

# GULF INSTITUTE



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# Modern Maintenance Technologies

## INTRODUCTION

- Modern Maintenance Technologies provides great opportunities to optimize the performance of your systems and equipment to achieve maximum Return On Investment (ROI). By reducing costs and downtime, while achieving high levels of safety and quality you will be able to get the best out of your assets. This Modern Maintenance Technologies training seminar introduces participants to the skills and knowledge areas of essential maintenance technologies and methodologies of today, associated with equipment, systems, people and management. It demonstrates both the background to each technology, and its practical application to achieve the best bottom-line results.

This training seminar will highlight:

- Asset Management: A Business-like Approach of Maintenance
- International Standards on Asset Management (PAS 55 & ISO 55000)
- Cost / Benefit Thinking
- Understanding Risk and an Introduction to a Risk Based Maintenance Approach
- Decision Support Tools to make maintenance more effective
- Root Cause Analysis (RCA)
- Understanding Audits, Maintenance Assessments and Benchmarking as a means to improve your asset & maintenance management process

## OBJECTIVES

At the end of this training seminar, participants will learn to:

- Apply modern maintenance technologies & methodologies in the appropriate way
- Understand how each of these technologies contribute to maintenance efficiency
- Explain how these technologies interact with and support each other
- Achieve the best results in practicing these technologies
- Develop an action plan to utilize these technologies in their own areas of responsibility, fitting them into the overall maintenance strategy and to measure the benefits

## TRAINING METHODOLOGY

- This Modern Maintenance Technologies training seminar will be conducted along interactive workshop principles. There will be a variance of lectures and practical exercises. Experiences from different areas will be discussed and there will be many opportunities for discussion and sharing experiences.

## ORGANISATIONAL IMPACT

- The organisation will understand modern maintenance technologies and methodologies
- Learn fast how other companies are using modern methodologies to improve their maintenance performance
- Gain insight in common pitfalls and key success factors
- Know how to implement improvement actions successfully
- The seminar provides the organisation with instruments to improve maintenance management in both short as well as long term

## PERSONAL IMPACT

- Gain understanding and practical insight of asset management and modern technologies and methodologies
- Improve level of personal knowledge
- Work more effectively by applying a risk based approach
- Add value for themselves
- Be able to plan and develop a future career

## WHO SHOULD ATTEND?

This training seminar is suitable to a wide range of professionals involved in the area of maintenance contracts, but will greatly benefit:

- All professionals involved in Maintenance, Engineering and Production
- Anyone who wishes to update themselves on Modern Maintenance Technologies, judge the suitability of these technologies for their needs, and learn how to implement them for the benefit of their organizations

## Course Outline

### Introduction & Overview – Challenging the Traditional Approaches to Maintenance

- Asset Management: A Business-like Approach of Maintenance
- Cost / Benefit Thinking: Spending the Right Amount of Maintenance
- Applying Basic Optimization Tools to Support Cost / Benefit Decisions
- Introduction to Risk

## Risk Based Maintenance (RBM)

- Deterioration: The Way Assets Could Fail
- Representation of Risk
- The Seven Steps of Risk Based Maintenance (RBM) – The Methodology
- Failure Behaviour
- Choosing the Right Maintenance Task

## Root Cause Analysis (RCA)

- Multiple Realities
- Subjective Views
- Effective Problem Solving
- Cause and Effect Relations
- RCA Methodologies – Examples and Application

## Process Audits, Maintenance Assessments & Benchmarking

- Where are we now? – Introduction to Process Audits, Benchmarking & Assessments
- Process Audit – basic theory
- Auditing in Practice
- Maintenance Assessment – basic theory
- Execution of a Maintenance Assessment of the Work Planning & Control Process
- Benchmarking – basic theory
- Benchmark Studies
- How to Interpret Benchmark Results

## Performance Management & Decision Support Tools

- Defining Performance
- Applying Specific Performance Indicators and Process Parameters to Measure the Performance of Assets, Activities and Processes
- Performance Management: Influencing the Behaviour of People to Gain Better Results
- Applying Sophisticated Decision Support Tools to Optimize Maintenance Performance

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