

Quality Assurance in Maintenance and Engineering





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REF: A2118 DATE: 7 - 18 July 2024 Venue: Sharm El-Sheikh (Egypt) - Sheraton Sharm Hotel, Resort, Fee: 3520 Euro

#### Introduction:

This training program provides participants with a holistic understanding of quality management principles and practices in maintenance and engineering contexts. It empowers them to enhance operational efficiency, reliability, and quality standards within their maintenance and engineering functions.

## **Program Objectives:**

### At the end of this program, participants will be able to:

- Apply quality assurance principles effectively in maintenance and engineering contexts to ensure operational efficiency and reliability.
- Navigate regulatory requirements and standards relevant to quality assurance in maintenance and engineering.
- Identify key stakeholders and their roles in quality assurance processes, fostering collaborative efforts towards quality improvement.
- Utilize various quality assurance tools and methodologies to assess and enhance maintenance and engineering processes.
- Demonstrate a comprehensive understanding of quality assurance concepts and their practical applications in optimizing maintenance and engineering operations.

# **Targeted Audience:**

- · Quality control staff.
- · Maintenance engineers.
- · Quality manager.
- · Safety manager.
- · Auditors.

# **Program Outlines:**

#### Unit 1:

Fundamentals of Quality Assurance in Maintenance and Engineering:



- Introduction to quality assurance principles and their application in maintenance and engineering.
- Understanding the importance of quality assurance in ensuring operational efficiency and reliability.
- Overview of regulatory requirements and standards relevant to maintenance and engineering quality assurance.
- Identifying key stakeholders and their roles in quality assurance processes.
- Introduction to quality assurance tools and methodologies used in maintenance and engineering.

### Unit 2:

#### Maintenance and Engineering Process Optimization:

- Analyzing maintenance and engineering processes to identify areas for improvement.
- Implementing continuous improvement strategies to enhance process efficiency and effectiveness.
- Utilizing Lean and Six Sigma principles in maintenance and engineering operations.
- Incorporating predictive maintenance techniques to minimize downtime and optimize asset performance.
- Monitoring and measuring key performance indicators KPIs to track process optimization efforts.

#### Unit 3:

#### Quality Control Techniques in Maintenance and Engineering:

- Understanding the principles of quality control and their application in maintenance and engineering.
- Implementing statistical process control SPC methods to monitor and maintain process quality.
- Conducting root cause analysis to identify and address quality issues in maintenance and engineering activities.
- Establishing inspection and testing procedures to ensure product and service quality.
- Developing corrective and preventive action plans to address non-conformances and prevent recurrence.

#### Unit 4:

#### Risk Management in Maintenance and Engineering:

- Identifying potential risks and hazards associated with maintenance and engineering operations.
- Assessing risk severity and likelihood to prioritize risk mitigation efforts.
- Developing risk management strategies to minimize the impact of potential failures on operations.



- Implementing preventive maintenance programs to mitigate equipment failure risks.
- Establishing contingency plans and emergency response protocols to address unexpected events.

#### Unit 5:

### Quality Assurance Audits and Compliance:

- Planning and conducting quality assurance audits in maintenance and engineering.
- Evaluating compliance with regulatory requirements, industry standards, and organizational policies.
- Documenting audit findings and communicating recommendations for improvement.
- Implementing corrective actions and monitoring their effectiveness.
- Continuously improving quality assurance processes based on audit results and feedback.