



## Chemical, Mechanical Engineering Training Courses

### Course: Flow Measurement and Custody Transfer

Code	City	hotel	Start	End	Hours	price
364	Singapore (Singapore)	Hotel Meeting Room	2026-07-13	2026-07-17	25	6450 €

## Training Course Outline

### Basic Fluid and Gas Laws

- Pressure
- Flow Volume
- Continuity Principle
- Energy Law (Bernoulli's Equation)
- Pressure Change Equation
- Flow Configurations (Flow Profiles)
- Laminar Flow
- Turbulent Flow
- Reynold's Number
- Flow Losses (Friction Losses)
- Viscosity
- Ideal Gases
- Gas Laws, Boyle's Law, Charles's Law, Gay-Lussac's Law

### Types and Applications of Flow Meters

#### Differential Pressure (DP) Flow Meters

- Types; Orifice plates, Venturi tubes, flow nozzles, averaging Pitot tubes
- Systems, Operating Principle, Performance, Properties, Characteristics, Uses and Applications, Installation, Calibration



- Standard AGA3

### **Positive Displacement (PD) Flow Meters**

- Types; Rotor, Oscillating Piston, Oval Gear, Rotating Paddle
- Slippage, Volume displacement
- Systems, Operating Principle, Performance, Properties, Characteristics, Uses and Applications, Installation, Calibration

### **Turbine Flow Meters**

- Types; Conventional and Helical
- Problems with Erosion, corrosion, Cavitation and Obstructions
- Systems, Operating Principle, Performance, Properties, Characteristics, Uses and Applications, Installation, Calibration
- Standard AGA7

### **Flow Measurement Systems and Other Consideration**

- Meter Factor
- Meter Runs
- Proving Systems; Direct, Indirect, Master Meter, Volume, Displacement
- Time Delay
- Quality Systems (Gas Chromatographs and Sampling Systems)
- Custody Transfer Skids
- Flow Computers and Communication
- Temperature and Pressure Measurements

### **General Characteristics and Performance of Flow-meters**

- System Characteristics
- Flow range and viscosity range
- Performance
- Accuracy



- Stability and Repeatability
- Sensitivity
- Noise
- Linearity
- Reliability
- Applications and Usage
- Sizing
- Calibration

## **Types and Applications of Flow Meters (contd.)**

### **Ultrasonic Flow Meters**

- Systems, Operating Principle, Performance, Properties, Characteristics, Uses and Applications, Installation, Calibration
- Straight run requirement
- Standard AGA 9

### **Magnetic Flow Meters**

- Systems, Operating Principle, Performance, Properties, Characteristics, Uses and Applications, Installation, Calibration

### **Coriolis Flow Meters**

- Systems, Operating Principle, Performance, Properties, Characteristics, Uses and Applications, Installation, Calibration
- Standard AGA 11



The Scandinavian Academy for Training and Development adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training and Development.

### **Program Timings:**

- 9:00 AM to 2:00 PM in Arab cities.
- 10:00 AM to 3:00 PM in European and Asian cities.

### **The program includes:**

- A daily buffet provided during the sessions to ensure participants comfort.