

## A LDI Training Course

# Maintenance Management

Total Productive Maintenance and Reliability Centered Maintenance

## *LDI Instructor*

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### Course Outline

#### **Introduction of Modern Maintenance Management as a part of World Class Maintenance**

- What is Modern Maintenance Management
- What is World Class Maintenance
- Various concepts of World Class Maintenance

#### **World Class Maintenance Organization**

- Directives (VISION, MISSION, Corporate Planning: Short-Long Term Planning)
- Maintenance Classification and Implementation
- Equipment Maintenance Sub-systems Relation
- Correlation Between Maintenance Functional Elements in Plant Maintenance
- Enterprise Asset Management System
- World Class Maintenance Organization Recommendation

#### **Maintenance Strategies**

- Policies
- Organization / Human Resources
- Employee Empowerment
- Maintenance Tactics
- Reliability Analysis
- Performance Measure / Benchmarking
- Information Technology
- Planning and Scheduling
- Material Management
- Maintenance Process Reengineering

#### **Maintenance Values**

#### **Maintenance Management Information System**

- Importance of Computerized Maintenance Management System (CMMS)
- Enterprise Asset Management System, an advance development of CMMS
- Activity in EAMS:
- Functional Location and Equipment Tree/Hierarchy
- Work Flow and Work Order Management Flow Diagram
- BM, PM, PdM, PaM
- Maintenance Management Business Process Flow Diagram
- Inventory Management, Purchasing and Supply Chains Philosophy

- Document and Catalog Management
- DCS and Condition Monitoring Integration
- Labor
- Report Writer
- Integrated Enterprise Asset Management System (IEAMS)
- Flow Diagram of EAMS
- Where & When in using IAMS

### **Maintenance Planning & Scheduling**

- What is Maintenance Planning
- What is Maintenance Scheduling
- Maintenance & Scheduling Flow Process
- The Criteria for Planner and Scheduler
- Planning & Scheduling of Shutdown and Turn Around Activities

### **Proactive Maintenance**

- **Introduction of Proactive Maintenance (PaM)**
  - What is Proactive Maintenance
  - Comparison of various maintenance methods: BM, PdM, PM, RACi
- **Predictive Maintenance (Condition Based Maintenance) as a part of Proactive Maintenance**
  - Definition & principles of Condition Based Maintenance
  - The role of Condition Based Maintenance in the Maintenance System
  - Condition Based Maintenance: Methods & techniques
    - Dynamic Monitoring and Analysis/Vibration Analysis /Balancing / Alignment
    - Particle & Chemical Monitoring and Analysis/Oil & Contamination Analysis
    - Physical Effects Monitoring and Analysis
    - Temperature and Electrical Effects Monitoring and Analysis/Thermography
  - The benefits of Condition Based Maintenance
- **Preventive Maintenance as a part of Proactive Maintenance**
  - Definition & Principles of Preventive Maintenance
  - The role of Preventive Maintenance in the maintenance system
  - Preventive Maintenance: Methods & Techniques
  - The benefits of Preventive Maintenance
- **Root Cause Analysis and Failure Modes and Effects Analysis**
  - Importance of FMEA
  - Principles of FMEA
  - How and where we use FMEA

### **Total Productive Maintenance**

- **Introduction of Total Productive Maintenance (TPM)**
  - What is TPM
  - Pillars of TPM & Twelve Stages in Building TPM
  - Benefits of TPM
  - Overall Equipment Effectiveness
  - Organizational Learning; Culture Change / Autonomous Maintenance; Learning Organization
  - Health Safety and Environment in Modern Maintenance Management
- **Reliability Centered Maintenance (RCM)**
  - Definition & Principles of RCM
  - RCM Standard SAE JA1011

- The role of RCM in the Maintenance System
- Reliability Centered Maintenance Process Analysis and Techniques: Function, Functional Failure, Failure Modes, Effect and Consequences of Failure, Proactive and Default Actions
- The Benefits of RCM
- Continuous Improvement / Reliability Improvement
- Concept of Zero Breakdown

### Who Should Attend

- Maintenance engineers, supervisors and Managers
- Production Engineers and Operation Supervisors
- Service engineers and supervisors
- Financial Managers and Supervisors
- Operation engineers and supervisors
- Mechanical engineers and supervisors
- Plant/Industrial Engineers and supervisors
- Manufacturing/Production managers

NOTE: CONDUCTED IN BAHASA INDONESIA

**To enroll or get more information, please contact**

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