

# ROTATING EQUIPMENT EXCELLENCE



## OUR ACCREDITATION & PARTNERS



# ROTATING EQUIPMENT EXCELLENCE



## OVERALL DESCRIPTION:

The hum of a well-maintained machine isn't just noise; it's the sound of productivity, reliability, and profit. But the reality is, managing your critical rotating equipment—the very heart of your operations—often feels like a constant battle against unexpected failures and costly repairs. This course is your strategic guide to mastering these essential assets. We'll equip you and your team with the knowledge and confidence to move beyond simple repairs and into a realm of proactive excellence, where equipment longevity and peak performance are the standards, not the exceptions. By transforming your approach, you'll not only enhance operational efficiency but also drive significant, tangible value for your organization.

## Course Objectives:

**Upon completion of this course, participants will have the knowledge and skills to:**

- **Diagnose & Troubleshoot:** Accurately diagnose common faults in pumps, compressors, turbines, and fans.
- **Optimize Maintenance:** Develop and apply effective preventive and predictive maintenance strategies.
- **Improve Reliability:** Utilize root cause analysis to permanently solve recurring equipment failures.
- **Enhance Safety:** Understand and apply safety protocols related to rotating machinery operation and maintenance.
- **Reduce Costs:** Implement lubrication and sealing best practices to reduce operational costs and improve efficiency.



# ROTATING EQUIPMENT EXCELLENCE

## Course Outline:

- **Foundational Principles of Rotating Equipment:**
  - Types and operational characteristics of pumps, compressors, turbines, and motors.
  - Understanding fluid dynamics and mechanical principles.
- **Maintenance & Reliability Strategies:**
  - Comparison of preventive, predictive, and proactive maintenance.
  - Conducting Failure Mode and Effects Analysis (FMEA).
- **Core Component Technology:**
  - Bearings: Selection, installation, and common failure modes.
  - Mechanical Seals: Principles, types, and troubleshooting leaks.
  - Couplings: Alignment, types, and their impact on system performance.
- **Condition Monitoring & Diagnostics:**
  - Vibration analysis basics for identifying machine faults.
  - Oil and lubrication analysis techniques.
  - Implementing a cost-effective condition monitoring program.
- **Troubleshooting & Case Studies:**
  - Systematic troubleshooting methodologies.
  - Practical case studies on real-world equipment failures and their resolutions.





# ROTATING EQUIPMENT EXCELLENCE

## WHO SHOULD ATTEND?

**This course is designed for professionals who are directly involved with the operation and maintenance of rotating equipment. This includes:**

- Mechanical Engineers
- Maintenance and Reliability Engineers
- Maintenance Supervisors and Technicians
- Plant Operators and Team Leaders
- Anyone aspiring to enhance their knowledge in rotating equipment management and reliability.

## Course Methodology:

We utilize a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. This training course will be conducted as a highly interactive workshop session. A variety of training methodologies will be used Before and during the course whenever applicable. Some of these methods are gamification, online pre-post test, role plays, self-assessment instruments, group exercises & case studies.

