

WORLD CLASS PIPELINE OPERATIONS & MAINTENANCE

"Mastering Pipeline Performance - Ensure Efficiency, Safety, and Longevity"

Schedule

Date	Venue	Fees (Face-to-Face)
24 - 28 Aug 2026	London - UK	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Pipeline operations and maintenance are critical to the smooth and safe transport of hydrocarbons and other materials over long distances. A well-maintained pipeline network ensures reliability, reduces operational downtime, and minimizes risks to personnel and the environment. This 5-day intensive course provides participants with a comprehensive understanding of pipeline systems and the best practices for their operation and maintenance.

Through a combination of expert-led presentations, case studies, and hands-on workshops, participants will learn how to effectively manage pipelines, monitor pipeline integrity, perform maintenance procedures, and optimize performance. This course is ideal for professionals in the oil and gas industry seeking to enhance their pipeline operations and maintenance knowledge and skills.

Objectives

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

- Understand the key components and functions of pipeline systems
- Implement efficient maintenance strategies for pipeline operations
- Recognize common pipeline failure modes and apply effective prevention techniques
- Develop strategies for pipeline integrity management and monitoring
- Conduct risk assessments and ensure regulatory compliance in pipeline maintenance
- Optimize pipeline performance and extend asset life through best practices

Why Attend

- Gain an in-depth understanding of pipeline operations and the challenges associated with maintaining pipeline systems
- Learn how to design and implement effective maintenance programs to reduce downtime and improve operational efficiency
- Discover the latest technologies and methods for pipeline integrity management
- Understand the critical role of safety and environmental standards in pipeline operations
- Network with professionals from the oil and gas industry to share best practices and real-world solutions

Target Audience

This program is designed for:

- Pipeline engineers, maintenance engineers, and operations managers
- Safety officers and reliability engineers involved in pipeline operations
- Project managers overseeing pipeline construction, operations, and maintenance
- Technicians responsible for pipeline inspection, maintenance, and repair
- Anyone responsible for the integrity and performance of pipeline systems in the oil and gas industry

Individual Benefits

Key competencies that will be developed include:

- Enhanced understanding of pipeline systems and maintenance strategies
- The ability to implement preventive maintenance programs and procedures
- Advanced skills in identifying and mitigating pipeline risks and failures
- Expertise in monitoring pipeline integrity using advanced technologies
- Stronger ability to ensure compliance with industry standards and regulations

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- The ability to optimize pipeline performance and reduce operational interruptions
- Improved risk management and the ability to prevent costly failures and safety hazards
- More efficient pipeline inspection, monitoring, and maintenance procedures
- Increased compliance with environmental and safety regulations
- Enhanced capability to manage the lifecycle of pipeline assets and extend their operational life

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings - Detailed overview of pipeline systems, operations, and maintenance practices
- Case Studies - Analysis of real-world pipeline failures and successful maintenance programs
- Workshops - Hands-on activities focused on pipeline inspection, integrity management, and troubleshooting
- Peer Exchange - Group discussions on challenges in pipeline operations and solutions
- Tools - Tools for pipeline monitoring, risk assessment, and maintenance scheduling

MAWA EVENTS

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Course Outline

Detailed 5-Day Course Outline

Training Hours: 7:30 AM – 3:30 PM **Daily Format:** 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Introduction to Pipeline Operations and Maintenance

- Module 1: Overview of Pipeline Systems (07:30 – 09:30)
- Key components of pipeline systems (pumps, valves, compressors, etc.)
- Pipeline design principles and operational challenges
- Common materials used in pipeline construction
- Module 2: Pipeline Operations (09:45 – 11:15)
- Understanding the flow of materials through pipelines
- Operational considerations (pressure, temperature, and flow rate)
- Real-time monitoring and control of pipeline systems
- Module 3: Pipeline Safety and Compliance (11:30 – 01:00)
- Health, safety, and environmental regulations for pipeline operations
- Industry standards and compliance requirements (API, ASME, etc.)
- Risk management in pipeline operations

Day 2: Maintenance Strategies and Techniques

- Module 4: Preventive Maintenance for Pipelines (07:30 – 09:30)
- Key elements of a preventive maintenance program
- Inspection and testing procedures for pipelines
- Maintenance scheduling and tracking
- Module 5: Inspection and Monitoring Techniques (09:45 – 11:15)
- Non-destructive testing methods (ultrasonic, radiographic, etc.)
- Pipeline inspection tools and technologies
- The role of remote monitoring and sensors
- Module 6: Managing Pipeline Integrity (11:30 – 01:00)
- Integrity management principles for pipelines
- Risk-based inspection and maintenance programs
- Identifying and mitigating corrosion, leaks, and other failures

Day 3: Pipeline Failure Modes and Prevention

- Module 7: Common Pipeline Failures (07:30 – 09:30)
- Types of pipeline failures: corrosion, mechanical damage, erosion, etc.
- Root cause analysis of pipeline failures
- Failure modes and effects analysis (FMEA)
- Module 8: Corrosion Control and Prevention (09:45 – 11:15)
- Corrosion mechanisms in pipelines
- Corrosion monitoring and prevention techniques
- Coatings, cathodic protection, and other corrosion control methods
- Module 9: Leak Detection and Repair Techniques (11:30 – 01:00)
- Methods for detecting pipeline leaks and breaches
- Leak detection technologies and systems
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Repair techniques for different types of pipeline damage

Day 4: Advanced Pipeline Monitoring and Technologies

- Module 10: Advanced Monitoring Systems (07:30 – 09:30)
- Real-time pipeline monitoring systems (SCADA, DCS, etc.)
- Remote sensing and satellite technology for pipeline surveillance
- Data analysis and decision-making for pipeline performance optimization
- Module 11: Smart Pigging and Inspection Tools (09:45 – 11:15)
- The use of "smart pigs" for pipeline inspection
- How smart pigging detects internal pipeline corrosion and defects
- The benefits and limitations of smart pigging technologies
- Module 12: Pipeline Maintenance Scheduling and Optimization (11:30 – 01:00)
- Techniques for optimizing maintenance schedules and resource allocation
- Predictive maintenance using data analytics
- The role of maintenance management software (CMMS)

Day 5: Pipeline Performance Optimization and Future Trends

- Module 13: Optimizing Pipeline Efficiency (07:30 – 09:30)
- Techniques for improving pipeline flow and reducing friction losses
- Energy efficiency in pipeline operations
- Pipeline performance benchmarking and KPIs
- Module 14: Future Trends in Pipeline Operations and Maintenance (09:45 – 11:15)
- Innovations in pipeline materials and technology
- The role of artificial intelligence and machine learning in pipeline management
- Sustainability and environmental considerations in pipeline operations
- Module 15: Best Practices for Pipeline Operations and Maintenance (11:30 – 01:00)
- Key takeaways for optimizing pipeline operations
- Developing an effective pipeline maintenance strategy
- Future-proofing pipeline systems for long-term success

Certification

Participants will receive a Certificate of Completion in World Class Pipeline Operations & Maintenance, validating their expertise in pipeline management, maintenance strategies, and performance optimization.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
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