RELIABILITY CENTRED MAINTENANCE (RCM)

WHAT YOU WILL LEARN:

- Understand the history of RCM, i.e. classical, RCM 2 and streamlined RCM
- Paradigm changes in industry due to the implementation of RCM
- Benefits of RCM to your organisation
- Planning the RCM process
- RCM working groups
- Integration of maintenance management with overall business objectives
- Building the RCM principles into new designs
- Development of a maintenance strategy blueprint
- Key Performance Indicators (KPIs) for RCM

WHO SHOULD ATTEND:

This workshop is intended for all maintenance managers, reliability engineers and technicians directly involved in maintaining and preserving the function of assets. Since the RCM process makes use of cross – functional groups as well as the fact that a lasting maintenance program can only be developed by maintainers and users of the assets, it is also recommended that operation/production personnel attend this workshop to ensure an effective RCM program. These should comprise:

- Consulting engineers
- Key leaders from each maintenance craft
- Maintenance managers/supervisors
- Operation specialists
- Planners
- Plant managers
- Reliability engineers/technicians

IDC TECHNOLOGIES

Technology Training that Works

The Workshop

The primary objective of the maintenance function is no longer only to focus on optimising plant availability at minimum cost. In modern day, maintenance affects all aspects of business effectiveness and risk, i.e. safety, environmental integrity, energy efficiency, product quality, customer service, plant availability and cost. Further to this maintenance is about preserving the functions of assets, as well as avoiding, reducing or eliminating the consequence of failure.

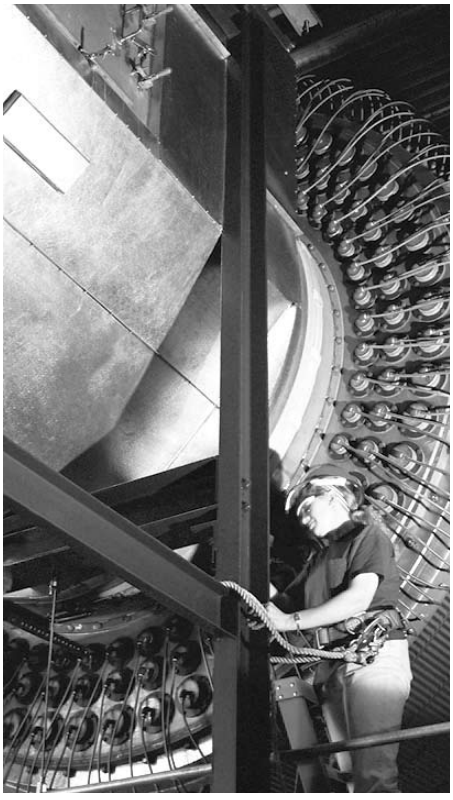
Reliability Centred Maintenance (RCM) is a systematic and structured process used to decide what must be done to ensure that any physical asset, system or process continues to do whatever its users want it to do. It is taking into consideration the primary performance parameters of the asset, possible failure mode and consequence and lastly a suitable failure management policy.

This workshop is designed to familiarise you with the principles and the process of implementing a RCM program. It will help you to apply the rules of RCM through cross-functional review groups in order to produce robust and cost effective asset management programs, by applying the four maintenance strategies, i.e. corrective, preventive, predictive and pro-active.

Pre-requisites

All the principles of RCM will be covered, including the type of strategies, as well as the tools that are used to facilitate the process. A basic knowledge of maintenance management as well as the practical operations and maintenance of assets would be an advantage. This practical experience will enable the workshop to be placed in context.

No special knowledge or skills are required – only a technical background so that there is a better understanding of issues related to RCM and the application thereof.



The Program

DAY ONE

RELIABILITY CENTRED MAINTENANCE (RCM) – AN OVERVIEW

- Evolution of maintenance
- History of RCM
- Classical RCM
- RCM2
- Streamlined RCM

WHY RCM FOR MY ORGANISATION

- Why RCM is different
- The new paradigms in maintaining assets
- What you should expect from RCM
- Who should do RCM

PROJECT INITIATION

- Planning and preparation
- Setting up review groups
- Selecting facilitators
- Selecting the systems for RCM analysis

GATHERING AND BREAKDOWN OF THE BASIC INFORMATION

- Defining functions and performance standards
- Defining failure – functional failure
- Establish root cause of failures – failure modes
- Identify what happens if failure occurs – failure effect
- What is the consequence of failure (cost, throughput, quality, safety, environment and customer)
- FMECA

SELECTING MAINTENANCE TASKS THROUGH PRO–ACTIVE MAINTENANCE (PDM, PM)

- Scheduled restoration tasks
- Scheduled discard tasks
- Scheduled on-condition tasks

DAY TWO

TYPES OF PREDICTIVE TECHNIQUES AVAILABLE

- "The Human"
- Vibration monitoring and analysis
- Thermography
- Oil analysis – rotating and transformers
- Ultrasonic
- Magnetic flux
- Dye penetrant
- Radiography
- MPI
- Eddy current

IF NO PROACTIVE TASK IS AVAILABLE?

- When and how to do failure-finding (including RCA's)
- When to redesign
- When to run to failure

IMPLEMENTATION

- Auditing the analysis
- Developing the maintenance program
- Continuous improvement
- KPI's to measure success

PRACTICAL EXERCISE

- Breakdown of plant into systems
- Completing a FMECA
- Selecting the appropriate tasks for different scenarios
- Developing the maintenance program – blue print

SUMMARY, OPEN FORUM AND CLOSING

Practical Sessions

This is a practical, hands on workshop enabling you to work through practical exercises which reinforce the concepts discussed.

To gain full value from this workshop, please bring your laptop/notebook computer.