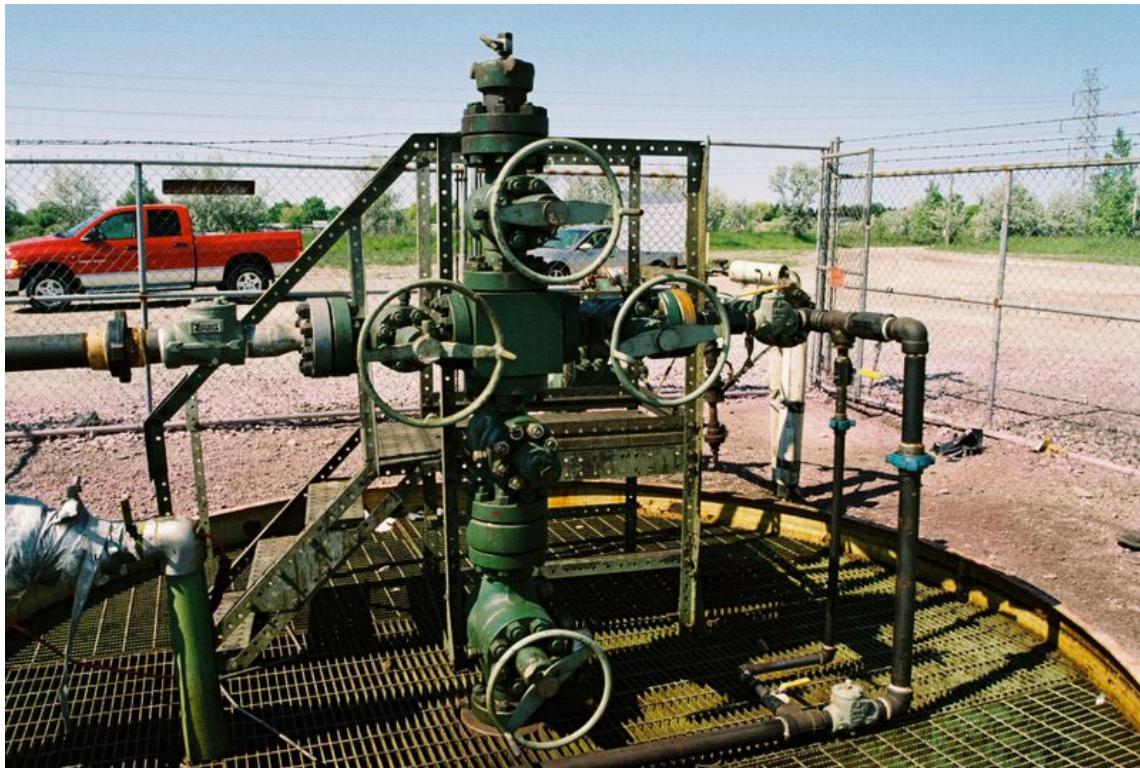


# **Flowmeters in the Oil and Gas Industry**

## **- OVERVIEW -**



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# Flowmeters in the Oil & Gas Industry

## Flowmeters in the Oil & Gas Industry has two main purposes:

- To provide data on flowmeter shipments into the oil & gas industry worldwide and by region. This includes Coriolis, magnetic, ultrasonic, vortex, thermal, differential pressure (DP), primary elements, positive displacement, and turbine. Data is provided in both dollars and units.
- To provide data on natural gas and oil production worldwide and by region. Selected countries are discussed in regions based on the amount of natural gas and crude oil produced. Data is given for both regions and countries because it is the regions and countries that produce the most natural gas and crude oil that are most likely to have the greatest opportunities for flow measurement.

## This study achieves multiple purposes:

- Provides a world view of the market from many perspectives and identifies growth areas
- Examines the Oil & Gas Industry flow measurement market by regions
- Reports on 2019 shipments for flowmeters in the oil & gas industry for each region by flowmeter type
- Provides growth rate forecasts to 2024 for flowmeters in the oil & gas industry
- Provides data on each region's natural gas and oil production
- Identifies growth factors for oil & gas production by region
- Discusses growth factors for flowmeters in the Oil & Gas industry by region

## Forecasts Adjusted Due to Events in 2020

When oil prices restabilized after 2016, there was significant new growth in capital projects in large regional economies such as North America, India, China, and the Mideast. Recently there have been more fluctuations of oil prices and volatility in some major oil and gas countries, as well as other global events including the novel coronavirus pandemic. We have taken these events into consideration in making our current forecasts. We believe that this is an important time to take an in-depth look at flowmeter use in the Oil & Gas industry. This study will be published in January 2021.

### Key Topics Addressed

- Main drivers of growth for flowmeters in the Oil & Gas Industry
- Natural gas and oil production by region and by country
- Discussions of market forces at work worldwide and by region driving energy use
- A comparison of growth rates for flowmeters by type in the Oil & Gas industry

## Segmentation

Our research on the worldwide Oil & Gas Industry is based on an examination of the individual market segments by region and flow measurement technology type. Individual chapters are

devoted to the worldwide market for all oil & gas industry flowmeters and to each region, with data by flowmeter types in both dollars and units.

## **Geographic Regions**

- Worldwide
- North America (United States and Canada)
- Western Europe
- Eastern Europe/FSU (Former Soviet Union)
- Mideast/Africa
- Japan
- China
- Asia/Pacific (including India)
- Latin America (Mexico, Central and South America)



## **Oil & Gas Industry Flowmeter Types**

### **New-technology Flowmeters**

- Coriolis
- Magnetic
- Ultrasonic
- Vortex
- Thermal

### **Conventional Flowmeters**

- Differential Pressure Transmitters
- Primary Elements
- Positive Displacement
- Turbine

## **Chapters**

Chapter One: Executive Summary

Chapter Two: Scope and Method

Chapter Three: Flow Measurement in the Oil & Gas Industry

Chapter Four: Worldwide

Chapter Five: North America: USA and Canada

Chapter Six: Western Europe: Norway, the UK, and the Netherlands

Chapter Seven: Eastern Europe/FSU: Russia, Turkmenistan/Uzbekistan, and Kazakhstan

Chapter Eight: Mideast/Africa: Saudi Arabia, Iran, Iraq, UAE, and Algeria

Chapter Nine: Japan

Chapter Ten: China

Chapter Eleven: Asia/Pacific: Australia, Indonesia, Malaysia, and India

Chapter Twelve: Latin America: Brazil, Mexico, and Argentina

### **Each regional chapter includes:**

- Data on natural gas production and consumption in the region and forecasts
- Growth factors for natural gas and oil production in the region
- Discussion of major companies in the region
- Growth factors for flowmeters in the oil & gas industry for the region
- Market size and forecast discussion
- 2019 shipments of flowmeters sold into the oil & gas industry for that region, by flowmeter type, in dollars and units, with forecasts to 2024

## Flow Research, Inc.

**Flow Research** is the only market research company whose primary mission is to research process control instrumentation markets. Flow Research market research studies can be purchased by anyone interested in the topics. We create these studies through interviews with suppliers, distributors, and end-users.

Topics include all of the flowmeter technologies – both new and conventional – as well as pressure transmitters; temperature sensors and transmitters, infrared thermometers and thermal imagers; level devices; analytical instrumentation; selected API-certified valves; and studies specifically focused on certain major markets for flowmeters such as the oil and gas markets. Flow Research also started a working group focusing on flowmeter calibration, and has completed two studies on flowmeter calibration facilities.

Further information on studies, links for articles and more can be found by visiting the Flow Research website at [www.flowresearch.com](http://www.flowresearch.com) or by calling us at +1 781-245-3200.

## Research Team Background

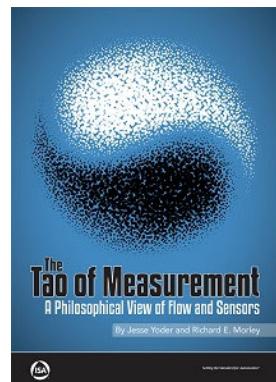


**Dr. Jesse Yoder** is President of Flow Research Inc., a company he founded in 1998. Dr. Yoder has 33 years of experience as a writer and as an analyst in process control and instrumentation beginning as president and founder of Idea Network. He is the lead analyst for this study. Since 1990, he has written over 280 market research studies, most of them about flow and instrumentation. Dr. Yoder has also written over 300 articles on flow and instrumentation for trade journals. Many can be found at [www.flowarticles.com](http://www.flowarticles.com).

In addition to the years he has spent writing market studies, Dr. Yoder spent 10 years as a technical writer. Almost four years of this were spent writing technical manuals and training guides for the process control division of Siemens. He also taught technical writing at the graduate level at Northeastern University and the University of Massachusetts Lowell. Dr. Yoder spent 10 years as an adjunct philosophy professor at the University of Massachusetts Lowell and Lafayette College.

Dr. Yoder has received two US patents for the flowtube meter, a new dual tube/dual sensor method of measuring flow, in 2015 and 2017. This meter has two prototypes built and is under test at CEESI in Nunn, Colorado.

His latest book, *The Tao of Measurement*, with Dick Morley as co-contributor, was published in 2015 by the ISA. Topics covered include temperature, pressure, flow, time, length, and area. He is currently working on a 2-volume set, *Advances in Flowmeter Technology*, to be published in 2021 by CRC Press: *New-technology Flowmeters*; and *Conventional Flowmeters*.



**Belinda Burum**, Vice President, worked in journalism and advertising before entering high tech 30 years ago as a writer, marketing communications manager, and customer references consultant. She joined Flow Research in 2002, and has been involved with many Flow Research projects and publications since.

**Norm Weeks**, Senior Market Analyst, joined Flow Research in 2004 after a 24-year stint with Verizon. At Verizon, Norm specialized in creating innovative solutions for national and international enterprises, introducing new products and lifecycle management. At Flow Research, his contributions in development, research, and writing are appreciably significant to studies, White Papers, and other publications. Custom projects are a specialty.

**Leslie Buchanan**, Research and Publication Production Associate, joined Flow Research in 2010 with skills from a variety of work and life experiences here and abroad. She assists with research and writing, and handles many aspects of Flow Research studies and publications production.

**Vicki Tuck**, Administrative Assistant, joined Flow Research in 2012 with experience in both the fast-paced law firms of Boston, and in various nonprofit organizations. She assists with administrative tasks, including database and collecting news for the Worldflow publications.

**Gabriella DeCologero**, Director of Marketing, joined Flow Research in June 2019. She is in charge of our social media outreach, and has brought her graphic design talents to our marketing efforts. Gabriella is also assisting in our customer contacts and outreach.



## The Flow Research Gold Partner Program

To produce studies that most closely match our clients' needs, Flow Research instituted the Gold Partner 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, Gold Partners receive regular updates from Flow Research on study progress, and receive a significant discount on the standard retail price of the study.

**Procedure:** Early in the planning phase of a study, Gold Partners receive a proposal that includes the proposed segmentation. Gold Partners 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 Gold Partners, 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, Gold Partners 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 Gold Partner Program applies to any particular study, please contact Flow Research. We look forward to working with you!

If you have any questions about the Gold Partner Program, please contact Norm Weeks at +1 781 245-3200, or [norm@flowresearch.com](mailto:norm@flowresearch.com).



## Flow Research studies contribute to an ongoing view of the flowmeter market

Listed below is a summary of recent and upcoming Flow Research studies in the area of process control instrumentation. These studies are further described at [www.FlowStudies.com](http://www.FlowStudies.com).

### Recent and Currently Scheduled Flow Research Studies

### Websites

#### New-Technology Flowmeter Studies

The World Market for Coriolis Flowmeters, 6<sup>th</sup> Edition  
 The World Market for Magnetic Flowmeters, 7<sup>th</sup> Edition  
 The World Market for Ultrasonic Flowmeters, 6<sup>th</sup> Edition  
 The World Market for Vortex Flowmeters, 6<sup>th</sup> Edition  
 The World Market for Thermal Flowmeters, 3<sup>rd</sup> Edition

[www.flowcoriolis.com](http://www.flowcoriolis.com)  
[www.flowmags.com](http://www.flowmags.com)  
[www.flowultrasonic.com](http://www.flowultrasonic.com)  
[www.flowvortex.com](http://www.flowvortex.com)  
[www.flowthermal.com](http://www.flowthermal.com)

#### Traditional Technology Flowmeter Studies

The World Market for Pressure Transmitters, 5<sup>th</sup> Edition  
 The World Market for Positive Displacement Flowmeters, 3<sup>rd</sup> Edition  
 The World Market for Turbine Flowmeters, 3<sup>rd</sup> Edition

[www.pressureresearch.com](http://www.pressureresearch.com)  
[www.flowpd.com](http://www.flowpd.com)  
[www.flotturbine.com](http://www.flotturbine.com)

#### Emerging Technology

The World Market for Multiphase Flowmeters, 2<sup>nd</sup> Edition  
 Multiphase: Module A: The World Market for Watercut Meters

[www.flowmultiphase.com](http://www.flowmultiphase.com)  
[www.watercutmeters.com](http://www.watercutmeters.com)

#### Mass Flow Controllers

The World Market for Mass Flow Controllers, 3<sup>rd</sup> Edition

[www.flowmfc.com](http://www.flowmfc.com)

#### Cross-Technology Flowmeter Studies

Volume X: The World Market for Flowmeters, 7<sup>th</sup> Edition  
 Volume X Module A: Strategies, Industries, and Applications, 7<sup>th</sup> Edition

[www.flowvolumex.com](http://www.flowvolumex.com)  
[www.flowvolumex.com](http://www.flowvolumex.com)

#### Gas Flow Studies

Core Study: The World Market for Gas Flow Measurement, 4<sup>th</sup> Edition  
 Module A: Applications and Strategies for Gas Flow Measurement  
 Module B: Natural Gas Production, Consumption, and Flow Measurement  
 in the Oil and Gas Industry

[www.gasflows.com](http://www.gasflows.com)  
[www.gasflows.com](http://www.gasflows.com)  
[www.gasflows.com](http://www.gasflows.com)

#### Industry Studies

Flowmeters in the Oil & Gas Industry

[www.oilflows.com](http://www.oilflows.com)

#### Calibration

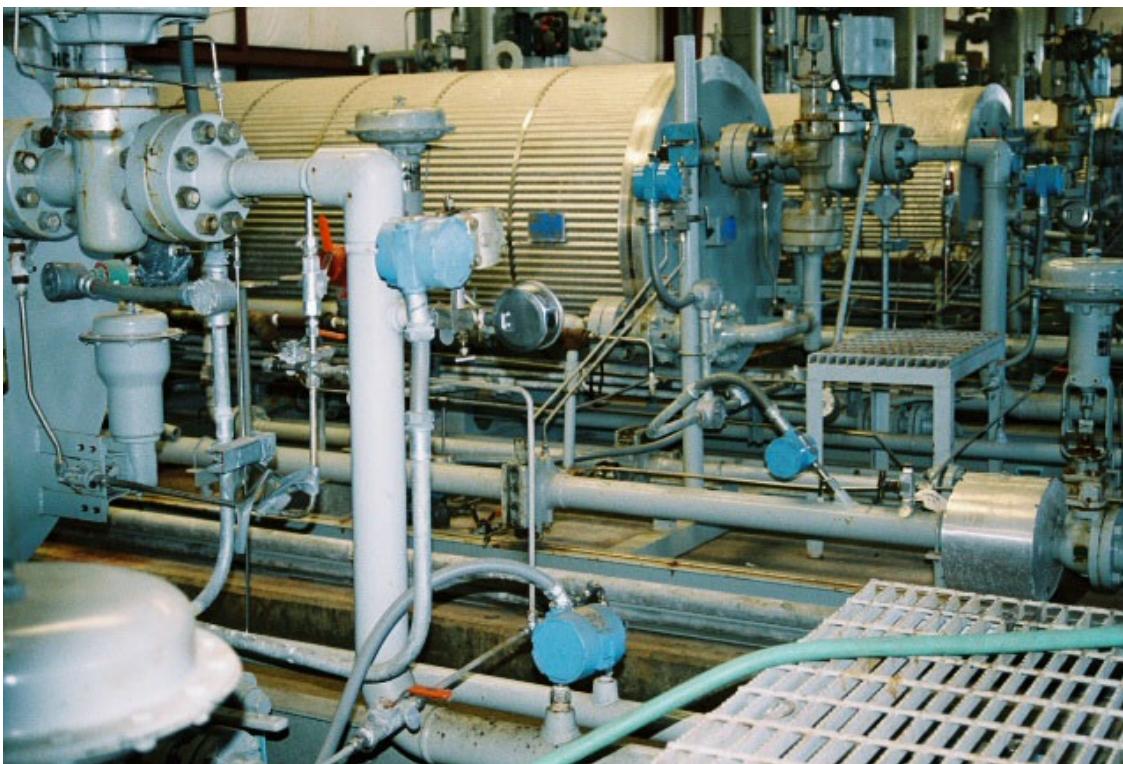
Core Study: Worldwide Gas Flow Calibration Facilities and Markets  
 Module A: Worldwide Liquid Flow Calibration Facilities and Markets

[www.flowcalibration.org](http://www.flowcalibration.org)  
[www.flowcalibration.org](http://www.flowcalibration.org)

Besides writing and publishing studies of this type, Flow Research specializes in custom projects and also conducts user surveys that include a detailed analysis of customer perceptions. In addition, Flow Research provides quarterly updates on the flow and energy industries in the **Market Barometer** and the **Energy Monitor**. Both publications are part of the Worldflow Monitoring Service. **Market Barometer** analyzes the current state of the flowmeter markets, and covers related topics such as other instrumentation and flow calibration. **Energy Monitor** analyzes the current state of the oil & gas, refining, power, and renewables industries, and the implications for instrumentation suppliers. More details are available at [www.worldflow.com](http://www.worldflow.com).

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## – Overview –



*Gas processing plant — 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 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.