TRAINING TITLE

PROTECTIVE COATINGS FOR CORROSION PROTECTION

Training Duration

5 days

Training Venue and Dates

Ref. No. WC118	Protective Coatings for Corrosion Protection	5	14-18 Apr. 2025	$5,500	Abu Dhabi, UAE

In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees

- **$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch**

Training Certificate

Define Management Consultants Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

The Protective Coatings for Corrosion Protection course is designed to provide participants with a comprehensive understanding of how protective coatings are used to prevent and control corrosion in various industrial environments. The course covers the selection, application, and maintenance of coatings used in industries such as oil and gas, manufacturing, construction, and marine. Participants will learn about the different types of coatings, surface preparation techniques, coating application methods, inspection, and quality control, as well as how to select the appropriate coatings for specific corrosion protection needs.

TRAINING OBJECTIVES

By end of course participants will be able to understand

- **Understand the Fundamentals of Corrosion: Grasp the basic principles of corrosion and why it occurs in industrial materials and structures.**
- **Identify Types of Protective Coatings: Learn about the various types of coatings (organic and inorganic) and their specific applications for corrosion prevention.**
- **Surface Preparation: Understand the importance of proper surface preparation in ensuring the effectiveness of protective coatings.**

P.O BOX 45304
ABU DHABI, U.A.E
T +971 2 6264455
F +971 2 6275344
www.definetraining.com

- **Coating Application Techniques: Learn the methods and best practices for applying protective coatings to prevent corrosion.**
- **Quality Control and Inspection: Understand how to inspect coatings for quality, detect defects, and ensure the durability of protective coatings.**
- **Maintenance and Repair: Learn strategies for maintaining and repairing coatings in service to extend their life and prevent corrosion reoccurrence.**

WHO SHOULD ATTEND?

- **Engineers and technical personnel in industries like oil & gas, manufacturing, construction, and marine**
- **Corrosion specialists and materials scientists**
- **Coating inspectors, supervisors, and quality control personnel**
- **Maintenance personnel working with industrial coatings**
- **Contractors and facility managers responsible for corrosion prevention**
- **Procurement specialists involved in purchasing protective coatings and materials**

TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.
Very useful Course Materials will be given.

- **30% Lectures**
- **30% Workshops and work presentation**
- **20% Group Work& Practical Exercises**
- **20% Videos& General Discussions**

COURSE PROGRAM

Day 1: Introduction to Corrosion and Protective Coatings

- **Overview of Corrosion**
  - **Definition and types of corrosion (e.g., uniform, pitting, galvanic, etc.)**
  - **The impact of corrosion on materials and structures**
- **Principles of Corrosion Protection**
  - **Basic corrosion theory (electrochemical and chemical corrosion processes)**

P.O BOX 45304
ABU DHABI, U.A.E
T +971 2 6264455
F +971 2 6275344
www.definetraining.com

  - Role of protective coatings in preventing corrosion
- Types of Protective Coatings
  - Organic coatings (paints, varnishes, etc.)
  - Inorganic coatings (metallic coatings, anodizing, etc.)
  - Specialized coatings (epoxy, polyurethane, zinc-rich, etc.)

Day 2: Surface Preparation for Coating Application

- Importance of Surface Preparation
  - Why proper surface preparation is crucial for successful coating adhesion
  - Types of surface contaminants and their effects on coating performance
- Surface Cleaning Techniques
  - Manual cleaning (abrasive cleaning, wire brushing, sandpaper)
  - Power tools and abrasive blasting methods
  - Chemical cleaning methods (acid etching, solvent washing)
- Surface Profile and Abrasive Blast Standards
  - Measuring surface roughness and profile
  - Industry standards for surface preparation (ISO, SSPC, NACE)

Day 3: Coating Application Methods and Techniques

- Application Methods Overview
  - Brush, roller, spray, dip, and electrostatic coating
  - Advantages and limitations of each application method
- Coating Systems for Different Environments
  - Selection of coatings based on environmental factors (temperature, humidity, exposure to chemicals, etc.)
  - Multi-coat systems vs. single-coat systems
- Practical Application Techniques
  - Hands-on demonstration of coating application using different methods
  - Techniques for achieving uniform coating thickness and minimizing defects

Day 4: Coating Inspection, Quality Control, and Testing

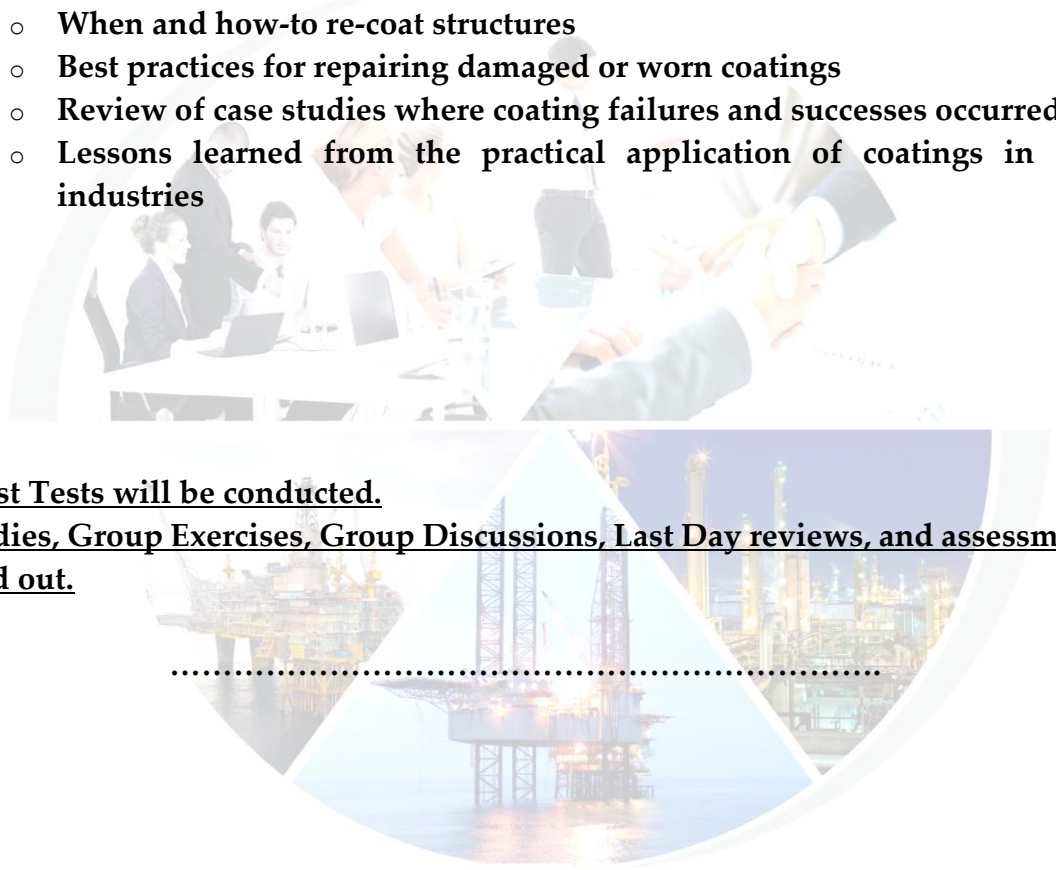
- Coating Inspection Methods
  - Visual inspection for defects (bubbles, pinholes, cracks)
  - Non-destructive testing methods (dry film thickness, holiday detection)
  - Adhesion testing and hardness testing
- Quality Control Standards
  - International standards for coatings (ISO, ASTM, SSPC)
  - Importance of controlling temperature, humidity, and curing time
- Common Coating Defects and Solutions

P.O BOX 45304
ABU DHABI, U.A.E
T +971 2 6264455
F +971 2 6275344
www.definetraining.com

- Troubleshooting common problems (poor adhesion, blistering, corrosion undercutting)
- Repair techniques for damaged coatings

Day 5: Maintenance, Repair, and Long-Term Protection

- **Coating Maintenance Strategies**
  - Monitoring the condition of coatings over time
  - Scheduling inspections and touch-ups for long-term protection
- **Re-coating and Repair Methods**
  - When and how-to re-coat structures
  - Best practices for repairing damaged or worn coatings
  - Review of case studies where coating failures and successes occurred
  - Lessons learned from the practical application of coatings in different industries



NOTE:
Pre-& Post Tests will be conducted.
Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.

……

P.O BOX 45304
ABU DHABI, U.A.E
T +971 2 6264455
F +971 2 6275344
www.definetraining.com