

DAY 1

Properties of Fluids and Applicable Gas Laws

- Principles Pertinent to Flow Measurement
- Bernoulli's Laws and Equations and Formulae Specific to Flow
- Variations in the Flow Profile
- The Reynolds Number
- Viscosity and Everything Associated with It
- Information Relevant to Ideal Gases
- Assorted Gas Laws

DAY 2

Aspects and Characteristics of Measurement and Meter Performance

- Fiscal Metering Systems, and Characteristics Associated with Them
- A Consideration of Ranges through which the Flow may Progress
- Theoretical Aspects Pertinent to Flow including (*but not limited to*) Sensitivity, Linearity, Reliability, Performance, Stability and Accuracy
- Fiscal Flow Measurement in the Real World - *looking at numerous Installations*
- Determining the Correct Size of a Flow Measuring System
- Calibration of Fiscal Flow Metering Systems

DAY 3

Differential Pressure, Positive Displacement and Turbine Flow Meters

- Full Insight into Differential Pressure Flow Meters, with Specific Attention Paid to Orifice Plates, Venturi Tubes, Pitot and Averaging Pitot Tubes and Fow Nozzles
- The International Standard (AGA 3) Applicable to Orifice Plates
- Full Insight into Positive Displacement Flow Meters, with Specific Attention paid to Rotor, Oscillating Piston, Oval Gear and Rotating Paddle Devices
- Slippage and Volume Displacement
- Full Insight into Turbine Flow Meters
- Erosion, Corrosion, Cavitation as well as conditions that can cause Blockages and Obstructions
- The International Standard (AGA 7) Applicable to Turbine Devices

DAY 4

Ultrasonic, Turbine, Electromagnetic Flow Meters and Coriolis Mass Flow Systems

- Full Insight into Ultrasonic Flow Meters
- Straight Pipe Run Requirements
- The International Standard (AGA 9) Applicable to Ultrasonic Devices
- Full Insight into Magnetic Flow Meters
- Full Insight into Coriolis Flow Meters
- The International Standard (AGA 11) Applicable to Coriolis Devices

DAY 5

Measurement Systems, Sampling, Proving and Equipment that is Specific to Flow Computing

- How Meter Factors Influence Fiscal Measurement
- The Relationship between Fiscal Measurement and Meter Runs
- Proving Systems, Concentrating on Direct, Indirect, Master Meter, Volume and Displacement Proving Systems
- Chromatography
- Sampling Systems
- Skids
- The Influence of Time Delays on Certain Systems
- Flow Computers, Serial Data Communication and other Miscellaneous Measurements Associated with the School Flow Measurement