



ME164: Effective Maintenance Planning & Scheduling

Training Description:

This Maintenance planning, scheduling and work control are the most important elements in modern maintenance management. Maintenance planning and scheduling are also synonymous with control of maintenance. Further, maintenance planning and scheduling of work orders in addition to the control of such work are considered as the hub of a well-functioning maintenance organization. In order for maintenance planning and scheduling to work many other systems need to work well. Most importantly equipment inspections through preventive maintenance, technical database such as bill of materials, work order history, and standard job plans. Maintenance spare part stores have to function well, see the above illustration picture.

In a world where sustainable cost-effectiveness and productivity is paramount, its focus is on increasing company revenue by enhancing the performance of physical assets. Are you up to the challenge? Maintenance Management and plays a critical part within Physical Asset Management. By understanding the fundamental processes behind this strategy participants will be able to identify the essential responsibilities they need to undertake in order to initiate a Maintenance Planning, Scheduling and Control program. But Maintenance Planning and Scheduling is not effective unless a strong reliability culture exists and reliability principles are understood and applied.

This intensive course is designed to assist maintenance team responsible for delivering maximum reliability and availability of equipment at the lowest possible cost. The course will present techniques designed to improve the effectiveness of maintenance management activities, to ensure that physical assets perform their required functions, operate reliably, and support corporate goals. The sessions will focus on the modern methods and techniques on the most critical aspects of maintenance management such as Organizing maintenance resource, Selecting the right maintenance work, Analyzing failures, Setting and conducting a maintenance plan, Planning spare parts, Estimating and controlling maintenance costs, Computerizing maintenance planning and measurement operations. The participants will also be introduced to Reliability tools and the effect human reliability has on plant availability.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Apply the bottom-line benefits of maintenance planning, scheduling and work control as the core business process
- ✓ Perform the critical steps in the identification of necessary maintenance work
- ✓ Develop a proactive maintenance planning system to reduce costs, downtime and backlogs
- ✓ Achieve streamlined maintenance processes by developing an effective planning program
- ✓ Analyze work requests using a risk-based approach so only necessary work is performed
- ✓ Apply proven performance measurement tools tailored to your maintenance conditions in order to guarantee the successful execution of maintenance work
- ✓ Manage scheduling and coordination as well as develop an accurate and reliable maintenance history through tracing and analyzing maintenance
- ✓ Improve turnaround performance by applying proven best practices
- ✓ Utilize best practice performance management in order to control your Maintenance work process
- ✓ Identify the various support elements as well as employ proper work planning, scheduling and work control

- ✓ Effectively decrease downtime by coordinating and streamlining your Maintenance Planning, Scheduling and Control Process

Training Designed for:

This course is intended for Maintenance Team responsible for delivering maximum reliability and availability of equipment at the lowest possible cost. It is also intended for Plant Maintenance Engineers, Planning Engineers, Maintenance Planners and Maintenance Coordinators.

Training Requirement:

“Hand’s on practical sessions, equipment and software will be applied during the course if required and as per the client’s request.”

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client’s learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

DAY ONE:

- ❖ Pre-Test
- ❖ Introduction
- ❖ Define the Planner/Scheduler Environment
 - Framework for Maintenance Excellence
 - Overall Philosophy
 - World Benchmark/All Industries
 - Maintenance Principles
 - Work Environment
 - Equipment
 - Information Systems
 - Elements for Effective Maintenance Planning and Scheduling
 - Establishing the Environment for Planning and Scheduling
- ❖ Understanding Maintenance Today
 - Types of Maintenance
 - Relationship Between Each Maintenance Type
 - Maintenance Strategy Development
 - Productive Maintenance
 - Benchmark for All Types of Maintenance
 - Discussion: What Type of Maintenance is your Plant Doing?
- ❖ Management
 - Managing Maintenance
 - Basic Principles
 - Maintenance Business Model
 - Business Elements
 - Maintenance Organization
 - Discussion: Do you Have a Maintenance Model? What is your Organization Structure?

❖ Maintenance Objective Setting

- Business Plan
- R&M Policy
- Maintenance Plans
- Discussions: Does your Plant Have an R&M Policy? Are the Yearly Goals Disseminated throughout the Plant?
- Objectives

❖ Equipment Failure Patterns

- Distinguishing Between Repairable and Non-Repairable Equipment
- Types of Equipment Failure
- Review Why Equipment Fails
- Life Cycle & Representative Graph
- Areas of the Bath-Tub Curve
- Actual Equipment Failure Patterns
- Actions to Minimize Failure Effect
- Discussions
- How does most of Your Equipment Fail?

DAY TWO:

❖ Develop an Effective Planning Program

- Apply a Maintenance Assessment Process & a Proactive Maintenance Timeline
- Coordinate the Roles & Responsibilities of Maintenance Supervisors & Planners
- Differentiate Between Reactive, Preventive and Predictive Maintenance
- Explain Work Measurement to the Maintenance Work Team
- Use Performance Metrics, PM Compliance, Schedule Compliance, Backlog, Efficiency & Labor Utilization
- Define the Essentials of Critical Path Planning

❖ Work Selection

- Pareto Analysis
- FMEA
- Mission
- Work Screening Procedure
- Work Request Requirements
- Prioritization Systems
- Cost Benefit Analysis
- Discussion: What Systems are you Using to Identify and Prioritize Work?

❖ Equipment Plans

- Equipment Plans Development
- Plan Options
- Approaches
- Discussion: Do you Have Equipment Plans Prepared? How were they Developed? Have you Applied RCM?

❖ Work Planning

- Planning Objectives
- Planning Effectiveness

- Planning Metrics
- Planners and Staffing
- Routine Maintenance Planning
- Work Plan
- Planning Tools
- Scheduling & Considerations
- Case Studies of Poor Planning

DAY THREE:

❖ **Manage Scheduling & Coordination**

- Define the Term Backlog & Its Relationship to Estimating
- Balance Manpower Demand
- Types of Schedules
- Work Execution Packages
- Maintenance Backlog
- Discussion: How Effective is your Planning? What Metrics are Tracked for Planning and Scheduling? Is Backlog a Concern?

❖ **Effective Scheduling**

- Key Guidelines for Completing the Scheduling Process
- Measuring Performance of the Planning and Scheduling Function
- Measuring the Performance of the Overall Maintenance Operations

❖ **Focus on Effective Scheduling**

- Scheduling Multiple Projects
- Dealing with Estimating Uncertainties (Estimating, Probability and Risk)
- MP&S Impact on Budgeting, Cost and Progress Control
- The Earned Value Analysis Technique

DAY FOUR:

❖ **Focus on Effective Scheduling (cont'd)**

- Linking Performance Measures to Action
- Improving the Quality of MP&S
- Linking Planning and Scheduling to Craft Productivity
- Conclusion and Final Review

❖ **Proven Turnaround Practices**

- Success Factors
- T/A Concern Areas
- Management Practices
- Milestone Plan
- Work Scope
- Projects
- Material Procurement
- Inventory Control
- Reorder Point
- Type of Stock
- Process Operations

- Pre-T/A Reviews
- Discussions: How are you Approaching Turnarounds? Who does the Planning? Self? Contractor? Does Planning Started Early Enough?
- ❖ **Work Execution & Organization Best Practice**
 - Create Effective Job Plans
 - Prepare a Detailed Job Plan
 - Plan Individual Job Activities
 - Objective and Actions
 - Best Practices for Maintenance Efficiency
 - Job Completion
 - Supervisor
 - Contracting Types
 - Advantages and Disadvantages
 - Discussions: How Effective is Work Execution? Are you Using Mixed Crews, Contractors, or own Crafts Men? What Kind of Contracting is most Done by your Plant?

DAY FIVE:

- ❖ **Support Elements**
 - Plant Numbering
 - Documentation
 - Development of Spares Inventory Management
 - Computerised Spares Optimisation Systems
- ❖ **Work Planning, Scheduling & Work Control**
 - Planning and Control
 - Types of Job Cards
 - Operator Logs
 - Equipment Specific Indicators
 - Work Force Utilization Metrics
 - Discussion: What KPI or Indicators is your Plant Tracking?
- ❖ **Continuous Improvement**
 - Objectives and Implementation
 - Data to be Screened
 - Bad Actors and RCFA
 - Discussion: Does your Plant Have a Continuous Improvement Program in Place? How Effective is it? What is Monitored to Identify Improvement Opportunities?
- ❖ **Computerized Maintenance Management Systems (CMMS)**
 - Components
 - Benefits
 - Implementation Plan and Issues
 - Discussion: What System Installed? Are all the Features Used? How Long did it Take to Implement?
- ❖ Course Conclusion
- ❖ POST-ASSESSMENT and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

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