

A Successful 3-Day In-house Training Course

Fundamentals of Pipeline Engineering, Effective Integrity & Corrosion Control



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WHY CHOOSE THIS TRAINING COURSE?

Compared with other forms of transport, pipelines allow a more continuous, stable, and high-capacity supply of hydrocarbons to reach end-users. Pipeline transportation has the advantages of being well established, efficient, cost-effective, and readily expandable.

The products carried in liquid pipelines include a wide range of materials. Process fluid systems gather production from onshore and offshore fields, while transmission lines transport them to terminals, interconnection points, and refineries.

The purpose of this course is to present basic principles related to the design, selection and optimisation of pipelines in various applications.

The course will combine the various disciplines of pipeline engineering, including stress analyses, structural integrity, pipeline hydraulics, corrosion and corrosion control.

The delegates will be introduced to main points of inspection and testing.

The programme will include several workshops with real problems from industrial practice which will enable discussions and exchange of experiences

The course will feature:

- Main aspects of pipeline engineering design considerations
- Knowledge of the governing principles, related to pipeline hydraulics and sizing
- Main types of failure, structural integrity and mitigation techniques
- Corrosion types and corrosion control
- Safe control and best practice use of pipeline systems

WHAT ARE THE GOALS?

By the end of this course, delegates will be able to:

- Develop deep understanding & familiarity basic principles of pipeline engineering design for various industrial applications
- Be familiar with the practical aspects of structural integrity, related to pipeline operation
- Have a knowledge of the various types of corrosion related to pipeline industry
- Understand the basic concepts of inspection and pigging operations
- Use & follow the guidelines & best industrial practices related to the design and operation of pipelines

WHO IS THIS TRAINING COURSE FOR?

- Project and asset managers
- Process, chemical and mechanical engineers working in petrochemical and process industry
- Operation, technical service and maintenance professionals from various processing plants involved in everyday operation, control, inspection and maintenance of pipelines
- Engineers and consultants dealing with planning of new production lines and retrofitting plants and introducing new technologies
- Technical professionals responsible for maintenance and repair of equipment

Daily Topics

DAY ONE

Overview of Pipelines and Pipeline Hydraulics

- Overview of main elements of oil and gas pipelines and systems
- Types of pipes and main manufacturing techniques
- Fundamentals of fluid laws
- Flow types and characteristics
- Pipe sizing and pressure drop
- Worked Examples

DAY TWO

Mechanical Design Considerations and Structural Integrity

- Mechanical testing, mechanical materials properties, Charpy Impact & Hardness
- Overview of ASME B31 pipe design code
- Pipe expansion consideration
- Stress Analysis examples
- Hydrostatic Testing
- Non Destructive Testing

DAY THREE

Corrosion and corrosion Control

- Corrosion types and relation to pipes
- Pipeline corrosion considerations and HIC
- Corrosion mitigation methods and cathodic protection
- Maximum allowable pressure, wall thickness calculations and corrosion allowance
- Corrosion monitoring, pigging techniques

Quality Certifications

ISO 29990 : 2010 Certified






ISO 9001: 2015 Certified



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