

# Certified Courses



# Implementing Effective Preventive & Predictive Maintenance Programmes

## INTRODUCTION

- Effectively planned Preventive & Predictive Maintenance which is integrated with the workflow 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 Maintenance Engineering training seminar on Implementing Effective Preventive & Predictive Maintenance Programmes 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 & Asset Management process or auditing an existing process. It covers all the steps required in developing a successful Preventive & Predictive Maintenance Program from failure behavior and finding the right preventive maintenance task until a well-managed preventive & predictive maintenance program, fully integrated with the workflow and the CMMS.
- Leading industrial organizations are evolving away from reactive ("fix-it-when-it-breaks") management into preventive and predictive management ("anticipating, planning, and fix-it-before-it-breaks"). This evolution requires well-planned and executed actions on several fronts.

### This training seminar will highlight:

- Preventive & predictive maintenance strategies and their position within Asset Management
- Risk Based Maintenance
- Maintenance & reliability engineering best practices
- Best practices in planning and scheduling (workflow management)
- The application of CMMS
- Monitoring & managing performance with Key Performance Indicators (KPI's)
- Continuous improvement aspects

## OBJECTIVES

At the end of this training seminar, you will learn to:

- Understand how world-class organizations solve common planning problems
- Improve productivity through use of better, more timely information
- Implement a practical and effective predictive maintenance effort
- Improve consistency and reliability of asset information
- Optimize preventive and predictive maintenance strategies

## TRAINING METHODOLOGY

- This Maintenance Engineering training seminar on Implementing Effective Preventive & Predictive Maintenance Programmes will be conducted along interactive workshop principles. There will be a variance of lectures and practical exercises. Experiences from different areas will be discussed. There will be many opportunities for discussion and sharing experiences.

## ORGANISATIONAL IMPACT

- A comprehensive understanding of a developing preventive & predictive maintenance programs
- Integrate Preventive & Predictive Maintenance into the workflow & CMMS
- Optimize the workflow
- Develop an effective system to monitor the performance
- Optimization of the maintenance effort
- Manage full and effective control of the maintenance budget

## PERSONAL IMPACT

By attending this training seminar, the participants will:

- Know and identify which equipment components should be part of your preventive & predictive maintenance plan
- Know how to establish the most appropriate failure finding interval for protective devices - and how to come up with the failure risk of equipment that's subject to condition-based maintenance
- Know the right way to establish the optimal inspection frequency for equipment in continuous operation
- Understand the integration of preventive & predictive maintenance strategies into workflow and CMMS
- Know how to arrive at the economic life of an asset where its utilization declines as it ages
- Add value for themselves
- Be able to plan and develop a future career

## WHO SHOULD ATTEND?

This training seminar is suitable to a wide range of professionals but will greatly benefit:

- Maintenance Managers & Supervisors
- Personnel designated as planners, or identified to become planners
- Predictive Maintenance Technicians & Supervisors
- Key Leaders from each Maintenance craft
- Maintenance & Reliability Engineers
- Materials Management Managers / Supervisors
- CMMS Key Users

## Course Outline

### The Need for Maintenance

- Maintenance & Asset Management as a Business Process
- Risk Based Maintenance (RBM)
- Causes of Failure
- Likelihood & Severity of Failure - Risk Analysis
- Failure Mode Effect & Criticality Analysis (FMECA)
- Choosing the (preventive) Maintenance Tasks
- Optimization of Maintenance Decisions
- Failure Pattern Identification
- Statistical Analysis of Failures
- Weibull Analysis
- Zero Base Budgeting
- Define the Production Requirement
- Define the Maintenance Requirement

### Developing the CMMS

- Database & Structure
- CMMS & Workflow
- CMMS & Maintenance Strategies
- Asset Register
- Configuration Management

### The Planning Function

- The Maintenance Workflow and How It Relates to the Preventive Maintenance Strategy
- Roles & Responsibilities in Work Preparation, Planning and Scheduling
- Principles of Work Preparation & Planning
- Principles of Scheduling
- Network Planning

## Predictive Maintenance

- Potential Failure Analysis (PFA)
- Integration of PFA with FMECA & RBM
- Understanding the P-F Interval
- Decide which Technologies to Apply
- Predictive Maintenance Technologies
- Vibration Analysis
- Visual Inspection
- Infrared Thermography
- Temperature Sensitive Labels
- Megger Tests
- Ultrasonics
- Oil Analysis

## Control of the Maintenance Process

- Implementation Stages of Preventive & Predictive Maintenance Strategies
  - CMMS Integration
  - Reporting – Use of (Key) Performance Indicators
  - Case Study
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