Preventive & Predictive Maintenance (PPM)

Introduction:

Preventive and predictive maintenance is a maintenance system which very reliable to prevent some sudden troubles or breakdown that may happened on factory's tools and equipment. The sudden troubles are very potential things that caused a big loss in production process. The effects of this problem are some failure to achieve production target, the lack of personnel, unprepared spare parts, etc. Preventive and predictive maintenance application system starts from standard arranging, activity planning, realization supervising, and, as the finish line is, evaluating and analyzing the maintenance's result. Effective planned & predictive maintenance is critical for a successful company and an integral part of maintenance management strategies. This program 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.

Who Should Attend?

Maintenance personnel & supervisors, Foreman and technicians, Mechanical, electrical and operational personnel, Personnel designated as planners, or identified to become planners, Predictive and preventive maintenance, technicians & supervisors, Key leaders from each maintenance craft, Key operations personnel

Course Objectives:

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

- Develop, implement and supervise preventive & predictive maintenance
- Economize the time, money and company's resources
- Prevent the company's equipment and tools from damage and make the machine's living period longer
- Decrease the down time & increase the profit
- 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
- Select the most appropriate planning and predictive tools for effective maintenance
- Integrate predictive maintenance into the planning function
- Introduce critical decision-making topics
- Develop an effective system for controlling maintenance
- Manage full and effective control of the maintenance budget
- Know and identify which equipment components should be part of your preventive maintenance plan

Course Outline:

Introduction to Preventive Maintenance

PM Strategy for the 3 Equipment Life Cycles & 6 Failure Modes

Benefits of PPM

Benefits of PM/PdM

PM Frequency and its Effect on Breakdown

- PM frequency and the P-FF curve
- Common tasks
- Staffing the PM effort
- Strategies to PM and PdM done
- Steps to install
- Survey instructions

Guidelines for Involvement with Predictive Techniques

- Oil analysis
- Vibration analysis
- Temperature measurement
- Ultrasonic inspection
- Advanced visual techniques
- Other methods of predictive maintenance
- Developing a unique action plan

Why Preventive & Predictive Maintenance

- Apprising maintenance performance and effectiveness
- Typical maintenance controls
- Reactive maintenance
- Anticipative maintenance
- Ascertainment of equipment condition
- The need for preventive maintenance
- Why preventive maintenance
- Preventive Predictive maintenance objectives
- Preventive Predictive maintenance prerequisites
- Preventive maintenance feasibility analysis

- Policies
- PM program functions
- Cost impact
- Saving potential

Developing the Preventive Predictive Maintenance Program

- Assignment of organizational responsibilities
- Equipment to be included
- Equipment inventory sheet
- Equipment numbering concepts
- The PM work order
- Developing the inspection sheet
- Sample of equipment components
- Spare parts and material needs
- Inspection sheet examples
- Determining the frequency cycle
- Scheduled frequency overview
- Developing job safety practices
- Considering manual versus computerization
- Predictive maintenance can determine maintenance requirement
- Predictive maintenance and its applied techniques as part of the PM program
- Vibration analysis
- Wear particle analysing

Implementation of Preventive Maintenance Program

- Job planning
- The planning function
- Planning
- Service to do
- Job planning prerequisite

- Planners qualifications
- Duties and responsibilities of planners
- The hob package
- Line supervisors qualifications
- Planning permits Us, to forecast, communicate and measure
- What job should be planned
- Time required to perform work
- Standard defined
- Consistency of estimating
- Estimating methods
- Work backlog
- Scheduling of maintenance work
- Loading of the PM work order
- Load levelling
- Weekly scheduling
- Manpower requirements forecasting
- Forecasting by crew
- Forecasting by department
- Weekly schedule

Controlling the Preventive Predictive Maintenance Process

- Preventive maintenance administration
- Planned maintenance
- Special tools and equipment
- Service user coordination
- Equipment availability
- Service user notification
- Automotive notification
- Control reporting
- Schedule for supervisor

- Schedule for supervisor service user
- Overdue for maintenance and service user
- Missed PM report for maintenance and service user
- Complete PM's
- Summary report of all PM's completed
- Planning and scheduling index
- Assurance of work performed
- Conformance and auditing
- Feedback evaluation/corrective action cycle