MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

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ADVANCED MATERIALS PRESERVATION

""Extending Asset Life and Performance through Proactive Materials Protection Strategies""

Schedule

Date	Venue	Fees (Face-to-Face)
06 – 08 Jan 2026	Kuala Lumpur, Malaysia	USD 2495 per delegate
05 – 07 May 2026	Doha, Qatar	USD 2495 per delegate

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

Introduction

Materials degradation is one of the costliest and safety-critical issues faced in industries such as oil & gas, power, petrochemicals, and manufacturing. Corrosion, contamination, and environmental exposure can lead to equipment failure, production downtime, and health and safety risks.

This intensive three-day training course focuses on advanced materials preservation techniques for extending the service life of industrial assets. Participants will gain in-depth knowledge of protective coatings, cathodic protection, inspection strategies, and preservation practices during commissioning, shutdown, and storage periods.

Objectives

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

- Understand common mechanisms of material degradation and failure.
- Select and apply appropriate preservation methods for different materials and environments.
- Evaluate protective coating systems and cathodic protection techniques.
- Implement preservation strategies during lay-up, storage, or shutdown.
- Integrate inspection, monitoring, and documentation practices into preservation programs.
- Ensure compliance with industry standards and reduce lifecycle maintenance costs.

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Why Attend

- Improve the longevity and reliability of critical equipment and structures.
- Minimize costs and risks associated with corrosion and deterioration.
- Apply the latest industry best practices and international preservation standards.
- Reduce rework, delays, and failures during commissioning and startup.
- Ensure asset readiness during planned or extended shutdowns.

Target Audience

This program is designed for:

- Maintenance engineers and planners
- Mechanical and materials engineers
- Integrity, reliability, and asset management professionals
- QA/QC inspectors and corrosion specialists
- Operations personnel responsible for asset preservation

Individual Benefits

Key competencies that will be developed include:

- Corrosion control and preservation techniques
- Coating system evaluation and specification
- Preservation planning and execution during shutdown
- Inspection and verification of materials condition
- Risk-based decision-making in asset protection

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Reduced material failure and asset degradation
- Fewer preservation-related delays during project handover or commissioning
- Better protection of spare parts, piping, and rotating equipment in storage
- Improved compliance with asset integrity and safety standards
- Enhanced lifecycle performance of critical materials and components

Instructional Methodology

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

- Technical Briefings – Mechanisms, standards, and application principles
- Case Studies – Failures due to poor preservation and lessons learned
- Templates – Preservation checklists, inspection forms, and coating logs
- Workshops – Surface prep, protective system selection, preservation planning
- Group Exercises – Risk-based preservation strategy design
- Instructor Feedback – Real-world applications and guidance

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Course Outline

Detailed 3-Day Course Outline

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

Day 1: Fundamentals of Material Degradation and Preservation Needs

- **Module 1: Understanding Material Deterioration (07:30 – 09:30)**
- Common degradation mechanisms: corrosion, oxidation, contamination
- Effects of temperature, humidity, and chemical exposure
- Vulnerable asset categories: piping, tanks, rotating equipment
- **Module 2: Introduction to Preservation Planning (09:45 – 11:15)**
- Preservation lifecycle and timing: pre-commissioning, storage, shutdown
- Asset criticality and preservation risk assessment
- Key international standards: NACE, ISO, ASTM
- **Module 3: Preservation Program Components (11:30 – 01:00)**
- Documentation, tagging, and inspection routines
- Responsibilities and interfaces across departments
- Material-specific needs and preservation windows
- **Module 4: Workshop – Preservation Audit Planning (02:00 – 03:30)**
- Participants plan a basic audit for shutdown-phase equipment

Day 2: Coating Systems, Cathodic Protection & Storage Strategy

- **Module 5: Protective Coating Systems (07:30 – 09:30)**
- Paint types, surface prep, and coating selection
- Dry film thickness (DFT) checks and holiday testing
- Common coating failures and prevention
- **Module 6: Cathodic Protection and Passive Systems (09:45 – 11:15)**
- Galvanic and impressed current systems
- CP for underground piping, tanks, and marine assets
- Monitoring and testing effectiveness
- **Module 7: Preservation for Storage and Shutdown (11:30 – 01:00)**
- Temporary preservation vs. long-term lay-up
- Inserting, sealing, oil misting, and desiccants
- Rotating equipment and turbine preservation techniques
- **Module 8: Simulation – Developing a Storage Preservation Plan (02:00 – 03:30)**
- Group designs a preservation plan for multiple asset types in storage

Day 3: Monitoring, Documentation & Continuous Improvement

- **Module 9: Inspection and Verification Methods (07:30 – 09:30)**
- Visual inspection, NDT methods, corrosion coupons
- Documenting compliance with preservation specs
- Checklists and record-keeping for handover and audits
- **Module 10: Failure Analysis and Lessons Learned (09:45 – 11:15)**
- Root cause analysis of preservation failures
- Identifying gaps in process, training, or planning
- Learning from cross-industry case studies
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Module 11: Optimizing and Sustaining Preservation Programs (11:30 – 01:00)

- Building a preservation culture in operations and maintenance
- Roles of contractors, OEMs, and suppliers in preservation
- Continual improvement using KPIs and audit results
- **Module 12: Final Workshop – Preservation Strategy Review (02:00 – 03:30)**
- Teams review and present their facility-wide preservation strategy

Certification

Participants who complete the program will receive a **Certificate of Completion in Advanced Materials Preservation**, recognizing their ability to develop and implement effective preservation strategies for industrial assets and infrastructure.

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.

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

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