

STRUCTURAL COATINGS FOR THE OIL & GAS INDUSTRY - MATERIALS DESIGN & SELECTION, APPLICATION & TESTING (INCLUDES CP DESIGN, PFPS)

“Enhancing Oil & Gas Infrastructure Protection through Advanced Coatings and Cathodic Protection”

Schedule

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

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

Introduction

This comprehensive course focuses on the role of structural coatings in protecting vital oil and gas infrastructure from corrosion, fire, and harsh environments. Covering materials selection, design, application, testing, and inspection, it also includes specialized modules on Cathodic Protection (CP) design and Passive Fire Protection Systems (PFPS). Delegates will gain practical and theoretical knowledge to ensure coating integrity across upstream, midstream, and downstream operations.

Objectives

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

- Understand coating technologies for oil & gas environments
- Design and select suitable coatings based on exposure conditions
- Apply best practices for surface preparation and coating application
- Integrate CP design with coating systems for corrosion control
- Specify and inspect PFP systems for structural fire protection
- Conduct performance testing, defect analysis, and repairs

Why Attend

- Learn to design and apply protective coatings for oil & gas assets
- Master CP and PFP integration with coating systems
- Reduce failure risks, enhance safety, and increase asset lifespan
- Stay compliant with ISO, NACE, and offshore standards
- Gain hands-on experience with real-world case studies and testing methods

Target Audience

- Corrosion engineers
- Asset integrity and maintenance professionals
- Pipeline and structural engineers
- Inspection and QA/QC personnel
- Project managers and technical consultants in oil & gas

Individual Benefits

- Enhance expertise in advanced protective systems
- Improve on-site decision-making related to coatings and CP
- Acquire in-demand skills for offshore and onshore asset management
- Receive professional certification to validate your expertise

Organizational Benefits

- Improve infrastructure reliability and reduce unplanned downtime
- Optimize long-term protection strategies and lower lifecycle costs
- Ensure compliance with industry codes and standards
- Reduce risk of environmental hazards and safety incidents

Instructional Methodology

- Interactive lectures with industry experts
- Case studies of offshore and onshore coating systems
- CP and PFP design walkthroughs
- Demonstrations of testing and inspection tools
- Group discussions, troubleshooting workshops, and assessments

Course Outline

DETAILED 5-DAY COURSE OUTLINE (Customizable) Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Fundamentals of Structural Coatings in Oil & Gas

- Module 1 (07:30 – 09:30): Introduction to Protective Coatings in Harsh Environments
- Module 2 (09:45 – 11:15): Substrate Types and Surface Preparation Methods
- Module 3 (11:30 – 01:00): Overview of Coating Systems – Epoxies, Urethanes, Zinc-Rich Primers

Day 2: Coating Materials, Selection & Application

- Module 4 (07:30 – 09:30): Materials Selection Based on Corrosivity and Service Conditions
- Module 5 (09:45 – 11:15): Application Methods: Spray, Roller, and Brush
- Module 6 (11:30 – 01:00): Inspection, Quality Control & Testing (DFT, adhesion, holidays)

Day 3: Cathodic Protection Integration

- Module 7 (07:30 – 09:30): CP Principles and Coating Compatibility
- Module 8 (09:45 – 11:15): Designing CP Systems for Pipelines and Offshore Structures
- Module 9 (11:30 – 01:00): CP Monitoring and Maintenance Integration

Day 4: Passive Fire Protection Systems (PFPs)

- Module 10 (07:30 – 09:30): Fire Risks in Oil & Gas and the Role of PFPs
- Module 11 (09:45 – 11:15): Types of PFP Materials – Intumescent, Cementitious, Ablative
- Module 12 (11:30 – 01:00): Design, Application & Performance Testing of PFPs

Day 5: Case Studies, Failures & Best Practices

- Module 13 (07:30 – 09:30): Root Cause Analysis of Coating Failures in Oil & Gas
- Module 14 (09:45 – 11:15): Maintenance Planning & Repair Techniques
- Module 15 (11:30 – 01:00): Interactive Review, Final Assessment & Certification

Certification

Participants will receive a Certificate of Completion in Structural Coatings for the Oil & Gas Industry – Materials Design & Selection, Application & Testing (Includes CP Design, PFPs).

Why Choose MAWA Events

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Interested in running this course for your team?

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