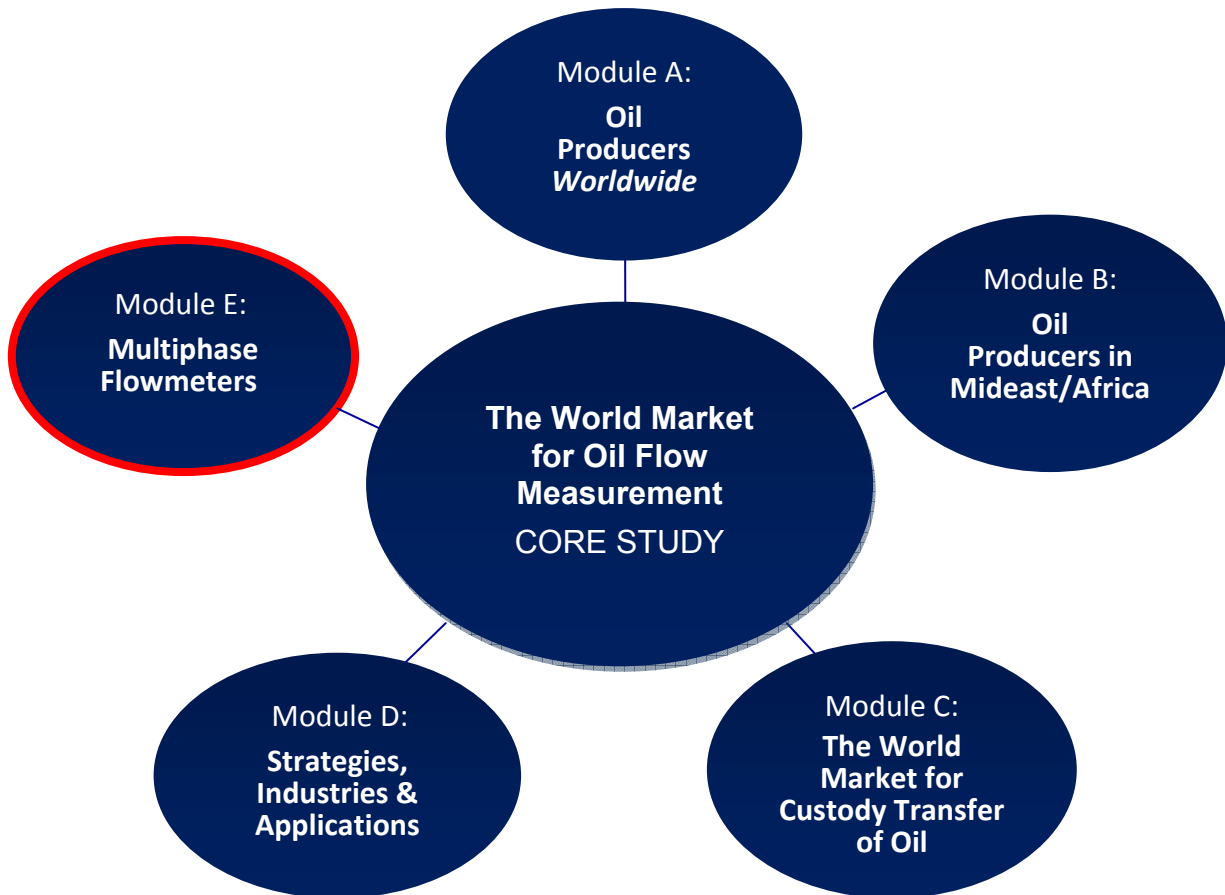
Turbine

- Custody Transfer of Oil
- Refining (at the refinery)
- Distribution (downstream from the refinery)
- Other

Module E

The World Market for Multiphase Flowmeters

Overview



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Module E:

The World Market for Multiphase Flowmeters

Flow Research has nearly completed a new study on the worldwide multiphase flowmeter market. The primary goal was to determine the size of this flowmeter market in 2010. Forecasts through 2015 are included. The study is called *The World Market for Multiphase Flowmeters*. This study is Module E of the broader study, *The World Market for Oil Flow Measurement*.

The study has multiple purposes:

- To determine worldwide market size and market shares for multiphase flowmeters in 2010
- To forecast market growth for multiphase flowmeters through 2015
- To identify the industries and applications where multiphase flowmeters are used, and to identify market growth sectors
- To provide a product analysis for the main companies selling into the multiphase flowmeter market
- To provide strategies to manufacturers for selling into the multiphase flowmeter market
- To provide company profiles of the main suppliers of multiphase flowmeters.



Flow Research photo of oil field pump jack near Houston, TX

Rationale for Study

Flow Research published the 3rd edition of our worldwide study of all flowmeter types in October 2010. We have been reporting on all fourteen flowmeter technologies for more than decade in our comprehensive studies, in consultation with a wide spectrum of flowmeter manufacturers, by way of our two quarterly publications (*Market Barometer* and *Energy Monitor*), and through our regular contributions to industry journals such as *Flow Control* and *Processing* magazines. We are entirely focused on the business of industrial process flow, pressure, temperature, and analytical instrumentation.

Our focus on flow has recently been on the emerging development of multiphase flowmeter technologies. Developments here are of particular value in the oil & gas industry, an industry that we routinely report on as part of our world view of measurement applications.

Economic and Flow Management Benefits of Real Time Data

Users are discovering the economic and flow management benefits of technologies that provide real time data on oil and gas flows. Increasingly, the complex demands of managing oil and gas reservoir assets require more sophisticated tools so that producers may improve operating margins in the highly competitive energy market.

Today's exploration and production environment is filled with potential investment, environmental, and personnel risks as new methods are employed to extract valuable energy resources in areas previously not utilized. At the same time, traditional flow measurement ideals such as non-restrictive measurement points, high reliability of accuracy and repeatability, and lengthy life cycles are still in play. Multiphase metering instrumentation offers reservoir managers the confidence to more effectively and more safely operate topside, offshore, and subsea wells.

We believe that this is an optimal time to quantify the existing size and future growth in this market, and to take an in-depth look at the new technologies, manufacturers, and applications in what promises to be one of the fastest growing markets in the worldwide flowmeter industry.

In conducting this study, we contacted all known manufacturers of multiphase flowmeters worldwide. Flow Research has already identified recent entrants into this growing market and reports detailed information about each company. In so doing, we have assembled a comprehensive picture of the total multiphase flowmeter market.

We asked suppliers to provide detailed information about geographic segmentation, industries sold into, types of multiphase flowmeters sold, and many other product segments. As a result, the study identifies where growth is occurring in the market, as well as the underlying factors for that growth. Our already completed end-user survey provides additional perspectives on this market.

Key issues addressed in this study

This study addresses the following key issues in the multiphase flowmeter market:

- Factors causing the market to grow
- Growth in the use of multiphase flowmeters
- The future of multiphase in custody transfer applications
- The use of multiphase flowmeters in oil and gas applications
- The increased number of suppliers in the multiphase flowmeter market
- Line sizes for multiphase flowmeter applications
- The importance of electromagnetic radiation technology and its future in this market
- New product and technology developments
- Growth strategies for multiphase flowmeter suppliers

Operating Principle

Multiphase flowmeters are generally found to have highest utility in the oil and gas industry. This value is largely based on their ability to simultaneously measure the proportional content of oil, water, and oil streaming at the wellhead. There are multiple technologies presently employed by manufacturers to satisfy this application, and we plan to explore all of them. This instrumentation is presently very costly on a per unit basis, but much in demand. Manufacturers are concentrating their efforts to develop new phase measurement techniques at lower costs to end-users.

Proposed Segmentation

The segmentation for this study is as follows:

Geographic Segmentation

- North America (United States and Canada)
- Europe (including Central Europe and Former Soviet Union)
- Mideast/Africa
- Japan
- China
- Asia without Japan/China
- Latin America (Mexico, Central America, and South America)



Flowmeters by Use of Radiation Type

- Gamma ray
- None
- Other

Flowmeters by Type of Radioactive Material

- Americium
- Barium
- Cesium
- Other

Multiphase Flowmeter Usage by Application Site

- Topside (land-based)
- Offshore
- Subsea

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

Multiphase Flowmeters by Measurement Configuration

- Before a separation rig or separator
- After a separation rig or separator
- Without the use of a separator rig or separator

Multiphase Flowmeters by Use with Other Instrumentation

- Water cut meters
- Pressure transmitters
- Temperature transmitters
- Other instrumentation

Multiphase Flowmeters by Application

- Fiscal monitoring
- Allocation monitoring
- Reservoir monitoring
- Other applications

Flowmeters by Sales Channel

- Direct Sales
- Independent Representatives
- Distributors
- E-Business

Market Shares of the Leading Suppliers

This study will provide company market share data in multiple categories. Market share data will be provided for the following geographic regions:

- Worldwide
- North America (United States and Canada)
- Europe (including Central Europe and Former Soviet Union)
- Mideast/Africa
- Japan
- China
- Asia without Japan/China
- Latin America (Central America and South America)

Flowmeters by Customer Type

This flowmeter market will be segmented according to the following customer types:

- End-Users
- OEMs
- Systems Integrators
- Engineers/Consultants

Strategies for Success

- Discussion of market forces at work
- Technical developments
- Strategic action perspectives
- Forming alliances to enhance product offerings



Also included:

- Average pricing data
- Obstacles to growth
- Reasons behind multiphase metering success
- Quantified growth rates worldwide and by region

Company Profiles

Complete company profiles on the leading multiphase flowmeter suppliers are included. The following is a partial list of the companies profiled in this study:

- Agar Corporation
- Framo Engineering
- Jiskoot (Cameron Measurement Systems)
- Multiphase Meters
- Neftemer
- Phase Dynamics
- Roxar (Emerson Process Management)
- Schlumberger
- Solartron ISA
- Weatherford



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Blaise Pascal

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 can 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 be made either 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 +1 781 245-3200, or norm@flowresearch.com.

Background of Studies

Flow Research has followed the flowmeter, pressure, and temperature markets for more than ten years. During this time, we have completed multiple studies on the many flowmeter technologies, pressure transmitters, and temperature sensors and transmitters in use today. Our study on differential pressure (DP) transmitters and primary elements revealed for the first time the actual size of the worldwide DP flowmeter market, including primary elements.



In 2004, Flow Research published a market study on the worldwide oil flow measurement market called *The World Market for Oil Flow Measurement* (www.oilflows.com). This included all flow technologies used to measure oil flow. In 2008, we published a comprehensive study of the worldwide ultrasonic flowmeter market that identified the market for custody transfer of oil. This study was called *The World Market for Ultrasonic Flowmeters, 3rd Edition* (www.flowultrasonic.com). And in 2010, we updated all of our worldwide flowmeter numbers as part of our global study covering all types of flowmeters, *The World Market for Flowmeters, 3rd Edition* (www.floweverything.com), just published in October 2010.

Flow Research has been researching the oil flow measurement market for the purposes of doing this group of studies for the past two years. The research included onsite interviews with oil suppliers in the Mideast. The purpose of the interviews, which were conducted in UAE, Saudi Arabia, Qatar, and Oman between September and November 2009, was to identify trends in oil flow measurement and to better understand growth in the oil market in the Mideast, Europe, and worldwide. This research has formed a background for Modules A and B. With the Mideast in turmoil today, both Modules A and B are very timely.

Our ongoing cycle of regularly scheduled editions to individual flowmeter types have focused on both the flowmeter technologies and markets – including both new-technology and traditional technology flowmeters – as well as temperature sensors and temperature transmitters on a regional and worldwide basis. We understand how and why flowmeters perform critical tasks within nearly all instrumentation industries and markets, whether North America or beyond.

We believe Flow Research has the perfect qualifications for doing this study. We have been following the oil flow market. Our quarterly publications, *Market Barometer* and *Energy Monitor*, serve as regular updates to our knowledge base of the entire range of instrumentation technologies used within the worldwide process control instrumentation market.

We have also done user interviews that show that the interest in oil flow measurement remains at a very high level. You can trust Flow Research to give you data and insights you can use today.

Background

Dr. Jesse Yoder is President of Flow Research Inc., a company he founded in 1998. Dr. Yoder has 24 years of experience as a writer and analyst in process control and instrumentation. Since 1990, he has written more than 110 market research studies, most of them about flow and instrumentation. Recent and scheduled Flow Research studies include the following:

Volume I	The World Market for Coriolis Flowmeters, 4 th Edition (December 2011)**
Volume II	The World Market for Magnetic Flowmeters, 4 th Edition (May 2009)
Volume III	The World Market for Ultrasonic Flowmeters, 4 th Edition (Q2 2011)**
Volume IV	The World Market for Vortex Flowmeters, 3 rd Edition (July 2010) <i>New release</i>
Volume V	The World Market for DP Flowmeters and Primary Elements (January 2007)
Volume V-A	The World Market for DP Flow Transmitters (September 2007)
Volume V-B	The World Market for Primary Elements (September 2007)
Volume VI	Worldwide Survey of Flowmeter Users (January 2006)
Volume VII	The World Market for Pos. Disp. Flowmeters (August 2011) <i>New release</i>
Volume VIII	The World Market for Turbine Flowmeters (September 2011) <i>New release</i>
Volume IX	The World Market for Pressure Transmitters, 3 rd Edition (August 2011) <i>New!</i>
Volume X	The World Market for Flowmeters, 3 rd Edition (October 2010) <i>New release</i>
Volume XI	The World Market for Gas Flow Measurement + five modules (Q3 2011) <i>New!</i>
Volume XII	The World Market for Steam Flow Measurement (March 2008)
Volume XIII	The World Market for Mass Flow Controllers, 2 nd Edition (Q1 2012)
Volume XIV	The World Market for Thermal Flowmeters (October 2009)
Volume XV	The World Market for Liquid Analytical Instruments (Feb. 2011) <i>New release</i>
Volume XVI	The World Market for Oil Flow Measurement + five modules (Q1/Q2 2013)**

***Studies in progress* These studies are described at <http://www.flowresearch.com/flow.htm>

Dr. Yoder has also written more than 160 articles on flow and instrumentation for trade journals. Links to many of these can be found at <http://www.flowresearch.com/articles.htm>.

Belinda Burum, Vice President and Editor, has worked in high tech for 16 years as a writer and marketing communications manager. She joined the company in 2002, and has since then worked on many projects. In addition to her work on market studies, Belinda serves as editor of the *Market Barometer* and the *Energy Monitor* (www.worldflow.com).

Norm Weeks, Senior 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 market analyst for Flow Research who specializes in custom projects, and regularly contributes articles and editorial assistance to our *Market Barometer* and *Energy Monitor* publications.

Leslie Buchanan serves as our client specialist, and is responsible for our keeping our expanding database current. **Christina Glaser**, who has many years of programming experience, has redesigned and is maintaining our many websites, and also contributes editorial content to our publications. Our highly efficient support staff includes **Nicole Riordan** and **Jessica Weldy**, who help keep the steady stream of data coming your way!

The World Market for Oil Flow Measurement

Overviews of Core Study + Modules A through E



*Rotana Beach, Abu Dhabi
Photo by Flow Research*



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Why Flow Research?

- We specialize in flowmeter markets and technologies.
- We have researched all flowmeter types.
- We have interviewed oil flow end-users onsite in many countries.
- We have more than ten years of historical data on the oil flow measurement market.
- We follow the flowmeter and energy markets on a quarterly basis through our *Market Barometer* and *Energy Monitor* publications

We create change in flow