



# Training Course: Oil and Gas Processing Flow Measurement

24 - 28 November 2024 Istanbul (Turkey) DoubleTree by Hilton Istanbul Esentepe

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## Training Course: Oil and Gas Processing Flow Measurement

Training Course code: EN235435 From: 24 - 28 November 2024 Venue: Istanbul (Turkey) - DoubleTree by Hilton Istanbul Esentepe Training Course Fees: 6300 🛛 Euro

#### Introduction

Flow measurement is a critical aspect of the oil and gas industry, impacting everything from production efficiency to safety and regulatory compliance. This 5-day training program is designed to provide a comprehensive understanding of the various flow measurement technologies used in the oil and gas sector. Participants will gain indepth knowledge of the principles, applications, installation, calibration, and maintenance of different flow meters, as well as data interpretation and safety considerations. Through a combination of theoretical instruction and practical exercises, this program aims to equip professionals with the skills necessary to optimize flow measurement processes in their operations.

### **Objectives**

- Understand the Importance of Flow Measurement: Gain insights into the role of accurate flow measurement in the oil and gas industry and its impact on production efficiency, safety, and regulatory compliance.
- Learn About Various Flow Measurement Technologies: Acquire detailed knowledge of different types of flow meters, including their working principles, applications, and limitations.
- Master Installation and Calibration: Develop practical skills for the correct installation, calibration, and maintenance of flow meters to ensure accurate and reliable measurements.
- Interpret Flow Measurement Data: Learn to analyze and interpret flow measurement data for process optimization and troubleshooting.
- Ensure Safety in Flow Measurement: Understand the safety considerations involved in flow measurement and how to manage hazardous environments.
- Stay Updated on Emerging Technologies: Explore recent advancements and future trends in flow measurement technologies.

### **Target Audience**

- Engineers and Technicians: Professionals involved in the installation, calibration, and maintenance of flow measurement systems in the oil and gas industry.
- Process Operators: Individuals responsible for monitoring and optimizing production processes who need to understand flow measurement data and its implications.



- Quality Assurance and Compliance Personnel: Staff tasked with ensuring that flow measurement systems meet regulatory and safety standards.
- Project Managers: Managers overseeing oil and gas projects who need a comprehensive understanding of flow measurement to make informed decisions.
- Technical Sales and Support Staff: Personnel providing technical support or selling flow measurement equipment who require a deeper understanding of the technologies and their applications.

## Training Program Outline

#### Day 1: Introduction to Flow Measurement

- Welcome and Introduction
  - Overview of the training program
  - Importance of flow measurement in the oil and gas industry
- Basic Principles of Flow Measurement
  - Definition and types of flow
  - Units of measurement
- Types of Fluids in the Oil and Gas Industry
  - · Liquids, gases, and multiphase flows
- Overview of Flow Measurement Technologies
  - · Positive displacement, differential pressure, turbine, ultrasonic, Coriolis, and magnetic flow meters
- Selection Criteria for Flow Meters
  - · Factors influencing the choice of flow meters
- Q&A Session and Recap

#### Day 2: Flow Measurement Technologies

- Differential Pressure Flow Meters
  - Working principles
  - Types: Orifice plates, Venturi tubes, and flow nozzles



- Applications and limitations
- Positive Displacement Flow Meters
  - Working principles
  - Types: Rotary vane, gear, and diaphragm meters
  - Applications and limitations
- Turbine Flow Meters
  - Working principles
  - Applications and limitations
- Q&A Session and Recap

#### Day 3: Advanced Flow Measurement Technologies

- Ultrasonic Flow Meters
  - Working principles
  - Types: Transit-time and Doppler
  - Applications and limitations
- Coriolis Flow Meters
  - Working principles
  - Applications and limitations
- Magnetic Flow Meters
  - Working principles
  - Applications and limitations
- Comparison of Flow Measurement Technologies
  - Pros and cons of different technologies
- Q&A Session and Recap

#### Day 4: Installation, Calibration, and Maintenance

• Installation of Flow Meters



- · Best practices for accurate measurements
- · Common installation issues and solutions
- Calibration of Flow Meters
  - Importance of calibration
  - · Calibration methods
- Maintenance of Flow Meters
  - Routine maintenance procedures
  - Troubleshooting common problems
- · Case Studies
  - Real-world examples of flow measurement challenges and solutions
- Q&A Session and Recap

#### Day 5: Data Interpretation and Safety

- Data Collection and Interpretation
  - Understanding flow measurement data
  - · Analyzing and interpreting data for process optimization
- Safety in Flow Measurement
  - · Safety considerations during installation and operation
  - Managing hazardous environments
- Emerging Technologies in Flow Measurement
  - · Recent advancements and future trends
- Final Q&A Session and Recap
- Assessment and Certification
  - Written test and practical demonstration
  - Feedback and discussion
  - Awarding certificates of completion





## Registration form on the Training Course: Oil and Gas Processing Flow Measurement

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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