MERCURY

Maintenance, Reliability & Asset Management Technology Best Practices

4 – 8 January 2027
London (UK)



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Ref: 9259_289460 **Date:** 4 – 8 January 2027 **Location:** London (UK) **Fees:** 5900 Euro

Introduction:

Maintenance, Reliability, and Asset Management Best Practices are critical for every successful individual and company. The maintenance professional's job is to optimize the maintenance effort using a structured and systematic approach.

This maintenance, reliability, and asset management best practices course covers all the fundamentals of Maintenance, Reliability, and Asset Management that a suitably qualified professional would be expected to carry out during his duty, starting with the first steps and building up in a staircase fashion to a fully functional maintenance organization.

Individuals exposed to this maintenance, reliability, and asset management best practices training will develop new insights into international best practices. They will learn why the best companies in the world see Maintenance management as the key to delivering the right quality product at the lowest costs.

Technical knowledge is critical to effective control and peer respect within any maintenance organization; when this is achieved, personal satisfaction follows. This maintenance, reliability, and asset management best practices course will give the delegate the required technical knowledge and skills to achieve personal satisfaction.

Upon completing this maintenance, reliability, and asset management best practices course, the delegate will be able to critically analyze the methodologies employed within the organization and instigate improvements where required.

Maintenance, Reliability, and Asset Management Best Practices:

This comprehensive maintenance, reliability, and asset management best practices training delves into maintenance management best practices and emphasizes the importance of implementing effective strategies to optimize asset performance and longevity.

Participants in this maintenance, reliability, and asset management best practices program will gain insights into maintenance technology advancements and learn how to integrate these innovations into their operations.

Key components of the course include defining asset maintenance management and exploring its role in maximizing operational efficiency. Participants will acquire skills to develop and implement robust maintenance reliability programs, enhance equipment reliability, and minimize downtime.

Additionally, the maintenance, reliability, and asset management best practices course addresses the critical aspects of reliability maintenance engineering, equipping participants with tools to manage assets and mitigate risks proactively.

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Targeted Groups:

- Maintenance Supervisors and Superintendents.
- Reliability Engineers.
- Operational Professionals are interested in maintenance reliability and asset management.
- Safety and Integrity Professionals.
- Other professionals are involved in process improvement.

Course Objectives:

At the end of this maintenance, reliability, and asset management best practices course, the participants will be able to:

- Understand the Maintenance optimization best practice techniques.
- Understand a range of equipment failures and their implications for the operational organization.
- Design a maintenance plan for the upkeep and maintenance inspections of static and rotating plants.
- Learn a practical approach to developing an action plan to utilize these technologies in their areas of responsibility, fitting them into the overall maintenance strategy, and measuring benefits.
- Integrate Reliability-centered Maintenance RCM, Total Productive Maintenance TPM, and Condition-based Maintenance CBM.

Targeted Competencies:

At the end of this maintenance, reliability, and asset management best practices course, the participant's competencies will be able to improve:

- Understand the fundamentals of maintenance, reliability, and asset management.
- Overview of reliability modeling and failure modes for rotating and stationary machinery.
- Learn from major failures.
- Condition-based maintenance technologies.
- Select appropriate maintenance strategies in asset management.

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Course Content:

Unit 1: Failure of Machines and Inspection-Based Failure Analysis - Causes of Machinery Failure in Rotating Equipment:

- Cavitation in Pumps.
- Tripping of Turbines.
- Surging in Compressors.
- Wear Mechanisms: Fatigue, Fretting, and Corrosion.
- Fundamental Machine Problems: Balance Problems, Alignment Problems, Machinery Mounting Problems.
- Fundamentals of Maintenance and Asset Management.

Unit 2: Failure Analysis and Reliability:

- Elementary Statistics and Standards.
- Reliability Models.
- Learning from Major Failures Case Studies in Process Industries.
- Learning from Major Failures Case Studies in Oil and Gas Industries.
- Root Cause Analysis and Extractions of Specific and Generic Lessons.
- Reflection on Why Systems Fail.

Unit 3: Statistical Failure Analysis and Reliability:

- Further Reliability Definitions and Standards.
- Examples of the Planning Process.
- Hazard Function and Bathtub Curve.
- Weibull Analysis.
- Rotating Equipment.
- Major Failures in Other Industries.

Unit 4: Condition Based Maintenance:

- General Purpose CBM.
- The P-F Curve.
- Principles of Vibration Monitoring.
- Thermal Monitoring.
- Acoustic Emission.
- Lubricant Monitoring.

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Unit 5: Decision Analysis in Asset Management:

- Main Criticism of Existing Management of Computerised Maintenance Systems.
- The Asset Management Framework.
- The Decision-Making Grid Approaches.
- Selection of Appropriate Maintenance Strategies.
- Integration of RCM, TPM, and CBM Approaches.

Conclusion:

By the end of this maintenance, reliability, and asset management best practices training, participants will thoroughly understand maintenance and reliability principles, enabling them to drive improvements within their organizations.

This maintenance, reliability, and asset management best practices course is ideal for professionals seeking maintenance and reliability certification or enhancing their expertise in asset management and maintenance practices.