Centrifugal Compressor & Steam Turbines

TM101

Course Overview:

This specialized course is designed for experienced professionals operating in high-energy environments like those at Maaden. It focuses on centrifugal compressors and steam turbines, essential to efficient industrial operations. By addressing practical challenges, safety compliance, and emerging technologies, the course equips participants with both strategic and hands-on capabilities to improve system performance and reliability.

Course Objective:

-Understand the operational principles and types of centrifugal compressors and steam turbines

-Enhance diagnostic, maintenance, and troubleshooting skills

-Apply safety and regulatory practices in high-energy systems

-Implement energy efficiency and performance optimization strategies

-Analyze and solve real-world operational issues through customized case studies

Course Outline:

1. Fundamentals of Centrifugal Compressors
   - -Design and operational principles
   - -Compressor types and applications
   - -Performance characteristics and parameters
2. Steam Turbine Technology
   - -Principles of steam turbine operation
   - -Design features and industrial applications
   - -Integration into complex systems
3. Advanced Maintenance Strategies
   - -Predictive and preventive maintenance
   - -Condition monitoring and asset management
   - -Customized planning for operational reliability
4. Troubleshooting and Failure Analysis
   - -Diagnostic procedures for failures
   - -Advanced repair techniques
   - -Real-case applications
5. Safety and Compliance in High-Energy Environments
   - -Safety protocols for compressors and turbines
   - -Regulatory frameworks and compliance
   - -Risk assessment and mitigation
6. Technological Advances and Innovations
   - -New developments in machinery design
   - -Digital and smart system integration
   - -Trends shaping future operations
7. Performance Optimization and Efficiency
   - -Enhancing system reliability
   - -Energy-saving methodologies
   - -Lifecycle management
8. Customized Case Studies and Workshops

Training Language:

EN

Training Methodology:

The course combines various teaching methods, including instructor-led presentations, group discussions, case study analyses, and assessments through quizzes and a final exam to engage participants and ensure they understand and retain the material.

Venue | Date | Fees

Jubail | 14-12-2025 | 17,250 SAR

-Practical scenarios from Maaden operations

-Interactive problem-solving sessions

-Application of expert insights and best practices

Who Should Attend:

-Experienced Maintenance Engineers

-Mechanical Engineers in High-Energy Systems

-Senior Technicians in Compressor and Turbine Operations

-Subject Matter Experts in Mechanical Maintenance