

**COURSE OVERVIEW FE0445**

**Protective Coatings for Corrosion Protection**

**Course Title**

Protective Coatings for Corrosion Protection

**Course Date/Venue**

Session 1: January 26-30, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Session 2: July 28-August 01, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE



**Course Reference**

FE0445



**Course Duration/Credits**

Five days/3.0 CEUs/30 PDHs

**Course Description**



***This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.***



This course is designed to provide delegates with a detailed and up-to-date overview of asset integrity: protective coat engineering. Further, the course will also cover the uses of coating and lining, employ the best practices and identify external factors that influence their uses; the process of chemistry of liquid applied coating and coating formulation chemistry; differentiation of organic and inorganic coatings; and the coating characteristics including the basic chemistry and unique characteristics that affect surface preparation and application needs.



During this interactive course, participants will learn the common test and qualification method for liquid-applied coating and identify the chemistry of non-liquid coatings; the unique application and quality control methods for important non-liquid coatings; the testing coating properties and performance as well as the coating defects and substrates; the various coating system types including system selection, goals, objectives, performance requirements, design engineered properties and trade-offs; and the coating specification, coating surveys and maintenance program.

### Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on protective coating technology
- Discuss protective coatings and corrosion as well as employ corrosion protection techniques
- Identify various types of coatings and the characteristics of coatings covering the components of epoxy and polyurethane as well as the advanced polyurea coating system
- Describe the lining with glass fiber reinforced polyester and the British Standard Code of practice for protective coating of steel
- Explain coating application statement for surface preparation
- Illustrate surface pretreatment of steel and aluminum as well as priming, building and topping the coat
- Differentiate the various application methods of coating using spray, brush and roller application
- Discuss hot dipping metallic coating using galvanized steel pipes with zinc as well as joint protection using mastic and sealants
- Evaluate the coverage rate of coatings and concrete protection coatings
- Test paints for basic and specific properties
- Develop coating maintenance program

### Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.

### Who Should Attend

This course is intended for planning, supervisory or technical personnel who regularly work with protective coatings and lining.

### Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos


In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

### Course Certificate(s)


Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

### Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

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The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

### Course Fee

**US\$ 5,500** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

### Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



**Mr. George Poulos, MBA, MSc, BSc, CEng**, is a **Senior Corrosion & Metallurgical Engineer** with over **45 years** of extensive experience within the **Oil & Gas, Petrochemical, Refinery, Construction, Aircraft & Shipbuilding** Industry. His wide experiences cover in the areas of **Pressure Vessels, Piping Inspection, Risk-Based Inspection, Fitness-for-Service (FFS), Metallurgical Failure, Metallurgy & Metallurgical Processes, Metallurgical Lab, Corrosion and Metallurgy, Analysis & Prevention, Corrosion Fabrication & Inspection, Fabrication &**

**Repair, Corrosion Prevention, Corrosion Engineering, Corrosion Control, Corrosion Inhibition, Corrosion Management in Process Operations, Corrosion & Prevention of Failures, Material Selection, Cathodic Protection Systems, Steel Metallurgy, Steel Structure Welding, Steelmaking Slag, Steel Making Application, Steel Making Process, Steel Manufacturing, Steel Forging, Steel Manufacturing & Process Troubleshooting, Hot Rolling Process, Hot Strip Mill, Mill Operations, Roll Mill, Electric Arc Furnace (EAF), Slit Rolling, Carbon Steel Pipe Wall Thickness & Grade Selection, Ferro-Alloys, Heat Treatment & Prevention Techniques and Post Weld Heat Treatment.** Further, he is also well-versed in **Welding Inspection, Welding & Machine Techniques, TIG & Arc Welding, Shielded Metal Arc Welding, Gas Tungsten & Gas Metal Arc Welding, Welding Procedure Specifications & Qualifications, Aluminium Welding, Hot Work-Safety, SMAW, GTAW, Welding Techniques, Pipeline Welding Practices, Welding Engineering, Welding Fatigue & Fracture Mechanics, Welding Inspection Technology, Welding Safety, Welding Defects Analysis, Welding Technology, Welding Problems, Welding & Non Destructive Testing and Metallurgy Techniques.**

During his career life, Mr. Poulos has gained his practical and field experience through his various significant positions and dedication as the **Chief Executive, Head of Technical Studies, Manager, Senior Consultant, Lead Welding Engineer, Senior Welding Engineer, Design Engineer, Sales Engineer, Author, Welding Instructor, Visiting Lecturer** and **Technical Proposal Research Evaluator** from various international companies such as Greek Welding Institute, Hellenic Quality Forum and International Construction Companies such as Shipbuilding, Aircraft Industry and Oil and Gas Industry.

Mr. Poulos is a **Registered Chartered Engineer** and has a **Master's** degree in **Naval Architecture**, a **Bachelor's** degree in **Welding Engineering** and a Master of Business Administration (**MBA**) from the **Sunderland University, Aston University** and **Open University, UK**, respectively. Further, he is a **Certified Trainer/Instructor**, an active Member of Chartered Quality Institute (**CQI**), The British Welding Institute (**TWI**), The Royal Institution of Naval Architects (**RINA**) and American Welding Society (**AWS**), a Registered **EWFIW** (European Welding Federation-International Welding Institute W/E) and an **IRCA** Accredited External Quality Systems Auditor through BVQI. He is an **Author** of Technical Book dealing with Protection/Health/Safety in the Welding/Cutting domain and delivered various trainings, seminars, conferences, workshops and courses globally.

**Accommodation**

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

**Course Program**

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

**Day 1**

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	<b>PRE-TEST</b>
0830 – 0930	<b>Protective Coatings Introduction</b> Definition of Corrosion
0930 – 0945	Break
0945 – 1100	<b>Corrosion Protection Techniques</b>
1100 – 1230	<b>Types of Coatings</b>
1230 – 1245	Break
1245 – 1330	<b>Characteristics of Coatings</b> One Component
1330 – 1420	<b>Characteristics of Coatings (cont'd)</b> Two Components Epoxy & Polyurethane
1420 – 1430	<b>Recap</b>
1430	Lunch & End of Day One

**Day 2**

0730 – 0915	<b>Characteristics of Coatings (cont'd)</b> The Advanced Polyurea Coating System
0915 – 0930	Break
0930 – 1100	<b>Lining with Glass Fiber Reinforced Polyester</b> Case Study: Interior Tank Lining
1100 – 1230	<b>British Standard Code of Practice for Protective Coating of Steel</b> BS 5493 Environment
1230 – 1245	Break
1245 – 1420	<b>British Standard Code of Practice for Protective Coating of Steel (cont'd)</b> BS 5493 Life Required of Coating
1420 – 1430	<b>Recap</b>
1430	Lunch & End of Day Two

**Day 3**

0730 – 0930	<b>Coating Application Statement</b> Surface Preparation
0930 – 0945	Break
0945 – 1100	<b>Surface Pretreatment of Steel &amp; Aluminum</b>
1100 – 1230	<b>Priming, Build Coat &amp; Top Coat</b>
1230 – 1245	Break
1245 – 1420	<b>Application Methods</b> Spray, Brush & Roller Application
1420 – 1430	<b>Recap</b>
1430	Lunch & End of Day Three

**Day 4**

0730 – 0830	<b>Hot Dipping Metallic Coating</b> <i>Case Study: Galvanized Steel Pipes with Zinc</i>
0830 – 0945	<b>Joint Protection Using Mastic &amp; Sealants</b>
0945 – 1000	Break
1000 – 1230	<b>Coverage Rate of Coatings</b>
1230 – 1245	Break
1245 – 1420	<b>Case Study</b> <i>Exterior Oil Tank Protection • Interior Water Tank Protection</i>
1420 – 1430	<b>Recap</b>
1430	Lunch & End of Day Four

**Day 5**

0730 – 0930	<b>Concrete Protection Coatings with Case Study Anti-Slip Surface</b>
0930 – 0945	Break
0945 – 1100	<b>The Testing of Paints</b> <i>Tests for Basic Properties</i>
1100 – 1230	<b>The Testing of Paints (cont'd)</b> <i>Tests for Specific Properties</i>
1230 – 1245	Break
1245 – 1345	<b>Coating Maintenance Program</b>
1345 – 1400	<b>Course Conclusion</b>
1400 – 1415	<b>POST-TEST</b>
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	Lunch & End of Course

**Practical Sessions**

This practical and highly-interactive course includes real-life case studies and exercises:-



**Course Coordinator**

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