Implementing Effective Preventive and Predictive Maintenance Programmes Training

Description

Introduction

Effective Planned & Predictive Maintenance are 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 programme 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 programme from system development until a well-managed Maintenance system is in place and operational.

Objectives

Leading industrial organizations are evolving away from reactive (“fix-it-when-it-breaks”) management into predictive, productive management (“anticipating, planning, and fix-it-before-it-breaks”). This evolution requires well-planned and executed actions on several fronts.

- 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
- Achieve more productive turnarounds
- Optimize preventive and predictive maintenance strategies

The Contents

Day 1 – The Need for Maintenance

- **Failure Mode Effect & Criticality Analysis (FMECA)**
  - Causes of Failures
  - Likelihood & Severity of Failure – Risk Analysis

    - Reliability Centred Maintenance (RCM)
- **Optimisation of Maintenance Decisions**
    - Failure Pattern Identification
    - Statistical Analysis of Failures
    - Weibull Analysis
- **Zero Base Budgeting**
    - Define the production requirement
    - Define the maintenance requirement

Day 2 – Developing the CMMS

- **Database Construction**
    - Installed Asset Base
    - Hierarchical Structure
    - Procedures and Plans
- **Resources**
    - Dedicated Manpower
    - Contractors
    - Specialist Tools
- **Maintenance Strategies**
    - Centralised/Decentralised
    - Life/Emergency/Corrective/Planned
    - Planned & Predictive

Day 3 – The Planning Function

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

Day 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

Day 5 – Control of the Maintenance Process

- **CMMS Integration**
    - Predictive Maintenance Interface
    - Optimising 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