

## PUMPS AND COMPRESSORS: CONTROLS AND OPERATIONS

*"Enhancing operational efficiency and reliability through effective pump and compressor management"*

### Schedule

Date	Venue	Fees (Online)
18 - 19 May 2026	Online	USD 700 per delegate

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

### Introduction

Pumps and compressors are critical assets in oil and gas operations, directly affecting process efficiency and plant reliability. Proper understanding of their control and operational principles is essential to prevent failures, reduce downtime, and optimize performance. This 2-day intensive training provides participants with practical knowledge on the operation, control, and maintenance of pumps and compressors. Through theory, case studies, and hands-on exercises, participants will learn to monitor performance, implement control strategies, and ensure the reliability and efficiency of these essential systems.

### Objectives

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

- Understand the operational principles of pumps and compressors
- Apply effective control strategies for stable and efficient operation
- Monitor performance and identify operational issues
- Troubleshoot common problems and implement corrective actions
- Enhance safety, reliability, and energy efficiency
- Integrate best practices into maintenance and operations
- Optimize overall process performance

## Why Attend

- Gain practical knowledge of pump and compressor operations
- Improve operational stability and efficiency
- Reduce equipment downtime and maintenance costs
- Enhance safety and reliability in process operations
- Apply real-world case studies and hands-on exercises

## Target Audience

This program is designed for:

- Process and mechanical engineers
- Operations and maintenance personnel
- Control and instrumentation engineers
- Plant supervisors and managers
- HSE professionals involved in operational safety
- Technical staff responsible for pumps and compressors

## Individual Benefits

Key competencies that will be developed include:

- Understanding pumps and compressors operation and control
- Ability to monitor, troubleshoot, and optimize performance
- Knowledge of safety and reliability considerations
- Skills to integrate control strategies into daily operations
- Enhanced professional confidence in managing critical equipment

## Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved reliability and efficiency of pumps and compressors
- Reduced risk of failures and unplanned downtime
- Better integration of control strategies into operations
- Enhanced operational safety and energy efficiency
- Optimized performance and cost management

## Instructional Methodology

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

- Strategy Briefings – Fundamentals of pump and compressor operations
- Case Studies – Operational challenges and solutions
- Workshops – Hands-on exercises in monitoring and troubleshooting
- Peer Exchange – Discussions on best practices and lessons learned
- Tools – Control diagrams, monitoring templates, and operational guides

## Course Outline

Detailed 2-Day Course Outline

Training Hours: 9:00 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks included

Day 1: Fundamentals of Pumps and Compressors

Module 1: Introduction to Pumps and Compressors (09:00 – 10:30)

- Types, applications, and key performance parameters

Module 2: Control System Basics (10:45 – 12:15)

- Instrumentation, automation, and control strategies

Module 3: Operational Procedures (01:00 – 02:15)

- Start-up, shut-down, and normal operation
- Maintaining performance and stability

Module 4: Workshop – Performance Monitoring (02:30 – 03:30)

- Hands-on exercises for monitoring operations

Day 2: Optimization and Troubleshooting

Module 1: Performance Optimization (09:00 – 10:30)

- Controlling flow, pressure, and energy efficiency

Module 2: Troubleshooting Common Issues (10:45 – 12:15)

- Identifying and resolving operational problems
- Preventive and corrective actions

Module 3: Integrating Control with Operations (01:00 – 02:15)

- Linking control strategies with operational goals
- Continuous improvement

Module 4: Workshop – Action Planning (02:30 – 03:30)

- Developing practical operational improvement plans
- Group discussion and review

## Certification

Participants will receive a Certificate of Completion in Pumps and Compressors: Controls and Operations, validating their knowledge and practical competence in optimizing the operation and control of pumps and compressors in oil and gas operations.

## Why Choose MAWA Events

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### In-House / Customized Training

Interested in running this course for your team?

Please contact us:

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