MAWA EVENTS

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

Phone: +601116373203 | **Email:** info@mawaevents.net

FIREPROOFING AND INSULATION MAINTENANCE

"Enhancing Asset Integrity Through Effective Thermal Protection and Passive Fire Protection Systems"

Schedule

Date	Venue	Fees (Face-to-Face)
04 – 08 May 2026	Istanbul, Turkey	USD 3495 per delegate

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

Introduction

Fireproofing and thermal insulation systems are critical components of asset protection in high-risk industrial environments. Poor maintenance can lead to accelerated corrosion under insulation (CUI), compromised fire resistance, and catastrophic asset failures in the event of a fire or thermal excursion.

This course is designed to help maintenance, reliability, and inspection professionals understand how to assess, maintain, and improve the performance of passive fire protection and insulation systems. It covers both cementitious and intumescent fireproofing, thermal and cryogenic insulation, inspection techniques, and repair strategies in line with international standards.

Objectives

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

- Understand the principles of fireproofing and insulation systems used in industrial plants
- Identify common degradation mechanisms such as CUI, delamination, and weathering
- Inspect and evaluate the condition of fireproofing and insulation layers
- Apply maintenance, repair, and recoating techniques in compliance with international codes
- Plan preventive strategies to extend system life and reduce safety risks

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Why Attend

- Learn how to detect and prevent failures in fireproofing and insulation systems
- Gain practical skills in inspection, thickness testing, and repair
- Enhance safety and compliance through better system management
- Reduce costly shutdowns caused by insulation failure or fireproofing degradation
- Strengthen coordination with contractors and coating/insulation teams

Target Audience

This program is designed for:

- Maintenance and Reliability Engineers
- Corrosion and Asset Integrity Engineers
- Inspection and QA/QC Personnel
- Fire Protection and Safety Officers
- Project Engineers involved in plant modifications and shutdowns

Individual Benefits

Key competencies that will be developed include:

- Inspection and damage assessment of fireproofing and insulation
- Understanding material selection and application methods
- Knowledge of CUI mitigation and prevention
- Compliance with API, ISO, and ASTM fireproofing standards
- Execution of repair and preventive maintenance plans

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved system performance and extended service life
- Enhanced fire safety and thermal efficiency across assets
- Better planning of maintenance cycles and shutdown scopes
- Reduced CUI-related failures and unplanned downtime
- Stronger regulatory and insurance compliance

Instructional Methodology

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

- Strategy Briefings – Technical background, codes, and system design
- Case Studies – Industrial failure cases and lessons learned
- Workshops – Insulation and fireproofing inspections and assessments
- Peer Exchange – Sharing operational challenges and field solutions
- Tools – Thickness gauges, inspection forms, and failure mapping sheets

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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: Fireproofing and Insulation System Overview

- Module 1: Introduction to Passive Fire Protection (07:30 – 09:30) • Cementitious vs intumescent fireproofing • Fire resistance ratings and design
- Module 2: Insulation Systems and Types (09:45 – 11:15) • Thermal, cryogenic, and acoustic insulation materials
- Module 3: Design Criteria and Application Zones (11:30 – 01:00) • Process piping, vessels, supports, and fire zones
- Module 4: Workshop – Asset Survey for Fireproofing Needs (02:00 – 03:30) • Identify critical protection zones in a sample plant layout

Day 2: Degradation Mechanisms and Risk Factors

- Module 5: Common Failures in Fireproofing and Insulation (07:30 – 09:30) • CUI, water ingress, cracking, and disbondment
- Module 6: Corrosion Under Insulation (CUI) in Detail (09:45 – 11:15) • Causes, detection, and mitigation strategies
- Module 7: Fireproofing Delamination and Loss (11:30 – 01:00) • Environmental and mechanical stress factors
- Module 8: Workshop – Failure Mode Mapping (02:00 – 03:30) • Match failure types to root causes and prevention actions

Day 3: Inspection and Monitoring Techniques

- Module 9: Visual and Instrument-Based Inspection (07:30 – 09:30) • Coating adhesion, thickness testing, visual grading
- Module 10: CUI and Moisture Detection (09:45 – 11:15) • Thermal imaging, moisture meters, UT and IR scanning
- Module 11: API and ISO Inspection Guidelines (11:30 – 01:00) • API 583, ISO 12944, ASTM standards for inspection
- Module 12: Workshop – Field Inspection Simulation (02:00 – 03:30) • Assess sample coating and insulation panels

Day 4: Repair and Maintenance Planning

- Module 13: Removal and Recoating Techniques (07:30 – 09:30) • Cleaning, patching, recoating with fireproofing systems
- Module 14: Insulation Replacement and Upgrades (09:45 – 11:15) • Material compatibility and installation best practices
- Module 15: Fireproofing Reapplication Best Practices (11:30 – 01:00) • Surface prep, mesh reinforcement, cure control
- Module 16: Workshop – Draft a Repair Scope (02:00 – 03:30) • Write a repair plan with inspection and QA steps

Day 5: Fire Safety and Preventive Management

- Module 17: Preventive Maintenance and Life Extension (07:30 – 09:30) • Planning inspection cycles and condition-based maintenance
- Module 18: Fireproofing Strategy in Hazardous Facilities (09:45 – 11:15) • High-risk areas, fire scenarios, emergency planning
- Module 19: Case Study – Fire Incident Linked to System Failure (11:30 – 01:00) • Analyze the incident and identify key preventive actions
- Module 20: Final Workshop – Fireproofing & Insulation Master Plan (02:00 – 03:30) • Create a site-wide maintenance and improvement roadmap

Certification

Participants will receive a Certificate of Completion in Fireproofing and Insulation Maintenance, validating their ability to inspect, maintain, and enhance passive fire protection and thermal insulation systems in accordance with industry standards and safety best practices.

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Why Choose MAWA Events

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