Best Technology Soultions **(BTS)**

Training Program

Effective Planned Preventive & Predictive Maintenance

Introduction:

Effective planned & predictive maintenance are critical for a successful company and an integral part of maintenance management strategies such as RCM, RBM TPM, and even 6-Sigma. This course has been designed to benefit both qualified new professionals as well as experienced professionals who may be involved in the rollout of a comprehensive maintenance system or auditing an existing system. It covers all the steps required in developing a successful planning & predictive maintenance course from system development until a well-managed maintenance system is in place and operational.

Who Should Attend?

Reliability Engineers, Maintenance Managers, Engineers & Planners, Reliability and Maintenance Engineers, Facilities and Utilities Managers, Design Engineers, Top Level Maintenance Technicians, OE Champions, Predictive and Preventive Maintenance, Technicians & Supervisors, Planners, Maintenance Supervisors, Crafts and Tradesmen, Operations Supervisors, Process Engineers, Inspectors and Inspection Supervisors, Equipment Engineers Team Leaders and Professionals in Maintenance, Engineering and Production, Maintenance managers, reliability and maintenance

Engineers, Production Managers, Plant Engineers, Design Engineers, Reliability Engineers and Technicians, Operators, Safety Engineers, Risk Engineers, Safety Engineers and anyone who is involved in Reliability Engineering strategies or methodologies to include design engineers for capital projects engineers, Foreman and Technicians, Mechanical, Electrical and Operational Personnel, Personnel designated as Planners, Key leaders from each maintenance craft, Key operations personnel, Technical professionals responsible for maintenance and repair of equipment, Professionals involved in inspection and maintenance and repair, professionals involved in asset & maintenance management auditing, Quality & Compliance Managers, Lead Auditors & Audit Team Members, Process Controllers, Maintenance Supervisors, Maintenance Planners, Predictive Maintenance Technicians & Supervisors, Materials Management Managers and Supervisors, Service Company Representatives, Asset owners & Asset Managers

Course Objectives:

By the end of this course delegates will be able to:

- Improve consistency and reliability of asset information
- Achieve more productive turnarounds
- Understand how world-class organizations solve common planning problems
- Improve productivity through use of better, more timely information
- Implement a practical and effective predictive maintenance effort
- Optimize preventive and predictive maintenance strategies

Course Outline:

The Need for Maintenance

- Failure Mode Effect & Criticality Analysis (FMECA)
- Causes of Failures
- Likelihood & Severity of Failure, Risk Analysis
- Reliability Centered Maintenance (RCM)
- Optimization of Maintenance Decisions

- Failure Pattern Identification
- Statistical Analysis of Failures
- Weibull Analysis
- Zero Base Budgeting
- Define the production requirement
- Define the maintenance requirement

Developing the CMMS

- Database Construction
- Installed Asset Base
- Hierarchical Structure
- Procedures and Plans
- Resources
- Dedicated Manpower
- Contractors
- Specialist Tools
- Maintenance Strategies
- Centralized/Decentralized
- Life/Emergency/Corrective/Planned
- Planned & Predictive

The Planning Function

- Roles & Responsibilities
- The Planners
- Job Initiators
- Maintenance Trades
- Job Planning
- Planning Corrective Work
- Integrate Planning with Procedures
- Resource Levelling

- Scheduling
- Long Term Scheduling with Production
- Medium & Short Term Scheduling
- Planning Department Interfaces

Predictive Maintenance

- Potential Failure Analysis (PFA)
- Integration of PFA with FMECA & RCM
- Understanding the P-F Interval
- Decide which Technologies to Apply
- Vibration Analysis
- Detectable Faults
- Setup Parameters
- Monitoring & Protection
- On-Line or Off-Line
- Supporting Technologies
- Infrared Thermography
- Passive Ultrasonics
- Oil Analysis

Control of the Maintenance Process

- CMMS Integration
- Predictive Maintenance Interface
- Optimizing PM Kit Usage with PdM
- Operational planning
- Reporting
- Monthly PM & PdM reports for Management
- Financial Feedback Reports
- Budget Control
- Key Performance Indicators

- Reliability & statistics, MTBF, Reliability etc.
- Work request backlog analysis
- Customer feedback analysis