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, Build & Manage Pipeline Systems with Engineering Precision"

Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

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

Introduction

This intensive course is designed to provide engineers and technical professionals with a solid foundation in pipeline engineering. Covering the full spectrum of pipeline lifecycle—planning, design, construction, operation, and maintenance—it focuses on both onshore and offshore systems. The course explores engineering design principles, materials selection, fluid mechanics, structural integrity, and operational safety essential to delivering pipeline projects efficiently and safely.

Objectives

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

- Understand engineering fundamentals of pipeline systems
- Apply standards and specifications for pipeline design and operation
- Select appropriate materials and coatings based on operational and environmental factors
- Evaluate mechanical integrity, stress, and fluid flow
- Address engineering challenges in offshore and subsea pipeline projects
- Integrate pipeline integrity and monitoring strategies

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Why Attend

- Gain practical pipeline engineering knowledge essential for multidisciplinary project teams
- Understand industry standards (API, ASME, ISO, DNV) and how to apply them
- Improve your ability to troubleshoot and prevent costly engineering failures
- Learn directly from real-world case studies across different terrains and conditions

Target Audience

- Pipeline engineers and designers
- Project and construction engineers
- Mechanical and civil engineers
- Technical specialists in oil, gas, and energy infrastructure
- Professionals transitioning into pipeline projects

Individual Benefits

- Develop a structured approach to pipeline design and integrity assessment
- Understand challenges and solutions for both land and subsea pipeline systems
- Expand your technical capabilities with multidisciplinary exposure
- Receive a recognized certificate of completion

Organizational Benefits

- Improve pipeline project efficiency, safety, and compliance
- Strengthen engineering team capabilities in planning and problem-solving
- Reduce pipeline failures and environmental risk
- Optimize lifecycle cost and performance of pipeline infrastructure

Instructional Methodology

- Expert-led lectures with visual aids and animations
- Hands-on design calculations and modeling exercises
- Engineering problem-solving case studies
- Group discussions and scenario workshops
- Real-world pipeline project reviews and Q&A

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Course Outline

DETAILED 5-DAY COURSE OUTLINE (Customizable) Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1 – Introduction & Pipeline System Design

- Module 1 (07:30 – 09:30): Overview of Pipeline Systems – Types, Functions & Lifecycle
- Module 2 (09:45 – 11:15): Pipeline Route Selection & Surveying Considerations
- Module 3 (11:30 – 01:00): Design Codes and Standards (API, ASME, ISO, DNV, etc.)

Day 2 – Hydraulic & Mechanical Engineering Aspects

- Module 4 (07:30 – 09:30): Fluid Flow Dynamics and Pressure Drop Calculations
- Module 5 (09:45 – 11:15): Pipe Stress Analysis, Loadings, and Thermal Expansion
- Module 6 (11:30 – 01:00): Mechanical Design – Wall Thickness, Buried & Above-Ground Piping

Day 3 – Materials, Coatings & Offshore Engineering

- Module 7 (07:30 – 09:30): Materials Selection for Pipelines – Corrosion, Strength, Compatibility
- Module 8 (09:45 – 11:15): Coating Systems and Cathodic Protection Techniques
- Module 9 (11:30 – 01:00): Offshore and Subsea Engineering – Environmental and Technical Challenges

Day 4 – Pipeline Construction, Installation & Operations

- Module 10 (07:30 – 09:30): Onshore Construction Techniques – Trenching, Welding, Stringing
- Module 11 (09:45 – 11:15): Offshore Installation Techniques – S-Lay, J-Lay, Reel-Lay
- Module 12 (11:30 – 01:00): Commissioning, Pigging & Operational Readiness

Day 5 – Integrity, Inspection & Safety

- Module 13 (07:30 – 09:30): Pipeline Integrity Management – Monitoring & Assessment
- Module 14 (09:45 – 11:15): Inline Inspection (ILI), Risk-Based Inspection (RBI), and Smart Pigging
- Module 15 (11:30 – 01:00): Case Studies: Failures, Root Causes, and Lessons Learned

Certification

Participants will receive a Certificate of Completion in Pipelines Engineering (Onshore & Offshore), validating technical proficiency across design, installation, and operational practices.

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.

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

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