MAWA EVENTS

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

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

FLEXIBLE PIPE ENGINEERING – DESIGN, MATERIALS, MANUFACTURE & INSTALLATION

"Master the Engineering and Installation of Flexible Pipe Systems for Offshore and Subsea Success"

Schedule

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

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

Introduction

Flexible pipes are a critical component in subsea and offshore oil and gas operations, offering unique advantages in dynamic environments. This comprehensive course provides in-depth training on the engineering principles, material science, design considerations, manufacturing processes, and installation techniques for flexible pipe systems. Through real-world case studies and interactive sessions, participants will gain practical knowledge to ensure the integrity, safety, and performance of flexible pipelines in complex field conditions.

Objectives

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

- Understand the structure and functionality of flexible pipes.
- Identify material selection and compatibility for various operational environments.
- Apply design standards (API 17B/17J) for flexible pipe engineering.
- Analyze failure mechanisms and perform integrity assessments.
- Plan and execute flexible pipe manufacturing, testing, and installation processes.

MAWA EVENTS

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

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

Why Attend

- Gain comprehensive knowledge of flexible pipe systems from design to deployment.
- Learn industry best practices for safety, cost-efficiency, and compliance.
- Enhance your ability to troubleshoot and mitigate installation challenges.
- Build your competency in one of the most critical subsea technologies.

Target Audience

This course is ideal for:

- Subsea and pipeline engineers
- Design and structural engineers
- Asset integrity and inspection professionals
- Project and operations managers
- Maintenance and installation specialists
- Quality assurance/control personnel
- Oil & gas professionals involved in offshore infrastructure

Individual Benefits

- Build technical confidence in flexible pipe design and use.
- Learn to evaluate pipe performance under fatigue and pressure.
- Expand your expertise with real-world installation scenarios.
- Receive a prestigious certification to support your career growth.

Organizational Benefits

- Minimize risk of pipeline failure and downtime
- Improve project efficiency and cost management
- Ensure regulatory and standard compliance
- Develop in-house engineering capacity for complex subsea systems
- Enhance project execution capabilities through trained staff

Instructional Methodology

- Expert-led technical sessions and live case reviews
- Standards-based learning (API, ISO, DNV)
- Group exercises and problem-solving workshops
- Engineering drawings and installation planning tools
- Multimedia aids (videos of pipe manufacturing and installation)

MAWA EVENTS

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

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

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 & Pipe Structure Fundamentals

- Module 1 (07:30 – 09:30): Introduction to Flexible Pipes & Market Applications
- Module 2 (09:45 – 11:15): Cross-Section Structure & Components (Carcass, Pressure Sheath, Armour Layers)
- Module 3 (11:30 – 01:00): Pipe Types (Risers, Flowlines, Jumpers) and Functional Requirements

Day 2 – Design and Material Considerations

- Module 4 (07:30 – 09:30): Design Standards and Codes (API 17J, ISO 13628-11)
- Module 5 (09:45 – 11:15): Material Selection – Polymers, Steels, Corrosion Considerations
- Module 6 (11:30 – 01:00): Fatigue, Collapse, and Burst Pressure Design Criteria

Day 3 – Manufacturing & Quality Control

- Module 7 (07:30 – 09:30): Manufacturing Processes and Equipment
- Module 8 (09:45 – 11:15): Factory Acceptance Testing (FAT), Destructive/Non-Destructive Testing
- Module 9 (11:30 – 01:00): QA/QC Measures and Document Control

Day 4 – Installation Engineering

- Module 10 (07:30 – 09:30): Pre-installation Planning & Transport Logistics
- Module 11 (09:45 – 11:15): Reel-lay, J-lay, and S-lay Methods
- Module 12 (11:30 – 01:00): Bending, Tension, and Torsion During Installation

Day 5 – Integrity, Failures, and Life Extension

- Module 13 (07:30 – 09:30): Common Failures: Cracking, Buckling, and Overbending
- Module 14 (09:45 – 11:15): Inspection, Monitoring, and Life Extension Strategies
- Module 15 (11:30 – 01:00): Final Review, Group Case Exercise & Certification Ceremony

Certification

Upon completion, participants will receive a Certificate of Achievement in Flexible Pipe Engineering, demonstrating their expertise in design, manufacturing, and installation processes.

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**