

Training
Course

Mechanical Maintenance Specialist Pumps, Compressors & Rotating Machinery

Course Plan

Introduction

This comprehensive training course is designed to equip mechanical technicians, engineers, and maintenance professionals with in-depth knowledge and practical skills in maintaining pumps, compressors, and rotating equipment. Participants will gain a thorough understanding of mechanical systems, troubleshooting techniques, preventive maintenance, and best practices to ensure operational efficiency and equipment longevity.

Course Objectives:

- ✓ Understand the operating principles of pumps, compressors, and rotating machinery.
- ✓ Identify common failure modes and root causes.
- ✓ Perform preventive and predictive maintenance procedures.
- ✓ Implement effective troubleshooting techniques.
- ✓ Interpret technical manuals, drawings, and specifications.
- ✓ Enhance reliability and reduce downtime in mechanical systems.
- ✓ Apply safety standards during maintenance operations.

Who Should Attend?

- Mechanical maintenance technicians
- Plant engineers
- Reliability engineers
- Industrial mechanics
- Maintenance supervisors
- Operations personnel responsible for machinery performance
- New hires in mechanical maintenance departments

Training Methods:

- ✓ Online Video material.
- ✓ Presentation.
- ✓ Live Interactive sessions.
- ✓ Course presenter will make extensive use of all tools that will be needed for the virtual environment.
- ✓ Questions & Answers

Course Outline:

Day One

- Introduction to Mechanical Maintenance
- Types and Classifications of Pumps
- Pump Operation and Performance Curves
- Centrifugal vs. Positive Displacement Pumps
- Pump Failure Modes and Troubleshooting

Day Two

- Seal Types and Maintenance (Mechanical Seals, Packing)
- Types of Compressors: Reciprocating, Screw, Centrifugal
- Compressor Operation and Control Systems
- Lubrication Systems and Oil Analysis
- Bearings: Types, Inspection, and Replacement

Day Three

- Alignment Techniques: Laser, Dial, and Straightedge
- Vibration Analysis Basics
- Balancing of Rotating Equipment
- Thermography and Ultrasonic Testing
- Motor-Driven Systems: Couplings and Drives

Day Four

- Condition Monitoring and Predictive Maintenance
- Root Cause Failure Analysis (RCFA)
- Maintenance Planning and Scheduling
- Safety in Mechanical Maintenance
- Spare Parts Management

Day Five

- Standards and Best Practices (API, ISO)
- Installation and Commissioning of Equipment
- Case Studies in Pump and Compressor Failures
- Documentation and Reporting Procedures
- Final Assessment and Practical Exercises

Training Details

Course Duration	5 Days
Pre-Schedule	30 June – 4 July 2025
Venue	Kaiserin Elisabeth – Hotel - Vienna
Training Fees Per Person	KWD 1800 (One Thousand Eight Hundred Only)
Course Fees Include	<ul style="list-style-type: none"> ✓ Tuition documentation ✓ Curriculum and Training Handout ✓ Five star Lunch ✓ Completion Certificates ✓ Lunch Included