

PROTECTIVE COATINGS AND LININGS: ADVANCED TECHNIQUES

“Enhance Asset Life with Advanced Protective Coating and Lining Systems for Harsh Industrial Environments.”

Schedule

| Venue (InHouse) | Fees |
|-------------------------------|-----------------------|
| At Your Organization Premises | Ask For The Quotation |

► **Available delivery methods:** In-House Training

Introduction

This advanced-level course delivers in-depth expertise in protective coatings and linings used to combat corrosion, chemical exposure, and mechanical damage in critical infrastructure and industrial assets. Participants will learn how to assess surface conditions, select appropriate coating systems, apply advanced technologies, and ensure quality control through proper inspection and testing. Emphasis is placed on performance-driven coating strategies tailored to oil & gas, marine, chemical, and offshore industries.

Objectives

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

- Understand the chemistry and technology behind protective coatings and linings
- Evaluate substrates, environmental conditions, and surface preparation techniques
- Select and specify appropriate coating systems based on application
- Apply QA/QC practices including inspection and failure analysis
- Implement advanced application techniques and safety measures
- Troubleshoot coating failures and recommend corrective actions

Why Attend

Protective coatings are essential to structural durability, corrosion resistance, and operational efficiency. This course equips professionals with practical application techniques, industry standards, and problem-solving skills to reduce costly failures and extend asset life.

Target Audience

- Coating and Painting Inspectors
- Maintenance and Reliability Engineers
- Corrosion and Asset Integrity Specialists
- QA/QC and Materials Engineers
- Plant Managers and Technical Supervisors

Individual Benefits

- Gain expertise in surface prep, coating application, and inspection
- Enhance your credentials in advanced corrosion protection methods
- Improve your ability to detect and prevent coating failures
- Strengthen your decision-making on material compatibility and performance

Organizational Benefits

- Improve coating system longevity and reduce rework costs
- Minimize downtime due to coating failures or corrosion damage
- Ensure compliance with ISO, SSPC, NACE, and other coating standards
- Strengthen asset integrity through best-practice coating programs

Instructional Methodology

- Industry-specific case studies and simulation exercises
- Hands-on training in inspection tools and techniques
- Interactive lectures with visuals of real-world coating failures
- Group workshops and technical documentation reviews
- Final exam and certification wrap-up

Course Outline

DETAILED 5-DAY COURSE OUTLINE (CUSTOMIZABLE)

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 Coatings and Linings

- Module 1: Overview of Protective Coating Technologies (07:30 – 09:30)
- Module 2: Coating Chemistry – Epoxies, Polyurethanes, Zinc-Rich, etc. (09:45 – 11:15)
- Module 3: Environmental Influences and Coating Selection Criteria (11:30 – 01:00)
- Module 4: Case Study: Coating Failures in Oil & Gas Facilities (02:00 – 03:30)

Day 2: Surface Preparation and Application Methods

- Module 1: Surface Condition Assessment – ISO and SSPC Standards (07:30 – 09:30)
- Module 2: Abrasive Blasting, Water Jetting, and Chemical Cleaning (09:45 – 11:15)
- Module 3: Coating Application Methods – Airless Spray, Brush, Roller (11:30 – 01:00)
- Module 4: Workshop: Creating a Surface Prep and Coating Procedure (02:00 – 03:30)

Day 3: Advanced Coating Systems and Linings

- Module 1: Internal Linings for Tanks, Pipelines, and Vessels (07:30 – 09:30)
- Module 2: Thermal Spray, Ceramic Linings, and Glass Flake Coatings (09:45 – 11:15)
- Module 3: Coatings for High-Temperature and Subsea Applications (11:30 – 01:00)
- Module 4: Application Challenges in Complex Geometries (02:00 – 03:30)

Day 4: Inspection, Testing, and Quality Assurance

- Module 1: Dry Film Thickness, Adhesion, and Holiday Testing (07:30 – 09:30)
- Module 2: Inspection Documentation and Compliance Standards (09:45 – 11:15)
- Module 3: Troubleshooting Application Defects – Blistering, Cracking, etc. (11:30 – 01:00)
- Module 4: Group Exercise: QA/QC Plan for Coating System Deployment (02:00 – 03:30)

Day 5: Failure Analysis, Safety, and Project Execution

- Module 1: Coating Failure Mechanisms and Root Cause Analysis (07:30 – 09:30)
- Module 2: Safety in Surface Preparation and Application Activities (09:45 – 11:15)
- Module 3: Coating Project Planning and Execution – Best Practices (11:30 – 01:00)
- Module 4: Final Exam, Certification Wrap-Up, and Action Planning (02:00 – 03:30)

Certification

Upon successful completion of the course and final assessment, participants will receive a Certificate of Completion – Advanced Techniques in Protective Coatings and Linings. This certification is aligned with international industry standards and contributes to professional development in corrosion control and asset integrity.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
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In-House / Customized Training

Interested in running this course for your team?

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