MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

PIPELINES ENGINEERING

""Design, Maintenance, and Optimization of Pipeline Systems for Efficient Operations""

Schedule

Date	Venue	Fees (Face-to-Face)
01 – 05 Mar 2026	Manama, Bahrain	USD 3495 per delegate

► **Available delivery methods:** In-House Training

Introduction

Pipeline engineering is a critical discipline that ensures the safe and efficient transportation of fluids, gases, and solids across various industries. This 5-day course provides in-depth knowledge and hands-on experience in designing, maintaining, and optimizing pipeline systems. Participants will learn about pipeline materials, stress analysis, corrosion control, and the latest industry standards. The course is designed for professionals involved in pipeline design, maintenance, and operations, providing them with the necessary skills to enhance pipeline system reliability and performance.

Objectives

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

- Understand the fundamentals of pipeline engineering and its importance in various industries
- Design pipeline systems that meet safety, regulatory, and operational requirements
- Apply techniques for stress analysis, corrosion control, and material selection in pipeline design
- Understand the methods for pipeline inspection, maintenance, and optimization
- Implement best practices for pipeline safety, risk management, and integrity monitoring

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Why Attend

- Gain comprehensive knowledge of pipeline design, materials, and installation processes
- Learn the principles of pipeline stress analysis and how to prevent failures
- Understand the key techniques for pipeline corrosion management and integrity assessment
- Develop skills in pipeline maintenance and troubleshooting to improve operational efficiency
- Enhance your ability to design and operate pipelines safely and in compliance with industry standards

Target Audience

This program is designed for:

- Pipeline engineers and design engineers
- Maintenance managers and supervisors
- Operations and project managers
- HSE professionals
- Consultants and contractors involved in pipeline systems

Individual Benefits

Key competencies that will be developed include:

- In-depth understanding of pipeline design principles and standards
- Skills in pipeline material selection, stress analysis, and safety optimization
- Techniques for effective pipeline maintenance and integrity assessment
- Knowledge of pipeline corrosion management and prevention
- Ability to improve pipeline system performance through continuous monitoring

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Enhanced capability to design, maintain, and optimize pipeline systems
- Improved ability to prevent and manage pipeline failures and corrosion
- Better adherence to industry safety standards and regulatory compliance
- Increased efficiency and reduced operational costs in pipeline operations
- Strengthened risk management and safety practices for pipeline systems

Instructional Methodology

Lectures on pipeline engineering principles, design techniques, and industry standards

- Case studies to analyze real-world pipeline design and maintenance challenges
- Workshops focused on pipeline stress analysis, corrosion management, and material selection
- Interactive discussions on the latest advancements in pipeline engineering
- Hands-on exercises in pipeline inspection, testing, and optimization

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Course Outline

Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Learning Modules | Coffee Breaks: 09:30 & 11:15 | Lunch Break: 01:00 – 02:00

Day 1: Introduction to Pipeline Engineering

- Module 1: Fundamentals of Pipeline Systems (07:30 – 09:30) • Types of pipeline systems and their applications • Key components of pipeline systems (valves, pumps, fittings) • Overview of pipeline design principles
- Module 2: Pipeline Design Considerations (09:45 – 11:15) • Design methodologies and techniques • Material selection and compatibility • Stress analysis and load considerations
- Module 3: Workshop – Pipeline System Design (11:30 – 01:00) • Participants will work on designing a basic pipeline system for a given scenario

Day 2: Pipeline Materials, Stress Analysis, and Safety

- Module 4: Pipeline Materials and Specifications (07:30 – 09:30) • Types of materials used in pipeline construction • Material selection criteria and standards • Factors affecting pipeline material performance
- Module 5: Pipeline Stress and Strain Analysis (09:45 – 11:15) • Methods for stress and strain analysis in pipeline systems • Factors influencing pipeline stress (pressure, temperature, external forces) • Designing for flexibility and resilience
- Module 6: Workshop – Stress Analysis for Pipeline Design (11:30 – 01:00) • Hands-on activity to analyze pipeline stress in a given design

Day 3: Pipeline Corrosion Control and Integrity Management

- Module 7: Corrosion Management in Pipelines (07:30 – 09:30) • Types of corrosion and their effects on pipelines • Methods for corrosion detection and prevention • Materials and coatings used for corrosion control
- Module 8: Pipeline Integrity Management (09:45 – 11:15) • Principles of pipeline integrity and safety monitoring • Techniques for evaluating pipeline condition • Managing risks and failures in pipeline systems
- Module 9: Workshop – Corrosion and Integrity Assessment (11:30 – 01:00) • Participants will conduct a corrosion assessment and integrity check for a sample pipeline

Day 4: Pipeline Inspection, Maintenance, and Optimization

- Module 10: Pipeline Inspection Techniques (07:30 – 09:30) • Methods for inspecting pipelines (visual, ultrasonic, X-ray) • Scheduling and executing pipeline inspections • Evaluating inspection data for maintenance decisions
- Module 11: Pipeline Maintenance Best Practices (09:45 – 11:15) • Routine maintenance strategies for pipeline systems • Troubleshooting common pipeline issues • Enhancing pipeline performance through effective maintenance
- Module 12: Workshop – Pipeline Inspection and Maintenance (11:30 – 01:00) • Participants will simulate pipeline inspection and develop a maintenance plan

Day 5: Pipeline Safety, Risk Management, and Optimization

- Module 13: Pipeline Safety Standards and Risk Management (07:30 – 09:30) • Overview of pipeline safety standards and regulations • Risk assessment techniques for pipeline systems • Managing pipeline failure risks and mitigating consequences
- Module 14: Optimizing Pipeline Performance (09:45 – 11:15) • Techniques for improving pipeline efficiency and reliability • Monitoring pipeline performance and implementing improvements • Automation and remote monitoring of pipelines
- Module 15: Final Workshop – Optimizing Pipeline Systems (11:30 – 01:00) • Participants will work on optimizing a pipeline system and develop a safety plan

Certification

Upon successful completion of this course, participants will receive a Certificate of Completion in Pipeline Engineering, demonstrating their ability to design, maintain, and optimize pipeline systems effectively.

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Why Choose MAWA Events

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In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**