Modern Maintenance Technologies Overview

Introduction:

This course provides all the delegates great opportunities to optimize the performance of their systems and equipment to achieve maximum return on investment (ROI). By reducing costs and downtime, while achieving high levels of safety and quality. This course provides an overview of a number of modern maintenance technologies associated with equipment, systems, people and management. It describes both the background to each technology, and its practical application to achieve the best bottom-line results. This course introduces participants to the skills and knowledge areas of essential maintenance technologies and methodologies of today, such as:

- Root Cause Analysis (RCA)
- Understanding audits, maintenance assessments and benchmarking as a means to improve your maintenance management process
- Asset Management: beyond maintenance management
- Cost and benefit thinking
- Understanding risk and an introduction to a Risk Based Maintenance approach
- Decision support tools to make maintenance more effective

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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:

- Apply the appropriate Modern Maintenance Technologies
- Achieve the best results in practicing these technologies
- Develop an action plan to utilize these technologies in their own areas of responsibility, fitting them into the overall maintenance strategy, and measuring benefits

Course Outline:

Introduction & Overview: Challenging the Traditional Approaches to Maintenance

- Introduction to program
- Introduction delegates
- Asset Management
- The business impact of maintenance
- Cost and benefit thinking: spending the right amount of maintenance
- Applying basic optimization tools to support cost/benefit decisions
- Introduction to risk

Risk Based Maintenance (RBM)

- Deterioration: the way assets could fail
- Representation of risk
- Not all failures are risky and must be prevented, applying risk to failures
- The seven steps of Risk Based Maintenance (RBM), The Methodology
- Failure Mode Effect & Criticality Analysis (FMECA)
- Failure behavior
- Choosing the right maintenance task

Root Cause Analysis (RCA)

- Multiple realities
- Interactive and exercise about subjective views
- Effective problem solving
- Preventing problems by finding the root causes of these problems
- Defining the problem as a starting point
- Cause and effect relations
- RCA methodologies

Process Audits, Maintenance Assessments & Benchmarking

- Where are we now, introduction to process audits, benchmarking & assessments

- Process audit, basic theory

- Interactive exercise, auditing in practice

- Maintenance assessment, basic theory

- Benchmarking, basic theory

Performance Management & Decision Support Tools

- Defining performance

- Applying specific performance indicators and process parameters to measure the performance of assets, activities and processes

- Performance management: the behavior of people

- ABC-model of influencing the behavior of people to gain better results

- Applying sophisticated decision support tools to optimize maintenance performance