



Risk Reliability Management

Course Description:

Why Choose this Training Course?

This course aims to equip delegates with skills to commission, appraise, review and apply risk-based approach so that organizations can improve the reliability of the assets, reduce maintenance costs and achieve higher levels of safety and environmental integrity over the life cycle of their systems.

Risk management has become the central function of a utility professional and organisations are being held to a higher standard by their shareholders to improve return on investment, by their customers to produce better quality, and by society to improve safety and environmental integrity. Traditional maintenance tactics are unlikely to meet the demands that are placed on the modern organisation and for this reason progressive organisation are changing to a risk-based approach.

This course will feature:

- How the objective of maintenance over the last twenty years has steadily shifted from a 'prevention' approach to 'risk-based' approach
- Why the evolution to larger and more complex systems capable of higher capacities leads to greater losses and requires a change in maintenance tactics
- How lean processes with less in-process storage and lower product inventories create a bigger demand for reliability
- How organisations are being held to a higher standard by society with regard to safety and environmental responsibility
- How organisations can overcome the above challenges by applying what they will learn in this course

What are the Goals?

By the end of this course, participants will be able to:

- Choose systems for reliability and risk improvement
- Identify functions and appropriate performance standards
- Anticipate the failed states, failure modes and damage mechanisms of a system
- Apply maintenance tactics to reduce risk and improve reliability
- Apply a team-based approach to implement risk and reliability improvement

Who is this Training Course for?

This course is suitable to a wide range of professionals but will greatly benefit:

- Reliability Engineers
- Maintenance Engineers
- Maintenance Supervisors
- Maintenance Planners
- Reliability Inspectors
- Team Leaders/Managers who are responsible for physical asset reliability and integrity

How will this Training Course be Presented?

This course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. The course will be presented using direct input, discussion and lot of individual and group hands-on practice using real life case studies that will enable the delegates to practice the techniques and processes that they are learning, ensuring maximum knowledge and skill transfer.

Daily Agenda

Day One: Operational Context and Functional Analysis

- Plant/equipment decomposition
- Criticality grading
- Identify primary, secondary functions
- Determine performance standards and quantify
- Practical: Perform functional analysis

Day Two: Failure Analysis

- Failure modes
- The concept of 'reasonably likely'
- Deterioration and damage mechanisms
- Physical damage mechanism
- Practical: Perform Failure Analysis

Day Three: Failure Effects, Consequences, Probability and Risk

- Operational and financial risks
- Safety, health and environmental consequences
- Hidden failure consequences
- Practical: Perform Risk Analysis
- The six failure probability density curves

Day Four: Risk-based Maintenance Tactics

- Tactic decision diagram
- Types of preventive maintenance tactics and how to select appropriate intervals
- Types of condition-based maintenance tactics how to determine the PF interval
- Function testing and failure finding and how to determine the interval
- Practical: Select and define appropriate maintenance tactics

Day Five: Implement Risk-based Reliability Management

- The role of the facilitator



- Selecting and setting up the review projects
- Auditing the decision making
- Implementing the results
- Post course assessment