



Training Program Outlines

Advanced Mechanical Maintenance Management

Why Choose this Training Course?

Our Advanced Mechanical Maintenance Management course offers a deep dive into modern maintenance engineering practices. Tailored for professionals, this program equips participants with advanced strategies and techniques crucial for optimizing maintenance operations and ensuring the long-term reliability of mechanical systems.

Through interactive sessions, case studies, and practical exercises, participants will explore predictive maintenance, reliability-centered maintenance, and strategic asset management principles. Key focuses include robust maintenance planning, advanced failure analysis, and leveraging condition monitoring technologies.

Ideal for maintenance managers, engineers, and technicians, this course empowers individuals to enhance their professional skills, drive positive change, and excel in maintenance management roles.

What are the Goals?

- Advanced maintenance strategies, including predictive maintenance, reliability-centered maintenance (RCM), total productive maintenance (TPM), and asset management principles.
- In-depth analysis of maintenance planning, scheduling, and execution methodologies.
- Advanced failure analysis techniques to mitigate downtime and enhance equipment reliability.



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- Implementation of cutting-edge condition monitoring technologies for proactivemaintenance interventions.
- Strategic approaches to asset lifecycle management and optimization.
- Master advanced maintenance strategies and techniques.
- Develop strategic skills in maintenance planning and scheduling.
- Enhance their ability to analyze failures and implement effective preventive measures.
- Implement advanced condition monitoring technologies for predictive maintenance.
- Understand the strategic importance of asset management and optimization.

Who is this Training Course for?

This training course is suitable for a wide range of professionals but will greatly benefit:

Individuals seeking to enhance their expertise in maintenance management. Professionals responsible for overseeing maintenance operations and strategies. Those looking to advance their careers in maintenance engineering and management.

Organizations committed to optimizing their maintenance practices and improving asset performance.

How will this Training Course be Presented?

In addition to a set of slides and a training manual, a highly interactive instructor presentation of the most important concepts, procedures, and issues will be provided. Furthermore, the course will also use several interactive Workshops and Exercises. In addition, a selected number of highly appropriate Videos will be shown.

ORGANISATIONAL IMPACT:

- Improved equipment reliability and reduced downtime.
- Enhanced maintenance planning and scheduling efficiency.
- Implementation of proactive maintenance strategies for cost savings and productivity gains.
- Optimized asset performance leading to improved overall operational efficiency.
- Alignment of maintenance practices with organizational goals and objectives.

PERSONAL IMPACT:

- Enhanced professional skills and expertise in maintenance management.
- Improved problem-solving and decision-making abilities.
- Increased confidence in implementing advanced maintenance strategies.
- Recognition as a subject matter expert in mechanical maintenance management.
- Career advancement opportunities in maintenance engineering and management roles



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Day 1: Advanced Maintenance Management Principles

- Advanced concepts in maintenance strategy development
- Integration of maintenance with overall business objectives
- Performance metrics and key performance indicators (KPIs) in maintenancemanagement
- Benchmarking and best practices in maintenance management
- Change management in maintenance organizations
- Leadership and communication skills for maintenance managers
- Risk management in maintenance operations
- Regulatory compliance and safety considerations in maintenance
- Continuous improvement methodologies in maintenance management
- Sustainable maintenance practices

Day 2: Advanced Maintenance Planning and Scheduling

- Advanced techniques for maintenance planning and scheduling
- Computerized maintenance management systems (CMMS) optimization
- Work order management and prioritization
- Resource allocation and optimization



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- Shutdown and turnaround planning
- Emergency maintenance planning and response
- Maintenance budgeting and cost control
- Outsourcing and contractor management
- Reliability-centered maintenance (RCM) principles in planning and scheduling
- Maintenance performance measurement and analysis

Day 3: Predictive Maintenance Technologies

- Overview of predictive maintenance (PdM) technologies
- Vibration analysis techniques and applications
- Thermography for predictive maintenance
- Oil analysis and lubrication management
- Ultrasonic testing in predictive maintenance
- Condition monitoring sensors and systems
- Data analytics for predictive maintenance
- Integration of predictive maintenance with asset management systems
- Predictive maintenance software and tools
- Case studies and examples of successful predictive maintenance implementations



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Day 4: Asset Management Strategies

- Asset lifecycle management principles
- Asset inventory and classification
- Risk-based asset management (RBAM) methodologies
- Asset performance monitoring and optimization techniques
- Reliability-centered asset management (RCAM) principles
- Maintenance strategies for critical assets
- Spare parts management and inventory optimization
- Asset disposal and decommissioning strategies
- Asset reliability modeling and simulation
- Asset management standards and certifications

Day 5: Maintenance Optimization Techniques

- Total productive maintenance (TPM) principles and implementation
- Root cause analysis (RCA) methodologies
- Failure mode and effects analysis (FMEA) techniques
- Lean maintenance principles and practices
- Six Sigma methodologies in maintenance optimization
- Continuous improvement techniques in maintenance processes
- Reliability-centered maintenance (RCM) optimization



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- Condition-based maintenance (CBM) strategies
- Data-driven decision-making in maintenance optimization
- Integration of optimization techniques with overall business goals

Course Completion Certificate

On successful completion of the Training Course, the participants will be awarded with a 5MInternational Consultancy & Training Company Certificate.
