



# Reliability Centered Maintenance

## INTRODUCTION

The objective of maintenance over the last twenty years has steadily shifted from a 'prevention' approach to 'risk' based approach. Maintenance strategies must evolve to support the technological requirements of modern equipment and the challenges of a competitive and legislated environment. Packed with vital reliability insights and reliability improvement techniques, this 3-day training course in 'Reliability Centered Maintenance and Risk Management' is for people who want to lift the efficiency, productivity and output of their operating assets with successful reliability engineering methods. Applying RCM in accordance with SAE JA1011 is still the only credible method for developing failure management strategies and tactics

This course is the ideal introduction to the practical aspects of using reliability engineering concepts in the workplace. It takes the understanding and techniques of reliability engineering and teaches you how to apply them to get better production plant performance. You do not need to be a university trained engineer to attend. The course contents and depth of coverage is focused on using the fundamental reliability concepts and correct principles, along with applying the successful workplace practices of reliability engineering in your business.

The real focus of the course is on the useful techniques of reliability engineering used every day to improve operating and production performance through lower maintenance costs, less downtime, fewer equipment failures and higher production output. Learn how to deliver equipment reliability improvement using every-day reliability engineering to enrich your operating and maintenance processes. The training provides you with valuable and insightful knowledge, along with practical case studies and hands-on data analysis activities you learn from. After a basic introduction to reliability engineering and equipment operational risk you see how reliability engineering is practically applied and used to achieve equipment reliability growth and optimise your maintenance management strategy.

## TRAINING OBJECTIVES

This course provides delegates with the following:

- ✓ Introduce reliability growth principles on new, existing or old equipment,
- ✓ Appreciate how to use failure data and industry failure databases and standards,
- ✓ The meaning of Due Process, Due Diligence and Standard of Care in the context of physical asset management
- ✓ How to select systems for reliability and risk improvement
- ✓ Selecting team members for a Reliability and Risk Analysis Project
- ✓ Identifying functions and appropriate performance standards
- ✓ Defining the failed states of a systems and identify likely failure modes and mechanisms
- ✓ How to analyse the effects of failure modes and grade the consequence of failure in terms of type, severity and probability for risk assessment
- ✓ Associating a failure mode with a failure pattern and probability Bath-tub Curve
- ✓ Monitoring and reviewing the effectiveness of failure management policies
- ✓ The role of root cause analysis in failure management processes
- ✓ The types of routing maintenance and which type is effective under certain conditions
- ✓ How to use the decision diagram to select the most appropriate failure management policy
- ✓ Recording the analysis and decision making process
- ✓ Preparing the results of the analysis for audit review
- ✓ Specifying routine maintenance tasks and setting standards for scheduling and execution
- ✓ Assigning routine tasks to appropriate roles including operations
- ✓ How to implements decisions in the CMMS
- ✓ Monitoring and reviewing the effectiveness of failure management policies
- ✓ The role of root cause analysis in failure management processes

(Training Objectives Continued)

- ✓ Recognising and solving the root causes of your equipment failures.
- ✓ Knowing when to use reliability engineering to get the most benefit for your operation.
- ✓ Realising where reliability engineering can deliver simple and low-cost reliability improvements to you.

## WHO SHOULD ATTEND?

Delegates should include the team members that would participate in the development of a reliability programme or failure management programme (maintenance policies/tactics/strategy) for the physical assets of the organisation.

**Delegates would include:**

- ✓ Maintenance and reliability engineers and engineers in training
- ✓ Engineers involved in extensions, upgrades, procurement of new equipment
- ✓ OEM design, engineers, field support Technicians
- ✓ Maintenance supervisors
- ✓ Master craftsmen/artisans
- ✓ Technicians
- ✓ Inspectors
- ✓ Operations supervisors
- ✓ Maintenance planners
- ✓ SHERQ staff responsible for safe handling of machinery and equipment

**Course Duration:** 3 Days

**SAAMA Accredited:** 3 CPD Points

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