Maintenance Planning & Scheduling

Courses Description

Importance of maintenance function is a significant factor in the constant quest for excellence and the balance needed to maintain plant and machinery in excellent condition and minimizing non-productive time is not easy. Failure to achieve this balance results in unnecessary loss of money and manpower. This course is focused on providing a thorough understanding of planning and scheduling of maintenance management.

Special emphasis is provided on modern approaches to maintenance planning such as efficient resource planning, project management, Reliability-Centered Maintenance, organizing and controlling maintenance resources. Measurement of maintenance performance, Turnaround or shutdown planning are also discussed in the course. The topics and principles covered in the course apply to all types of physical assets and equipment, including oil and gas, petrochemical, manufacturing, building equipment and all types of machineries

Courses Objectives

- To explore the components that comprise an effective maintenance program
- To present maintenance as various integrated business processes that support the objectives of an organization in the context of total life cycle facility management
- To acquaint personnel with basic planning techniques that optimize the use of resources
- To understand the techniques of scheduling both routine maintenance activities and major turnarounds
- To introduce a structured method for determining the optimum maintenance program designed around Reliability-Centered Maintenance
- To identify the interrelationships between planning staff and other support groups
- To establish effective performance measures for maintenance
- To understand the use of modern information systems in planning and scheduling

Course Outline

- **Introduction to Maintenance Management**
- **What is Maintenance – Defining A Level of Maintenance**
  - Types of Maintenance Being Performed
  - Total Predictive Maintenance (TPM)
  - The Movement to Reliability and Availability
  - The Maintenance Budget
  - Components of Maintenance
  - Planned vs. Default Method
  - Discover the Process Through which Maintenance Work is Prioritized
  - Maintenance Score Card
  - Advantages of Effective Planning and Scheduling Maintenance

- **Maintenance as a Business Process**
  - Maintenance Processes - Scheduled and Unscheduled
- **Estimating Methods**
  - How Job Estimates are Used in Maintenance
  - Planning and Estimating Methods
  - Construction Planning and Estimating
  - Methods Time Measurement (MTM)
  - MTM and Maintenance Work
  - Things which Affect the Accuracy of an Estimate
- **Maintenance Planning And Scheduling Techniques**
  - Planning
    - Planning Process
    - Planner Responsibilities and Authorities
    - Maintenance Supervisor Duties and Responsibilities
    - Identifying and Allocating Resources, Estimating
    - Developing Effective Job Plans
    - Material Procurement
    - Planning Meetings
    - The Work Order Process
    - The Planner's "Tool Box" – Aids to Improved Planning
    - Manpower Utilisation
    - Equipment and Repair Standards
  - Scheduling
    - Objectives and Benefits
    - Types of Priority System
    - Types Schedules
    - Scheduling Techniques – Critical Path, Charts, Allocation, Dynamic, etc.
    - Scheduling Methods
    - Scheduling with a Plotted Backlog
    - Allocation Scheduling Method
    - Allocation Scheduling and Contractors
    - Routine Scheduling
    - Developing a calendar
    - Building Daily and Weekly Work Schedule
    - Optimizing Resources, Lead Levelling, CIN Scheduling
    - Weekly and Daily Schedules
    - Auditing a Completed Daily Schedule
    - Maintenance Scheduling Procedure
    - Scheduling in Computerized Maintenance Management Systems (CMMS)
    - Priority Numbering Systems
  - Turnaround, Shutdowns and Outages Planning
    - Project Management
    - Turnaround Planning and Scheduling
    - Shutdown Tips
- **Performance Measurement**
  - The Performance Hierarchy
  - Types of Performance Measurement
  - Measuring Maintenance Effectiveness
  - Statistical Measurement of the Maintenance Efforts

- **Determining The Maintenance Program**
  - The Optimum Maintenance Program
    - Maintenance Planning Approaches
    - How to Make Your Representative Maintenance Program more Credible
  - Predictive and Preventive Maintenance – Planner's Tools
    - Predictive Maintenance Defined
    - Mandatory and Discretionary Predictive Maintenance
    - Writing a Predictive Maintenance procedure
    - Principles of Predictive Maintenance
    - Types of Maintenance Tasks
  - Application of RCM
    - The RCM Process
    - Functional Analysis
    - FMEA
    - Task Selection, Implementation.
- **Maintenance Ressources**
  - People and Organization
    - Skills and Training
    - Organizational Considerations for Maintenance
    - Support Infrastructure
  - Materials Supply Chain
    - Materials Planning
    - Supply Chain Management
    - Inventory Control
  - Documentation and Information Systems
    - Operating and Maintenance Documentation
    - Types of Information Needed
    - Computerized Maintenance Management Systems
  - Finance and Budgeting
    - Life Cycle Costing
    - Budgeting
- **Applying New Maintenance Concepts**
  - Quality
    - Quality Standards
    - Application of Quality to Maintenance
  - Challenge Your Paradigms
    - Applying New Knowledge
      - Review of Initial Concepts

- **Critical Path Methods (CPM)**
  - Definition
  - Conventions
  - Logic Network Conventions
  - Precedent logic
  - Finding the Critical Path
  - Earliest Completion Time, Latest Completion Time and Float
  - Practical CPM Applications
  - Why Determine Crash Time?
  - Load Levelling and Project Constraints
  - Computerized CPM Programs
- **Reporting**
  - Maintenance Performance Indices
  - Presenting Maintenance Data
- **Objectives Review**
- **Course Evaluation And Closing.**

Who Should Attend

The course is intended for maintenance planner/ schedulers, supervisors and maintenance engineers who are involved with planning and scheduling of maintenance functions. Superintendents and maintenance managers will also benefit from this course in updating the latest developments. It is also of value to operations and design staff that interact with maintenance.

For any further information please contact us at:

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