MERCURY

Implementing Effective Preventive and Predictive Maintenance Program

Istanbul - Turkey: +90 539 599 12 06
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Implementing Effective Preventive and Predictive Maintenance Program

Introduction:

Effective Planned & Predictive Maintenance is critical for a successful company and an integral part of maintenance management strategies such as RCM, RBM TPM, and even 6-Sigma.
This comprehensive 5-day program has been designed to benefit both qualified new professionals as well as experienced professionals who may be involved in the rollout of a comprehensive.
Maintenance system or auditing an existing system. It covers all the steps required in developing a successful Planning & Predictive Maintenance program from system development until a well-managed Maintenance system is in place and operational.

Targeted Groups:

The training is intended for:-

- Maintenance Personnel.
- Maintenance technicians.
- Maintenance engineers.
- Reliability engineers.
- Maintenance supervisors/managers.
- Operations Personnel.
- Operators who work closely with the equipment.
- Production supervisors/managers.
- Engineering Personnel.
- Reliability engineers.
- Management Personnel.
- Plant managers.
- Maintenance managers.
- Operations managers.
- Support Staff.
- Those involved in data analysis and interpretation.
- Administrative staff responsible for documentation and record-keeping.
- Cross-Functional Teams.

Training Objectives:

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

- Understanding Maintenance Concepts.
- Equipment Knowledge.
- Maintenance Planning and Scheduling.
- Condition Monitoring Techniques.
- Predictive Maintenance Technologies.
- Maintenance Procedures and Best Practices.
- Safety and Compliance.
- Cross-Functional Collaboration.
- Performance Monitoring and Continuous Improvement.

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Targeted Competencies:

- Equipment Knowledge.
- Maintenance Procedures.
- Condition Monitoring Techniques.
- Data Interpretation.
- Analytical Competencies.
- Problem-Solving.
- Data Analysis.
- Risk Assessment.
- Communication and Collaboration.
- Interdepartmental Communication.
- Documentation.
- Safety and Compliance.
- Continuous Improvement.
- Leadership and Management.
- Resource Management.

Course Content:

Unit 1: The Need for Maintenance:

- Failure Mode Effect & Criticality Analysis FMECA:
    - Causes of Failures.
    - Likelihood & Severity of Failure - Risk Analysis.
    - Reliability Centered Maintenance RCM.
- Optimization of Maintenance Decisions:
    - Failure Pattern Identification.
    - Statistical Analysis of Failures.
    - Weibull Analysis.
- Zero Base Budgeting:
    - Define the production requirement.
    - Define the maintenance requirement.

Unit 2: Developing the CMMS:

- Database Construction:
    - Installed Asset Base.
    - Hierarchical Structure.
    - Procedures and Plans.
- Resources:
    - Dedicated Manpower.
    - Contractors.
    - Specialist Tools.
- Maintenance Strategies:
    - Centralized/Decentralized.
    - Life/Emergency/Corrective/Planned.
    - Planned & Predictive.

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Unit 3: The Planning Function:

- Roles & Responsibilities:
  - The Planners.
  - Job Initiators.
  - Maintenance Trades.
- Job Planning:
  - Planning Corrective Work.
  - Integrate Planning with Procedures.
  - Resource Leveling.
- Scheduling:
  - Long Term Scheduling with Production.
  - Medium- & Short-Term Scheduling.
  - Planning Department Interfaces.

Unit 4: Predictive Maintenance:

- Potential Failure Analysis PFA:
  - Integration of PFA with FMECA & RCM.
  - Understanding the P-F Interval.
  - Decide which Technologies to Apply.
- Vibration Analysis:
  - Detectable Faults.
  - Setup Parameters.
  - Monitoring & Protection.
  - On-Line or Off-Line.
- Supporting Technologies:
  - Infrared Thermography.
  - Passive Ultrasonics.
  - Oil Analysis.

Unit 5: Control of the Maintenance Process:

- CMMS Integration:
  - Predictive Maintenance Interface.
  - Optimizing PM Kit Usage with PdM.
  - Operational planning.
- Reporting:
  - Monthly PM & PdM reports for Management.
  - Financial Feedback Reports.
  - Budget Control.
- Key Performance Indicators:
  - Reliability & statistics - MTBF, Reliability, etc.
  - Work request backlog analysis.
  - Customer feedback analysis.