MAWA EVENTS

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

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

PIPELINE AND TANK MAINTENANCE

"Ensuring Operational Integrity and Safety Through Best Practices in Inspection, Repair, and Preventive Maintenance"

Schedule

Date	Venue	Fees (Face-to-Face)
20 – 24 Apr 2026	Istanbul, Turkey	USD 3495 per delegate

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

Introduction

Pipelines and storage tanks are critical infrastructure in oil, gas, water, and chemical industries. Their failure can lead to catastrophic losses, environmental damage, and costly downtime. Proactive maintenance and inspection practices are essential to ensure integrity, regulatory compliance, and long-term asset performance.

This intensive course equips maintenance engineers, inspectors, and facility managers with essential techniques and standards for maintaining the safety, operability, and compliance of pipeline and tank systems. Through a combination of technical briefings, real-world case studies, and hands-on exercises, participants will gain the knowledge to identify early signs of degradation, implement preventive strategies, and manage repairs efficiently.

Objectives

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

- Understand the failure mechanisms affecting pipelines and storage tanks
- Apply inspection, cleaning, and corrosion prevention techniques
- Develop and implement preventive maintenance programs for above- and below-ground assets
- Execute repair procedures in line with industry codes (API, ASME, etc.)
- Ensure safety and environmental compliance through systematic integrity management

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Why Attend

- Minimize operational risk and unplanned shutdowns of critical infrastructure
- Ensure compliance with international standards and environmental regulations
- Extend the lifecycle of pipeline and tank assets through structured maintenance programs
- Improve your organization’s response to integrity threats and inspection findings
- Strengthen cross-functional knowledge of mechanical integrity, corrosion, and repairs

Target Audience

This program is designed for:

- Pipeline and tank maintenance engineers
- Inspection and integrity engineers
- Operations and facility managers
- Corrosion specialists and coating inspectors
- Health, Safety, and Environmental (HSE) officers involved in asset management

Individual Benefits

Key competencies that will be developed include:

- Identification and mitigation of degradation and damage mechanisms
- Inspection planning using API 570/653 and related codes
- Corrosion prevention, cathodic protection, and coating application
- Execution of cleaning, pigging, leak detection, and tank bottom repair
- Interpretation of NDT results and development of maintenance action plans

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Reduced risk of leaks, spills, and structural failures
- Improved maintenance planning and resource allocation
- Enhanced asset performance and regulatory compliance
- Improved safety culture and environmental protection
- Alignment with international best practices in asset integrity

Instructional Methodology

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

- Strategy Briefings – Codes, standards, and regulatory frameworks for pipelines and tanks
- Case Studies – Real-world failure incidents, inspection findings, and repair decisions
- Workshops – Development of maintenance plans, corrosion mitigation strategies, and inspection schedules
- Peer Exchange – Sharing operational challenges and field-proven solutions
- Tools – Inspection checklists, risk assessment templates, cleaning procedures

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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: Pipeline and Tank Fundamentals

- Module 1: Overview of Pipeline and Tank Systems (07:30 – 09:30) • Design, function, and classification of assets
- Module 2: Failure Mechanisms and Degradation Modes (09:45 – 11:15) • Corrosion, cracking, erosion, mechanical damage
- Module 3: Codes and Standards (11:30 – 01:00) • API 570/653, ASME B31.4, NACE SP0102 overview
- Module 4: Workshop – Asset Risk Ranking (02:00 – 03:30) • Categorize pipeline and tank assets based on failure risk

Day 2: Inspection Techniques and NDT Methods

- Module 1: Visual and Ultrasonic Testing for Pipelines (07:30 – 09:30) • Girth welds, corrosion mapping, wall thickness
- Module 2: Tank Floor Inspection and Roof Analysis (09:45 – 11:15) • Floor scanning, roof corrosion, shell integrity
- Module 3: In-Line Inspection (ILI) and Smart Pigging (11:30 – 01:00) • Crack detection, geometry, corrosion detection tools
- Module 4: Workshop – Inspection Planning Exercise (02:00 – 03:30) • Build an inspection schedule for a tank farm

Day 3: Cleaning, Repairs, and Coating Systems

- Module 1: Pipeline and Tank Cleaning Methods (07:30 – 09:30) • Chemical, mechanical, pigging, hydroblasting
- Module 2: Coating Systems and Cathodic Protection (09:45 – 11:15) • Epoxy linings, galvanic and impressed current systems
- Module 3: Welded and Non-Welded Repair Techniques (11:30 – 01:00) • Hot tapping, composite wraps, clamp repairs
- Module 4: Workshop – Repair Method Selection (02:00 – 03:30) • Evaluate repair options based on defect type and code

Day 4: Maintenance Strategy and Data Integration

- Module 1: Preventive and Predictive Maintenance Planning (07:30 – 09:30) • Time-based vs. condition-based approaches
- Module 2: Integration with CMMS and Data Systems (09:45 – 11:15) • Data logging, maintenance tracking, work order systems
- Module 3: KPI Development and Performance Metrics (11:30 – 01:00) • Leak rate, repair frequency, backlog monitoring
- Module 4: Workshop – KPI Dashboard for Integrity (02:00 – 03:30) • Design a metrics dashboard for pipeline/tank performance

Day 5: Emergency Response and Certification Review

- Module 1: Leak Detection and Emergency Preparedness (07:30 – 09:30) • Sensors, SCADA, response planning
- Module 2: Regulatory Reporting and Documentation (09:45 – 11:15) • Incident logs, maintenance records, audit readiness
- Module 3: Final Case Study – Integrated Maintenance Program (11:30 – 01:00) • Develop a full-scope maintenance and inspection plan
- Module 4: Wrap-Up and Certification (02:00 – 03:30) • Course review, Q&A, and certificate distribution

Certification

Participants will receive a Certificate of Completion in Pipeline and Tank Maintenance, confirming their skills in maintaining asset integrity, planning inspections, and executing maintenance activities in accordance with international codes and safety standards.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

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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**