MAWA EVENTS

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

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

GAS PIPING SYSTEMS FUNDAMENTALS

"Building a solid foundation in the design, operation, and safety of gas piping systems."

Schedule

Date	Venue	Fees
13 – 14 Oct 2026	Online	USD 700 per delegate

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

Introduction

Gas piping systems are critical infrastructure in the oil and gas, industrial, and utility sectors. Safe design, installation, and operation of these systems are essential to ensure operational reliability, minimize risks, and comply with regulatory standards. Improper handling of gas piping systems can lead to leaks, accidents, and costly downtime.

This 2-day intensive online training provides participants with a comprehensive understanding of gas piping system fundamentals, including design principles, materials selection, safety considerations, and operational best practices. Through case studies and practical examples, participants will develop the knowledge required to design, operate, and maintain gas piping systems safely and efficiently.

Objectives

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

- Understand the basic principles of gas piping system design and operation.
- Identify materials, components, and equipment used in gas piping systems.
- Apply safety and regulatory requirements in gas system operations.
- Evaluate system performance and troubleshoot common operational issues.
- Enhance reliability, efficiency, and safety in gas distribution and transport.

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

- Strengthen foundational knowledge of gas piping systems.
- Learn design, installation, and operational best practices.
- Enhance safety awareness and regulatory compliance.
- Develop problem-solving skills for operational issues.
- Improve overall system reliability and performance.

Target Audience

This program is designed for:

- Pipeline engineers and designers.
- Operations and maintenance personnel in gas systems.
- HSE professionals working in gas utilities.
- Supervisors and technical managers overseeing gas piping operations.
- Professionals responsible for pipeline integrity and safety compliance.

Individual Benefits

Key competencies that will be developed include:

- Understanding of gas piping system components and operation.
- Ability to apply safety standards and regulatory requirements.
- Skills to troubleshoot and resolve common system issues.
- Knowledge of materials selection and design considerations.
- Increased confidence in managing gas piping systems.

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Safer and more reliable operation of gas piping systems.
- Improved compliance with industry standards and regulations.
- Reduced operational risks and downtime.
- Enhanced technical capability of pipeline teams.
- Increased efficiency in design, installation, and maintenance processes.

Instructional Methodology

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

- Strategy Briefings – Principles of gas piping systems, design, and operation.
- Case Studies – Real-world examples of system failures and safety incidents.
- Interactive Discussions – Problem-solving exercises and scenario analysis.
- Practical Exercises – System design considerations and operational troubleshooting.
- Tools – Reference guides, checklists, and calculation templates.

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 2-Day Course Outline

Training Hours: 9:00 AM – 4:00 PM Daily Format: 3–4 Learning Modules | Coffee breaks as scheduled | Lunch Break: 01:00 – 02:00

Day 1: Fundamentals of Gas Piping Systems

Module 1: Introduction to Gas Piping Systems (09:00 – 10:30)

- Overview of gas distribution and transmission
- Types of piping systems and applications
- Key regulations and standards

Module 2: Piping Components and Materials (10:45 – 12:15)

- Pipes, valves, fittings, and supports
- Material selection and corrosion considerations
- Mechanical and pressure ratings

Module 3: Gas Flow Principles and Design Basics (01:00 – 02:30)

- Fundamentals of gas flow and pressure drop
- System sizing and layout considerations
- Safety and operational requirements

Module 4: System Safety and Regulatory Compliance (02:45 – 04:00)

- Hazard identification and risk mitigation
- Compliance with standards (ASME, API, ISO)
- Day 1 review and discussion

Day 2: Operational Practices and Troubleshooting

Module 5: Operation and Maintenance of Gas Piping Systems (09:00 – 10:30)

- Startup, operation, and shutdown procedures
- Routine maintenance and inspection practices
- Monitoring system performance

Module 6: Troubleshooting Common Issues (10:45 – 12:15)

- Leak detection, pressure drops, and blockages
- Addressing mechanical failures and corrosion problems
- Corrective actions and preventive strategies

Module 7: System Performance Optimization (01:00 – 02:30)

- Enhancing reliability and efficiency
- Preventive maintenance planning
- Performance monitoring techniques

Module 8: Case Studies, Best Practices, and Course Review (02:45 – 04:00)

- Analysis of real-world incidents
- Lessons learned and industry best practices
- Key takeaways, action planning, and Q&A

Certification

Participants will receive a Certificate of Completion in Gas Piping Systems Fundamentals, validating their knowledge of design principles, operational safety, and best practices for gas piping systems.

MAWA EVENTS

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

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

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**