Quality Maintenance

Introduction:

Organizations invest huge sums of money in systems and processes to implement RCM or TPM, often with little understanding of what are the underlying philosophies of these programs. Each individual philosophy is more suited to specific industries, have different organizational requirements and obviously more or less implementation effort depending on the type and maturity of the organization. This course gives delegates a clear understanding of the similarities and differences between these two widely recognized and respected approaches to maintenance.

Who Should Attend?

Delegates are the people in the organization who are involved in, or dependent on, the development of an effective maintenance program and the people that take overall responsibility for the integrity of the physical assets. Delegates include:

- Maintenance and reliability engineers
- Maintenance supervisors,

- Maintenance craftsmen,
- Technicians
- Inspectors
- Operations supervisors,
- Maintenance support assistants,

Course Objectives:

Participants gain a clear understanding of their role in defining and implementing cost effective maintenance policies and continuous improvement actions through an organizational development process based on either the TPM or RCM philosophy.

PROGRAMME OUTLINE:

The Changing World of Maintenance and Reliability Expectations

- Reliability and availability
- Safety, health and environment
- Output and service rate
- Quality
- Cost effectiveness

The Reality and Nature of Failure to Modern Equipment

- The effect of failures on reliability, maintainability, availability and utilization
- Age related failure causes
- Random failure causes

Select Target Systems for Maintenance Program Optimization

- Define facility mission
- Functional locations
- Criticality grading
- Performance gap analysis
- Short list of systems to review and boundary determination

Define System Functions and Performance Requirements

- Inherent function
- Secondary functions
- Inherent capability / desired performance

Failure Modes, Effects and Risk Analysis

- Consolidation of failure modes
- Local failure effects
- System effects
- Physical risks
- Economic risks
- Quantities and qualitative risk assessment

Maintenance Program Optimized Decision Making

- The optimized decision making algorithm
- Technical decision making criteria
- Cost effectiveness and risk based decision making criteria
- Condition Based, Preventive, Function testing, interval determination
- Maintenance Program Optimized Decision Making

Implementing RCM

- The role of the facilitator and facilitator skills

- Selection and composition of RCM review teams
- RCM Training
- Setting up the RCM program and schedule
- Conducting the RCM review meetings
- Capturing the results
- Implementing the decisions
- The organizational impact and how to overcome obstacles
- RCM in perpetuity

Introduction to TPM

- Equipment Reliability & Maintainability
- Equipment Availability
- Machine / equipment failure and Life Cycle
- The Six Big Losses
- Overall Equipment Effectiveness (OEE) Factors Affecting Reliability
- Optimal Equipment Conditions
- Calculating OEE
- Using OEE to Improve Performance

History and Evolution of Total Productive Maintenance

Productive Maintenance and Continuous Improvement

Equipment Effectiveness and OEE Equipment Defects and Losses

- Sporadic vs. Chronic Losses
- Eliminating Chronic Losses
- Impact of Minor Losses

Problem Solving Techniques

Autonomous Maintenance

- Equipment Cleaning
- Equipment Inspection Techniques
- Equipment Lubrication
- TPM Performance Standards

Predictive Maintenance Overview

TPM Implementation Strategies

Implementation Levels

- New Approaches
- The TPM Process
- Defining New Roles
- Training
- Implementation Plans
- Key Success Factors
- Obstacles to Success

Summary: RCM – TPM Selection Criteria, Implementation Implications