

## ADVANCED ROTATING EQUIPMENT MAINTENANCE & RELIABILITY

*"Enhance the Efficiency and Lifespan of Critical Rotating Equipment"*

### Schedule

Date	Venue	Fees (Face-to-Face)
08 - 09 Jul 2026	Manama, Bahrain	USD 1995 per delegate

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

### Introduction

This 2-day course on Advanced Rotating Equipment Maintenance & Reliability is designed to provide maintenance and reliability engineers with the advanced techniques and methodologies necessary to improve the reliability and performance of rotating equipment. The course emphasizes proactive maintenance, reliability-centered maintenance (RCM), condition monitoring, and the most effective strategies for optimizing equipment performance in industries like oil & gas, petrochemical, and manufacturing. Participants will gain practical insights into equipment failure modes and how to implement predictive maintenance techniques to minimize downtime and maximize equipment life.

The course also covers the latest developments in rotating equipment technologies and best practices for troubleshooting and root cause failure analysis. With a focus on real-world applications, this training is ideal for professionals seeking to enhance the reliability and performance of rotating machinery in critical operations.

### Objectives

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

- Understand the principles and best practices for maintaining rotating equipment
- Implement reliability-centered maintenance (RCM) strategies
- Use condition monitoring tools for effective equipment health management
- Analyze failure modes and conduct root cause analysis
- Develop maintenance strategies to improve equipment life and reduce unplanned downtime
- Understand the latest trends in rotating equipment technology and maintenance techniques

## Why Attend

- Learn advanced techniques for the maintenance and reliability of rotating equipment
- Improve the performance and lifespan of machinery in your organization
- Enhance your ability to detect early signs of equipment failure and take preventive measures
- Gain expertise in implementing reliability-centered maintenance (RCM) strategies
- Learn from industry experts with real-world experience in rotating equipment reliability

## Target Audience

This program is designed for:

- Maintenance engineers and technicians responsible for rotating equipment
- Reliability engineers working in industries such as oil & gas, manufacturing, and petrochemicals
- Asset management and plant managers
- Professionals involved in equipment maintenance, troubleshooting, and performance optimization

## Individual Benefits

Key competencies that will be developed include:

- Advanced understanding of rotating equipment maintenance and reliability
- Ability to implement condition monitoring and predictive maintenance techniques
- Skills in conducting root cause failure analysis (RCFA)
- Knowledge in improving equipment reliability through RCM and other advanced strategies
- Enhanced troubleshooting and diagnostic skills

## Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Reduced unplanned downtime and increased equipment uptime
- Improved reliability and performance of rotating equipment
- Effective use of condition monitoring tools and techniques
- A strategic approach to implementing and managing a reliability-centered maintenance program
- Better alignment between equipment maintenance practices and organizational goals

## Instructional Methodology

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

- Strategy Briefings - In-depth discussions on advanced maintenance techniques and reliability-centered approaches
- Case Studies - Real-world examples of rotating equipment failures and the best practices for prevention and repair
- Workshops - Hands-on exercises on failure analysis, predictive maintenance, and RCM implementation
- Peer Exchange - Group discussions on challenges and solutions in rotating equipment reliability
- Tools - Introduction to the latest software and tools for condition monitoring and reliability management

## 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: Introduction to Advanced Rotating Equipment Maintenance

- Module 1: Overview of Rotating Equipment and Maintenance Best Practices (07:30 – 09:30)
  - Understanding the importance of rotating equipment in industrial operations
  - Principles of effective maintenance strategies
  - Key performance indicators (KPIs) for measuring equipment reliability
- Module 2: Reliability-Centered Maintenance (RCM) (09:45 – 11:15)
  - Introduction to RCM and its benefits for rotating equipment
  - How to identify critical equipment and prioritize maintenance tasks
  - RCM methodology and its application in real-world scenarios
- Module 3: Condition Monitoring and Predictive Maintenance (11:30 – 01:00)
  - Overview of condition monitoring techniques and technologies
  - Vibration analysis, thermography, and oil analysis for rotating equipment
  - Predictive maintenance techniques for identifying early signs of failure

### Day 2: Root Cause Failure Analysis and Optimizing Equipment Performance

- Module 4: Root Cause Failure Analysis (RCFA) (07:30 – 09:30)
  - Conducting effective RCFA to prevent recurring equipment failures
  - Techniques for identifying failure modes and their causes
  - Best practices for documenting and addressing failure causes
- Module 5: Implementing Reliability Programs for Rotating Equipment (09:45 – 11:15)
  - Creating a comprehensive reliability program for rotating equipment
  - Developing maintenance schedules and strategies based on reliability data
  - Integrating reliability improvement programs into existing maintenance processes
- Module 6: Advanced Troubleshooting and Optimization (11:30 – 01:00)
  - Advanced troubleshooting techniques for rotating equipment
  - Optimizing machinery performance through process and maintenance adjustments
  - Real-world examples of successful equipment optimization

## Certification

Participants will receive a Certificate of Completion in Advanced Rotating Equipment Maintenance & Reliability, validating their expertise in maintaining and optimizing rotating equipment using the latest techniques and strategies.

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