

RELIABILITY-BASED SPARE PARTS & MATERIALS MANAGEMENT

“Optimizing Spare Parts Availability, Cost, and Reliability for Asset-Intensive Operations”

Schedule

Date	Venue	Mode	Fees
23 - 26 Mar 2026	Online	Online	USD 1200 per delegate
21 - 24 Apr 2026	Dubai, UAE	Face-to-Face	USD 2995 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Spare parts and materials play a critical role in maintaining asset reliability, operational continuity, and maintenance effectiveness. Poorly managed spare parts inventories often result in excessive capital tied up in stock, frequent stock-outs, equipment downtime, and increased maintenance costs.

This intensive 4-day training focuses on applying reliability-based principles to spare parts and materials management. Participants will learn how to align inventory decisions with asset criticality, failure behavior, and maintenance strategies to achieve optimal availability at the lowest total cost. The course combines reliability engineering concepts with practical inventory and materials management techniques used in asset-intensive industries.

Objectives

By the end of this course, participants will be able to:

- Understand the relationship between asset reliability and spare parts management
- Apply reliability-based approaches to spare parts classification and stocking
- Identify critical spares using asset criticality and risk analysis
- Optimize inventory levels while minimizing total lifecycle cost
- Improve spare parts planning for maintenance and shutdowns
- Reduce downtime caused by spare parts unavailability
- Integrate reliability, maintenance, and materials management processes

Why Attend

- Reduce spare parts inventory cost without increasing risk
- Improve equipment availability and maintenance effectiveness
- Learn best practices for critical spare parts management
- Apply reliability engineering principles to inventory decisions
- Improve coordination between maintenance, engineering, and supply chain
- Gain practical tools applicable to asset-intensive environments

Target Audience

This program is designed for:

- Spare parts and materials management professionals
- Maintenance planners and reliability engineers
- Inventory and warehouse managers
- Supply chain and logistics professionals
- Asset and operations managers
- Engineers and supervisors in asset-intensive industries

Individual Benefits

Key competencies that will be developed include:

- Strong understanding of reliability-based spare parts planning
- Ability to classify and prioritize spare parts effectively
- Improved inventory optimization and cost-control skills
- Enhanced coordination with maintenance and reliability teams
- Better decision-making based on risk and asset criticality
- Professional development in materials and asset management

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Reduced inventory holding and emergency procurement costs
- Improved spare parts availability for critical assets
- Reduced equipment downtime and maintenance delays
- Better alignment between maintenance and supply chain strategies
- Improved asset reliability and operational performance
- Stronger governance and control of spare parts inventory

Instructional Methodology

The course follows a blended learning approach combining theory with hands-on practice:

- Strategy Briefings – Reliability-based inventory management frameworks
- Case Studies – Real-world spare parts and materials management scenarios
- Workshops – Criticality analysis, spare parts classification, and stocking exercises
- Data Analysis – Inventory performance and reliability data interpretation
- Peer Exchange – Group discussions and experience sharing
- Tools – Spare parts criticality matrices, inventory models, and templates

MAWA EVENTS

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Course Outline

Detailed 4-Day Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules Coffee Breaks: 09:30 & 11:15 Lunch Break: 01:00 – 02:00

Day 1: Fundamentals of Reliability-Based Spare Parts Management

Module 1: Introduction to Reliability & Spare Parts Management (07:30 – 09:30)

- Role of spare parts in asset reliability
- Maintenance strategies and spare parts demand
- Common spare parts management challenges

Module 2: Asset Criticality and Risk Concepts

- Asset criticality analysis
- Failure consequences and risk-based thinking
- Linking asset risk to spare parts decisions

Module 3: Spare Parts Classification Techniques

- ABC, VED, and criticality-based classification
- Workshop: Classifying spare parts

Day 2: Spare Parts Planning and Inventory Optimization

Module 1: Failure Modes and Spare Parts Demand

- Failure behavior and spare parts consumption
- Mean time between failures (MTBF) concepts

Module 2: Inventory Models and Stocking Policies

- Min-max, reorder point, and safety stock
- Lead time and demand variability

Module 3: Inventory Optimization Workshop

- Setting stocking levels for critical spares
- Balancing availability and cost

Day 3: Materials Management & Supply Chain Integration

Module 1: Procurement and Supplier Management for Spares

- Sourcing strategies for critical parts
- Vendor reliability and lead time management

Module 2: Warehouse and Storage Best Practices

- Spare parts storage requirements
- Preservation, obsolescence, and shelf-life control

Module 3: Shutdown, Turnaround & Emergency Spares Planning

- Planning spares for shutdowns and outages
- Managing emergency and insurance spares

Day 4: Performance Measurement & Continuous Improvement

Module 1: Spare Parts KPIs and Performance Measurement

- Inventory turnover and service level KPIs
- Stock-out and obsolescence metrics

Module 2: Reliability-Based Continuous Improvement

- Improving spare parts strategies over time
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Lessons learned and data-driven improvements

Module 3: Integration, Best Practices & Course Review

- Integrating reliability, maintenance, and supply chain
- Action planning and key takeaways

Certification

Participants will receive a Certificate of Completion in Reliability-Based Spare Parts & Materials Management, validating their competence in applying reliability-centered principles to optimize spare parts availability, cost control, and asset performance.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

<p>In-House / Customized Training</p> <p>Interested in running this course for your team?</p> <p>Please contact us:</p>	<p>TEL:</p> <p>+601116373203</p>	<p>EMAIL:</p> <p>info@mawaevents.net</p>
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