Protective Coatings Inspection – NACE Level 1

21 – 25 November 2027
Cairo (Egypt)



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Introduction

Protective coatings play a critical role in extending the service life of industrial assets and infrastructure by protecting surfaces from corrosion, environmental exposure, and operational wear. As assets become more valuable and projects more complex, the quality of coating application and inspection has a direct impact on safety, performance, and long-term cost control. Effective inspection ensures that coating systems perform as designed and comply with technical specifications.

The Protective Coatings Inspection—NACE Level 1 course is designed to provide professionals with a structured foundation in coating inspection principles and practices. The course targets executives responsible for asset integrity, technical managers, inspection supervisors, engineers, and experienced professionals who are involved in quality control and inspection activities. It focuses on understanding coating systems, inspection methods, and industry-recognized standards.

The practical value of this course lies in its emphasis on inspection accuracy and compliance. Participants learn how to identify coating defects, verify surface preparation, and document inspection results effectively. These skills help organizations reduce rework, prevent premature coating failure, and protect high-value assets through disciplined inspection practices.

Course Objectives

The Protective Coatings Inspection—NACE Level 1 course aims to build a strong professional foundation in coating inspection, with a focus on applied knowledge and industry standards.

- Understand the fundamentals of corrosion and protective coatings.
- Identify different coating types and their applications.
- Recognize the importance of surface preparation.
- Apply inspection methods during and after coating application.
- Use basic inspection and measurement tools correctly.
- Identify common coating defects and their causes.
- Document inspection findings in a professional manner.
- Prepare for professional certification pathways in coating inspection.



Course Outlines

Day One: Corrosion Fundamentals and Protective Coatings Basics

- Understanding corrosion mechanisms and their impact on assets.
- The role of protective coatings in corrosion control.
- Overview of common protective coating systems.
- Understanding coating components and functions.
- Introduction to coating specifications and standards.
- Review of real-world coating failure examples.

Day Two: Surface Preparation and Pre-Application Inspection

- Importance of surface preparation for coating performance.
- Methods for cleaning and contaminant removal.
- Evaluating surface condition before coating application.
- Understanding surface profile and cleanliness requirements.
- Verifying surface readiness for coating.
- Practical exercises focused on surface inspection.

Day Three: Coating Application and In-Process Inspection

- Understanding coating application procedures.
- Monitoring environmental conditions during application.
- Inspecting coating thickness during application.
- Verifying compliance with application instructions.
- Recording inspection observations during coating work.
- Reviewing practical application scenarios.

Day Four: Inspection Tools and Defect Identification

- Introduction to common coating inspection tools.
- Measuring dry film thickness accurately.
- Identifying common coating defects.
- Analyzing the causes of coating failures.
- Assessing the impact of defects on coating performance.
- Practical exercises using inspection equipment.



Day Five: Final Assessment and Comprehensive Inspection Practice

- Comprehensive review of all course topics.
- Performing a complete protective coating inspection.
- Analyzing inspection results and preparing reports.
- Evaluating compliance with specifications and standards.
- Assessing participant understanding through practical activities.
- Summarizing key findings and improvement opportunities.

Why Attend This Course: Wins & Losses!

- Designed for experienced and advanced-level professionals.
- Builds strong inspection and quality control capabilities.
- Reduces the risk of premature coating failure.
- Supports long-term asset protection strategies.
- Strong focus on practical inspection activities.
- Improves technical reporting and documentation skills.
- Supports professional development in coating inspection.
- Enhances compliance with coating specifications.

Conclusion

The Protective Coatings Inspection—NACE Level 1 course provides a solid professional foundation for understanding and performing protective coating inspections in accordance with recognized standards. It is designed for experienced professionals who hold inspection, quality, or technical oversight responsibilities.

By combining theoretical knowledge with practical inspection techniques, the course enables participants to identify defects early, verify compliance, and improve overall coating quality. These capabilities contribute directly to asset integrity, cost efficiency, and operational reliability.

Overall, this course represents an essential step for professionals seeking to strengthen their expertise in protective coatings inspection and ensure durable, high-quality coating systems across projects and facilities.

