

# ADVANCED RELIABILITY CENTERED MAINTENANCE (REF:OTSRCM001)

## Course Objectives

To gain a detailed understanding of RCM.

## Course Description

Reliability Centred Maintenance is a methodology used to determine the right maintenance tasks to ensure that any physical asset on system containing its uses want it to do, in its present operating context. This course goes through the theory and principles of RCM.

## Who Should Attend

This course is aimed at Maintenance Engineers/Technicians.

## Pre-Requisites

All Attendees should have a sound power generation background.

## Course Outcome

Upon successful completion of the course the candidate will be familiar with:

- The RCM Guide
- RCM Objectives
- RCM Principles and Analysis
- Implement an RCM System
- Advanced Reliability Centred Maintenance Outline

## Day 1

- The RCM Guide
- Definitions
- Objectives
- Focus more on Functional Importance
- Looking at Failure and Repair history
- RCM "Principles" – Part 1
- Business Orientated & Function Orientated
- System Focused
- Investigates how equipment fails
- Defining the best maintenance strategy
- RCM acknowledges designed limitations
- RCM as an ongoing task

## Day 2

- RCM "Objectives"
- How to determine optimum maintenance program
- Optimise maintenance efforts
- How to focus on the most important functions of the system
- Evaluating Risks with RCM Program

*How to strive for the required reliability and maintainability*

- At the lowest cost
- Without sacrificing safety
- Without sacrificing the environment

RCM Principles

*Maintenance - Business Orientated*

- Operations efficiency
- Quality
- Cost
- Safety
- Environment



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## Day 3

Function Orientated

*How RCM investigates how equipment fails*

Failures  
Failures Mode  
Failure Cause  
Failure effect  
Failure Patterns

"RCM Tools"

Selection & Prioritising tool (Pareto Analysis)  
Failure analysis tool (FMECA)  
Reliability modelling tools (Reliability Block Diagram, Fault Tree)  
Decision Tool (Decision Tree Analysis)

## Day 4

"RCM Analysis"

Study Preparation  
System Selection & Definition  
System Function Definition  
Functional Failures Definition  
Failure Mode Analysis  
Failure Consequences Assessment  
Selection of Maintenance Actions  
Data Collection & Documentation  
CMMS & RCM Integration

## Day 5

"RCM Implementation"

Define the scope of objectives of the project

*Establish Review Groups*

Facilitator  
Project manager  
Operations Personnel  
Maintenance personnel

Training the review group  
Schedule for training group  
Plan correctly meetings  
Plan senior management audits  
How to implement the selected task  
How to document the tasks and procedures  
Benefits From Installing RCM  
Cost savings improve  
Rationalisation of certain tasks  
Improved safety... How?  
Improved environmental integrity  
Precise & Comprehensive maintenance database  
Improved teamwork.... How?  
Greater motivation of individuals

## Course Review and Feedback

