MERCURY

Onshore Gas Transmission Pipeline Engineering

22 – 26 August 2027
Sharm El-Sheikh (Egypt)



Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

Onshore Gas Transmission Pipeline Engineering

Ref: 121417_1031698 **Date:** 22 – 26 August 2027 **Location:** Sharm El-Sheikh (Egypt) **Fees:** 5500 Euro

Introduction

The Onshore Gas Transmission Pipeline Engineering course provides comprehensive insights into the planning, design, construction, and operation of onshore gas pipelines. Participants will gain a deep understanding of pipeline lifecycle management, including design considerations, material selection, and operational efficiency. The course highlights critical pipeline components, such as compressors, valves, and metering stations, and explores their role in maintaining system integrity. Key industry standards, particularly the ASME B31.8 framework, are introduced to ensure adherence to safety and regulatory requirements. The program emphasizes pipeline integrity management, including corrosion prevention, inspection, and risk assessment strategies. Through theoretical learning and practical case scenarios, professionals develop the knowledge and skills to manage pipelines safely and effectively.

Targeted Groups

This Onshore Gas Transmission Pipeline Engineering training targets professionals seeking knowledge and skills:

- Pipeline design engineers.
- Operations and maintenance managers.
- Safety and integrity specialists.
- Construction and project engineers.
- Regulatory compliance officers.
- Technical consultants in the energy sector.
- Graduate engineers entering pipeline management.
- Professionals involved in the inspection and testing of pipelines.

Course Objectives

Participants will achieve the following objectives by completing the Onshore Gas Transmission Pipeline Engineering course:

Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

- Understand the fundamentals of onshore gas transmission systems.
- Learn the pipeline lifecycle from design to operation.
- Apply ASME B31.8 standards to pipeline design.
- Select appropriate materials and determine wall thickness.
- Assess location class and operational load considerations.
- Understand corrosion mechanisms and protection strategies.
- Implement pipeline integrity management concepts.
- Plan inspection and maintenance strategies.
- Gain knowledge of construction, testing, and commissioning procedures.
- Operate pipelines safely and troubleshoot common issues.
- Ensure compliance with regulatory standards, including DOSH requirements.
- Analyze real-world scenarios for informed decision-making.

Targeted Competencies

Participants will gain the following competencies during the Onshore Gas Transmission Pipeline Engineering program:

- Ability to design pipelines following ASME B31.8 requirements.
- Knowledge of key pipeline components and their functions.
- Skills in corrosion protection and integrity management.
- Capacity to evaluate risk-based pipeline assessments.
- Competence in inspection planning and monitoring.
- Understanding of construction, testing, and commissioning processes.
- Operational troubleshooting skills for gas pipelines.
- Knowledge of regulatory compliance and reporting standards.
- Critical thinking in analyzing pipeline case studies.
- Enhanced ability to maintain pipeline safety and reliability.

Studying Scenarios

In this Onshore Gas Transmission Pipeline Engineering training, participants develop skills through the following scenarios:

- Evaluating pipeline design against ASME B31.8 safety standards.
- Planning material selection for high-pressure transmission pipelines.
- Conducting risk-based assessments for pipeline integrity.
- Conceptually inspecting pipelines for corrosion and damage.
- Developing maintenance strategies to optimize operations.
- Simulating leak detection and troubleshooting exercises.
- Reviewing case studies from operational pipelines.

Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

MERCURY

Course Content

Unit 1: Fundamentals of Gas Transmission Pipeline Systems

- Overview of onshore gas transmission systems.
- Pipeline lifecycle: design, construction, and operation.
- Key components compressors, valves, metering stations.
- Introduction to the ASME B31.8 framework.

Unit 2: Pipeline Design Based on ASME B31.8

- Design principles and safety factors.
- Material selection and specifications.
- Wall thickness and stress calculations.
- Location class and design implications.
- Internal & external load considerations.

Unit 3: Pipeline Integrity Management

- Integrity management concepts IMP.
- Corrosion mechanisms and protection methods.
- Risk-based assessment approaches.
- Inspection techniques conceptual overview.
- Maintenance planning strategies.

Unit 4: Construction, Testing & Commissioning Conceptual

- Pipeline construction methodologies overview.
- Welding and inspection standards theoretical.
- Hydrostatic testing principles.
- Commissioning procedures and safety practices.

Unit 5: Operations, Troubleshooting & Compliance

- Pipeline operation principles.
- Leak detection systems overview.
- Troubleshooting common operational issues.
- Regulatory compliance & alignment with DOSH.
- Case studies and industry scenarios.

Final Insights & Key Takeaways

Participants leave this training with a thorough understanding of onshore gas transmission pipelines and the ability to safely and efficiently manage, operate, and maintain them. They gain practical knowledge aligned with industry standards and regulatory compliance.