Fundamentals of Natural Gas Technology

Course Price

£2750

Course Description

This natural gas short course aims to give deep knowledge to production and processing personnel involved with natural gas and associated liquids to acquaint or reacquaint themselves with gas conditioning and processing unit operations.

Course Objectives

- The selection and evaluation processes used to dehydrate natural gas, meet hydrocarbon dew point specifications and extract natural gas liquids
- How to apply thermodynamic property correlations to the design and evaluation of gas processing facilities
- Equipment sizing methods for major process equipment
- To recognize and develop solutions to operating problems and control issues in gas processing facilities
- Technical fundamentals, property correlations, phase behavior and applied thermodynamics
- How to apply phase behavior principles and phase diagrams to design and operating problems
- How to apply thermodynamic laws and principles to equipment design and operation

Who Should Attend

- Engineers (production engineers, reservoir engineer and field engineer)
- Geologists, reservoir engineers, line managers, operational staff, shift foremen, those new to the industry such as entry-level engineers, as well as anyone interested in a general, technically oriented overview of the gas processing industry.
- Gas process and facility personnel
- Technical, project and managers responsible in the production development and field operation for gas facilities operation
- Sales and marketing professionals wishing to gain an understanding of Gas

Course Content
Gas processing systems
Terminology
Chemistry of gases
Gas composition and physical properties of gases
Qualitative phase behavior of gases
Vapor-liquid equilibrium
Basic thermodynamic concepts
General system energy changes and rate processes
Process control fundamentals
Gas production facilities
Separation equipment
Heat transfer, heat exchange and compression
Pumps and Compressors
Refrigeration
Fractionation/distillation
Hydrates, hydrate inhibition
Gas dehydration
Glycol dehydration
Adsorption systems
Gas sweetening and sulfur recovery
Acid gas re-injection
Natural gas liquids and dew point control
Condensate stabilization
Nitrogen rejection and helium recovery
Fractionation and stabilization
Gas transportation options
Effect of impurities found in natural gas

CPD Unit

Continuing Professional Development

21 HOURS CPD