

Corrosion Control Essentials for Oil, Gas, and Water Systems

1 – 5 February 2027
London

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Ref: 103600572_106401 **Date:** 1 – 5 February 2027 **Location:** London **Fees:** 6500 Euro

Course Overview:

Welcome to Corrosion Control Mastery, a groundbreaking course designed to equip professionals with in-depth knowledge and skills in corrosion control for the oil, gas, and water sectors. Unlike other training courses, this program delves deeply into the science of corrosion and its economic impact, offering practical solutions that can save your organization millions. This is an all-in-one package that combines corrosion control training courses, oil and gas accounting training courses, and oil and gas safety training certification courses to offer a comprehensive understanding. Don't miss this opportunity to elevate your proficiency and add significant value to your career and organization.

Target Audience:

- Petroleum Engineers
- Welding Engineers
- Process Engineers
- Inspectors and Inspection Supervisors
- Equipment Engineers
- Maintenance Engineers and Planners
- Design Engineers
- Service Company Representatives

Targeted Organizational Departments:

- **Engineering Departments**: Particularly Petroleum, Mechanical, and Process Engineers who directly engage with issues of corrosion control.
- **Maintenance and Reliability Teams**: To understand and implement preventive measures against corrosion.
- **Quality Control and Inspection Units**: For staff involved in checking material integrity and ensuring compliance with corrosion control standards.
- **Research and Development**: For teams focused on creating more corrosion-resistant materials or methods.
- **Procurement and Supply Chain Teams**: For selecting corrosion-resistant materials and services.

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Targeted Industries:

- **Oil and Gas Industry**: Given the high costs of corrosion in this sector, knowledge is critical for asset longevity and operational efficiency.
- **Water Treatment Plants**: Control of corrosion can significantly extend the life of pipes and treatment units.
- **Chemical Processing Industry**: Corrosion-resistant materials and knowledge can prevent leaks and accidents.
- **Maritime Industry**: Ship and offshore rig operators would gain substantially from improved corrosion control.
- **Construction Industry**: For those working with metals and other materials that need long-lasting corrosion resistance.

Course Offerings:

By the end of the course, participants will be skilled in:

- Understanding and applying corrosion theories and mechanisms
- Employing monitoring and inspection methods for corrosion control in oil and water fields
- Implementing practical methods for controlling corrosion

Training Methodology:

The course utilizes a blended learning approach that combines traditional lectures with interactive sessions, case studies, and group work. Feedback sessions and real-world examples are integrated to ensure the most effective learning experience. The course incorporates advanced oil and gas online training courses materials for a well-rounded understanding.

Course Toolbox:

- Workbook on Corrosion Control Engineering
- Software for corrosion rate measurement
- Checklists for routine inspections
- Templates for corrosion management plans
- Access to a library of oil and gas industry training courses

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Course Agenda:

Day 1: Fundamentals of Corrosion Control

- **Topic 1:** Introduction to Corrosion Engineering
- **Topic 2:** Importance of Corrosion Control in Oil and Gas
- **Topic 3:** Materials of Construction: Metals and Alloys
- **Topic 4:** Economic Impacts of Corrosion
- **Reflection & Review:** Recap of key points and interactive Q&A on economic implications of corrosion control.

Day 2: Types of Corrosion I

- **Topic 5:** Galvanic Corrosion: Causes and Control
- **Topic 6:** Localized/Pitting Corrosion: Identification and Management
- **Topic 7:** Soil Corrosion: Prevention Strategies
- **Topic 8:** Corrosion Exposed to Stray Currents
- **Reflection & Review:** Hands-on practice with corrosion simulations and identification techniques.

Day 3: Types of Corrosion II

- **Topic 9:** Crevice Corrosion: Causes and Control
- **Topic 10:** Microbiologically Induced Corrosion MIC: Treatment and Management
- **Topic 11:** Wet Hydrogen Sulfide H2S Corrosion Mechanisms
- **Topic 12:** Corrosion Under Insulation CUI: Identification and Mitigation
- **Reflection & Review:** Case studies review and group discussions on mitigating corrosion types discussed.

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Day 4: Corrosion Control Methods I

- **Topic 13:** Active Cathodic Protection: Sacrificial Anode Technique
- **Topic 14:** Passive Protection: Coating Types and Applications
- **Topic 15:** Cathodic Protection: Impressed Current Methodology
- **Topic 16:** Chemical Inhibitors: Types and Applications
- **Reflection & Review:** Participant presentations on designing a corrosion control program using the methods learned.

Day 5: Corrosion Control Methods II & Monitoring

- **Topic 17:** Corrosion Monitoring: Thickness Measurements using Ultrasonic Testing
- **Topic 18:** Risk-Based Inspection RBI in Corrosion Control
- **Topic 19:** Corrosion Coupons: Applications and Analysis
- **Topic 20:** Intelligent Pigs: Advanced Monitoring Techniques
- **Reflection & Review:** Final course wrap-up, Q&A, and feedback session on corrosion monitoring and future trends.

How This Course is Different:

Corrosion Control Mastery stands apart due to its comprehensive coverage, combining both theory and practical applications. Unlike other oil and gas industry training courses, we offer a holistic approach to corrosion control, covering oil and gas safety training certification courses and oil and gas accounting training courses as well.