

Maintenance Management: Developing & Enhancing Maintenance Strategies





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#### Introduction:

This program initially looks at all of the core maintenance management disciplines that support effective work planning, scheduling, and work control. The second week builds on the foundation knowledge introduced during the first week by introducing participants to Maintenance Auditing and Benchmarking. These key tools can be used to ensure the core disciplines are maintained, to drive improvement, identify best practices, and assist with the formulation of strategies.

#### Course Objectives:

At the end of this course the participants will be able to:

- Identify planning best practices and key Elements for taking action on them
- Understand how world-class organizations solve common planning problems
- · Evaluate their practices compared to those of others
- Improve the use of their information and communication tools
- Improve productivity through the use of better, more timely information
- Create and preserve lead-time in work management and use it for planning and scheduling resources
- Improve consistency and reliability of asset information
- Achieve more productive turnarounds
- Optimize preventive and predictive maintenance strategies
- Audit their maintenance operations
- Learn how to conduct a benchmarking study
- Use the results to develop an improvement strategy
- Establish Auditing and Benchmarking as a key element of the maintenance strategy

#### Targeted Audience:

 Professionals who are involved in maintenance planning, scheduling, and work control, including planners and users of CMMS. Also, any stakeholders in the Work Planning function would benefit from attending his program.

#### **Course Outlines:**

# Unit 1: Modern Maintenance Management Practice in Perspective:

- Equipment Classification and Identification
- Maintenance Practice in Perspective
- Maintenance in the Business Process
- Evolution in Maintenance Management
- The Contribution of Maintenance to the achievement of the Business Objectives
- Maintenance Strategy Development Process
- The Business Objective
- Business, Operations and Maintenance Key Performance Area
- The Maintenance Objective
- Roles and Accountability



- Equipment Classification and Identification
- CMMS Requirements
- · Functional Location
- Equipment Type Classification
- Equipment Identification
- · Part Number and Bill of Material
- Documentation Structures
- Document Identification and Classification

# Unit 2: Maintenance Policies and Logistics Planning:

- Maintenance Management Policies
- Equipment Criticality Grading
- Job Record Policy
- Job Information Requirements
- Principles of Work Order Design
- Maintenance Work Prioritisation
- · Maintenance Logistics Planning
- Logistic Support Analysis
- · Maintenance Task Detail Planning
- Maintenance Work Estimating
- Maintenance Levels
- Support Documentation
- Support Equipment
- · Personnel and Organisation
- Competency Development

## Unit 3: Failure Management Programme Development:

- Failure Modes, Effects and Consequences
- Equipment Functions and Performance Standards
- Functional Failures
- Failure Modes
- Failure Effects
- Consequences of Failure
- Failure Management Policies
- Age-Related Failure Patterns
- Random Failure Patterns
- Routine Restoration and Discard Tasks
- Routine Condition-based Tasks
- Types of Condition-based Tasks
- · Failure-finding Tasks
- The application of RCM in the Development of Failure Management Policies
- Proposed Routine Maintenance Tasks
- · Categorizing and structuring Routine Maintenance Tasks
- Corrective Maintenance Planning
- · Logistic Requirements Planning
- Implementing Failure Management Policies

#### Unit 4: Work Planning, Scheduling, and Control:

• Definition of Notifications, Defects, Deviations



- Notification Process, Roles and Principles
- Prioritizing Notifications
- Weekly Master Schedule
- Master Schedule Objectives
- · Categorize the Outstanding Workload
- Determine Resource Availability
- Determine Equipment Non-utilisation Profile
- Develop Draft Master Schedule
- Conduct Master Schedule Review Meeting
- Final Master Schedule and Implementation
- Backlog Management
- Project Maintenance Management
- · Critical Path Analysis
- Project Schedule
- Resource Planning
- Maintenance Project Plan
- Schedule Resources and Materials

# Unit 5: Information and Performance Management:

- Management and Information
- Information and Control
- Management Levels and Information
- Performance Indicators
- Performance Indicators
- Workload Performance Indicators
- Planning Performance Indicators
- Effectiveness Performance Indicators
- Cost Performance Indicators
- Management Reports

### Unit 6: Introduction and Foundation Concepts:

- The Maintenance Management Environment and the need for improvement
- An overview of various approaches to maintenance improvement
- Introduction to Maintenance Auditing and Benchmarking
- Using Auditing and Benchmarking to drive improvement
- Implementing sustainable approaches to improvement

#### Unit 7: Maintenance Auditing:

- The Maintenance Auditing Process
- Maintenance Auditing Methodology
- Conducting a Maintenance Audit
- Interpreting Audit Results
- Using Auditing to Drive Improvement

#### Unit 8: Maintenance Auditing and Benchmarking:

- Using the Maintenance Audit for internal benchmarking
- Designing a customized Maintenance Audit Process



- The Maintenance Benchmarking Process
- Maintenance Benchmarking Methodology
- Designing and Preparing for a Benchmarking Study

## Unit 9: Maintenance Benchmarking and Performance Measurement:

- Conducting a Maintenance Benchmarking Study
- Integrating Benchmarking resulting in improvement and objective setting processes
- Reporting results of Benchmarking and Auditing Studies
- Developing Key Performance Measures for Maintenance
- The Maintenance Balanced Scorecard

## Unit 10: Integrating Maintenance Auditing and Benchmarking:

- Integrating Maintenance Auditing and Benchmarking into the Performance Measurement System
- Using Auditing and Benchmarking to establish improvement objectives and strategies
- Monitoring Performance Improvement