MAWA EVENTS

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

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

PUMP FUNDAMENTALS

"Understanding Pump Principles and Operation for Reliable Process Performance"

Schedule

Date	Venue	Fees (Online)
08 – 09 Dec 2026	Online	USD 700 per delegate

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

Introduction

Pumps are critical components in industrial processes, ensuring the efficient movement of fluids and maintaining system performance. This 2-day online training provides participants with a solid understanding of pump fundamentals, including types, operation, selection, and maintenance, aimed at enhancing operational reliability and process efficiency.

Through interactive discussions, practical examples, and hands-on exercises, participants will gain the skills to select the right pump, troubleshoot operational issues, and implement best practices for pump performance. The course emphasizes real-world applications in oil, gas, and industrial facilities.

Objectives

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

- Understand the basic principles of pump operation and design.
- Identify different types of pumps and their applications.
- Select appropriate pumps based on process requirements.
- Diagnose and troubleshoot common pump problems.
- Apply best practices for pump maintenance, reliability, and safety.

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Why Attend

- Gain comprehensive knowledge of pump types, principles, and applications.
- Learn techniques to optimize pump performance and efficiency.
- Improve maintenance strategies and reduce operational downtime.
- Understand troubleshooting methods for common pump issues.
- Network with professionals in process and asset management.

Target Audience

This program is designed for:

- Process, mechanical, and maintenance engineers
- Operations personnel and plant supervisors
- Reliability and asset management engineers
- Technical staff responsible for pump operation and maintenance
- Industrial professionals involved in fluid handling systems

Individual Benefits

Key competencies that will be developed include:

- Understanding of pump types, components, and operating principles
- Ability to select and size pumps for industrial processes
- Skills in troubleshooting and maintaining pump systems
- Knowledge of performance optimization and energy efficiency
- Capability to apply best practices in pump operation and safety

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved pump performance and process efficiency
- Reduced downtime and maintenance costs
- Enhanced reliability and operational safety
- Compliance with industry standards and best practices
- Strengthened overall asset management and lifecycle performance

Instructional Methodology

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

- Strategy Briefings – Overview of pump principles, types, and standards
- Case Studies – Real-world examples of pump selection, troubleshooting, and optimization
- Workshops – Hands-on exercises for operation, maintenance, and performance testing
- Peer Exchange – Group discussions on challenges and solutions in pump operations
- Tools – Templates and guidelines for pump selection, troubleshooting, and maintenance

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Course Outline

Detailed 2-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: Fundamentals of Pumps

Module 1: Introduction to Pumps (07:30 – 09:30)

- Overview of pump types and components
- Basic operating principles
- Applications in process industries

Module 2: Pump Selection and Sizing (09:45 – 11:15)

- Criteria for selecting pumps
- Flow, pressure, and head considerations
- Material compatibility and environmental factors

Module 3: Operational Considerations (11:30 – 01:00)

- Common pump issues and troubleshooting
- Monitoring and performance evaluation

Module 4: Workshop – Hands-On Exercises (02:00 – 03:30)

- Practical exercises in pump operation and performance analysis
- Interactive discussion and feedback

Day 2: Advanced Practices and Maintenance

Module 1: Troubleshooting and Diagnostics (07:30 – 09:30)

- Identifying and resolving operational problems
- Case studies on common pump failures

Module 2: Maintenance Strategies (09:45 – 11:15)

- Preventive and predictive maintenance
- Inspection, testing, and lifecycle management

Module 3: Performance Optimization (11:30 – 01:00)

- Enhancing efficiency and reliability
- Reducing energy consumption and operational costs

Module 4: Workshop and Q&A (02:00 – 03:30)

- Practical exercises on troubleshooting and maintenance planning
- Group discussion and lessons learned

Certification

Participants will receive a Certificate of Completion in Pump Fundamentals, validating their expertise in pump principles, operation, troubleshooting, and maintenance practices for oil, gas, and industrial 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.

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