

# Rotating Equipment Optimisation with Continuous Reliability Improvement (CRI)

Oil & Gas Engineering  
Kigali (Rwanda)  
17 - 21 Feb 2025

UK Training

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## **Rotating Equipment Optimisation with Continuous Reliability Improvement (CRI)**

**Ref:** 3271\_137762 **Date:** 17 - 21 Feb 2025 **Location:** Kigali (Rwanda) **Fees:** 3300 **Euro**

### **Introduction:**

Benchmarking studies on various oil refineries around the world have shown that rotating equipment accounts for more than 20% of all maintenance and inspection costs. Also, rotating equipment is often at key nodes of the process and is frequently critical to production. Therefore failure would lead to unacceptable downtime costs.

This program aims to provide delegates with a comprehensive understanding of how to use a combined predictive and preventive maintenance approach coupled with proper failure monitoring to achieve maximum reliability and performance from rotating equipment

### **Course Objectives Rotating Equipment Optimisation with Continuous Reliability Improvement CRI**

- Apply the proven methodologies and templates which are introduced
- Focus on key areas of reliability
- Understand the nature of failure and how this affects the performance of rotating equipment
- Make the right maintenance choices for strategic equipment
- Reduce the impact of plant downtime
- Unlock the true potential of all of their people

### **Course Outline of Rotating Equipment Optimisation with Continuous Reliability Improvement CRI**

#### **Day 1**

#### **Understanding the link between Reliability and competitive advantage**

- Definition of Reliability
- Probability of failure
- Reliability metrics
- Strategic Importance of Reliability
- Assessing current performance
- Making the right strategic choices

A graphic of a chessboard with several chess pieces (a king, a pawn, and a knight) on it, set against a background of concentric circles. The text 'UK Training PARTNER' is overlaid on the right side of the board.

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## Day 2

### Using reliability modeling to establish inherent reliability

- Basic modeling building blocks
- Deterministic models
- Probabilistic models
- Markov chains
- Monte Carlo models
- Case study examples

## Day 3

### Understanding the nature of failures in order to make the best response

- Origins of failure
- Failure types
- Six common patterns
- Analysing failure patterns
- Weibull analysis
- Maintenance tasks

## Day 4

### Optimising your failure management to ensure that maintenance is cost-effective

- Risk assessment & criticality
- Equipment functions
- Functional failures
- Failure modes and effects analysis
- Failure consequences
- Maintenance task selection
- Producing a practical maintenance plan

## Day 5

### Setting up a continuous reliability improvement process in order to improve performance

- Assessing the improvement potential versus the costs
- Obtaining senior management support
- Establishing the project framework
- Technical aspects
- Human considerations
- Likely results

A graphic of a chessboard with several chess pieces (a king, a queen, a rook, and a pawn) on it, set against a background of concentric circles. The text 'UK Training PARTNER' is overlaid on the right side of the chessboard.

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