Gas Pipeline Design and Analysis: Practical Approach

Course Price

£3050

Course Description

This short course is designed to provide theoretical understanding of gas transportation through pipelines, linked to practical engineering principles, guidelines, codes, and standards using the concept of Natural Gas pipeline design as means of gas transportation. The course covers aspects of Conceptual Engineering, through Design, as well as Construction stages. It provides the basic underpinning engineering knowledge of theories, equations and models through to practical applications using case studies of several pipelines from real life experience at each stage of the training, as well as including software modelling and simulation for the specific stage of design. This unique combination of theory and software modelling helps Engineers to bridge their theoretical and practical understanding of the design of gas pipelines.

Course Objectives

The target of this course is to enable participants to:

- understand the relevance of gas pipelines as a means of gas transportation
- compare options of pipelines and LNG in gas transportation
- understand the flow regimes in gas pipelines
- identify pipeline route and area classifications
- identify compressor stations requirements along gas pipelines
- understand pipeline expansion options and limitations

Who Should Attend

Process Engineers, Flow Assurance Engineers, Pipeline Engineers, Mechanical Engineers, Instrumentation and Control Engineers, Safety Engineers, and managers or supervisors dealing directly with gas pipelines design, operations, regulations and maintenance

Course Content
Mobility Oil & Gas Limited

Day 1

- Pipeline as means of Gas transportation
- Transmission and Distributions pipelines
- Pipeline versus LNG options: choice and limitations
- Pipeline Design Codes and Standards
- Pipeline Design Basis

Day 2

- Flow regimes in Gas pipelines and
- Area classification and design factor considerations
- Pipeline Route Analysis, selection and Right Of Way (R.O.W)
- Compressor station spacing’s and sizing
- Simulation demonstration of Pipeline Flow regimes and compression

Day 3

- Pipeline looping versus compression option
- Pipeline crossing and planning
- Offshore pipeline concept and approach
- Onshore pipeline concept and approach
- Pipeline looping simulations

Day 4

- Pipeline Planning and delivery forecast: Construction and contracting schemes
- Pipeline wall thickness calculations
- Cathodic protection
- Pipeline planning simulations

Day 5

- Pipeline project management
- Inter-disciplinary interaction in pipeline design project
- Safety in Pipeline Design: Hazard and Operability Studies

CPD Unit

Continuing Professional Development

35 HOURS CPD