

PUMPS AND COMPRESSORS: OPERATION, MAINTENANCE AND TROUBLESHOOTING

“Maximize Reliability, Efficiency, and Safety by Mastering Pumps and Compressors Operations and Maintenance Techniques.”

Schedule

Venue (In-house)	Fees
At Your Organization Premises	Ask For The Quotation

► **Available delivery methods:** In-House Training

Introduction

Pumps and compressors are critical components of industrial process systems, essential for fluid and gas movement across operations. Failures or inefficiencies can lead to production downtime, safety hazards, and increased operational costs.

This course provides participants with comprehensive, hands-on training in the operation, maintenance, and troubleshooting of pumps and compressors. Through practical exercises, case studies, and industry examples, participants will develop the skills to ensure optimal performance, extend equipment life, and prevent unexpected failures.

Objectives

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

- Understand the operating principles of various pumps and compressors.
- Select and size pumps and compressors for different process applications.
- Perform proper installation, commissioning, and start-up procedures.
- Conduct preventive and predictive maintenance for pumps and compressors.
- Identify and troubleshoot operational problems effectively.
- Optimize performance and energy efficiency of fluid and gas systems.
- Apply safety standards and industry best practices in equipment management.
- Integrate maintenance and reliability strategies into plant operations.

Why Attend

Proper operation and maintenance of pumps and compressors are vital for reliable plant performance. This course provides practical insights and real-world techniques that help participants reduce downtime, prevent failures, and improve operational efficiency, making them valuable assets in process plant operations.

Target Audience

This course is suitable for:

- Mechanical, Process, and Maintenance Engineers
- Plant and Operations Managers
- Maintenance Supervisors and Technicians
- Reliability and Asset Management Professionals
- Operators responsible for pumps and compressors
- Technical Leads overseeing plant performance

Individual Benefits

- Gain hands-on knowledge of pump and compressor systems.
- Learn to identify and troubleshoot common operational issues.
- Enhance preventive and predictive maintenance skills.
- Improve professional competence and confidence in equipment management.
- Increase employability and technical expertise in process equipment operations.

Organizational Benefits

- Improve equipment reliability and operational efficiency.
- Reduce downtime, maintenance costs, and energy consumption.
- Ensure compliance with safety and operational standards.
- Optimize performance of pumps and compressors across the plant.
- Build in-house expertise for better maintenance and reliability management.

Instructional Methodology

The training employs a practical, interactive, and hands-on approach:

- Instructor-led demonstrations of pumps and compressors
- Hands-on workshops and operational exercises
- Real-world case studies and troubleshooting exercises
- Step-by-step guidance on maintenance, inspection, and performance optimization
- Group exercises, applied problem-solving, and continuous feedback sessions

Course Outline

- Module 1: Introduction to Pumps and Compressors – Types, Applications, and Principles
- Module 2: Selection, Sizing, and Installation Guidelines
- Module 3: Commissioning and Start-Up Procedures
- Module 4: Operational Principles and Performance Metrics
- Module 5: Preventive Maintenance Techniques
- Module 6: Predictive Maintenance and Condition Monitoring
- Module 7: Troubleshooting Common Operational Problems
- Module 8: Energy Efficiency and Performance Optimization
- Module 9: Safety Standards, Codes, and Best Practices
- Module 10: Practical Exercises – Operation, Maintenance, and Troubleshooting of Pumps and Compressors

Certification

Upon successful completion, participants will receive a Certificate in Pumps and Compressors: Operation, Maintenance and Troubleshooting, acknowledging their expertise in managing, maintaining, and troubleshooting industrial pumps and compressors for safe, reliable, and efficient plant operations.

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?

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