

COURSE OVERVIEW FE0445-4D
Protective Coating Technology

Course Title

Protective Coating Technology

Course Date/Venue

Session 1: August 12-15, 2024/Club B Meeting Room,
 Ramada Plaza by Wyndham Istanbul City
 Center, Istanbul, Turkey

Session 2: December 23-26, 2024/Al Aziziya Hall, The
 Proud Hotel Al Khobar, Al Khobar, KSA



Course Reference

FE0445-4D

Course Duration/Credits

Four days/2.4 CEUs/24 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

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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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 **2.4 CEUs** (Continuing Education Units) or **24 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.

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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.

Accommodation

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

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:



Dr. Jaber Mohamed, PhD, MSc, BSc, is a Senior Cathodic Protection Engineer with over 35 years of extensive experience within the Oil, Gas and Petrochemical industries. He specializes in Cathodic Protection Interference, Corrosion & Cathodic Protection Modelling, Coatings in Conjunction with Cathodic Protection, Painting & Coating Technology, Corrosion Technology, Chemical Technology, Material Corrosion Failure Analysis, Corrosion Monitoring & Control Techniques, Protective Coatings, Metal Surface Treatment, Steel & Aluminum Treatment, Concrete Repair & Concrete Protection, Water Insulation and Industrial Pollution Prevention. He is also well-versed in Epoxy, Polyurethane Coatings & Mortars, Acrylic, Alkyd & Chlorinated Rubber Coatings, Fast Setting Cement, Polysulphide Joint Sealants, Water Proofing Flooring & Non-Shrinkage Grouts, Water Repellants, Electrostatic Coating, Bonding Agents & Adhesives and Concrete Mixtures.

Currently, Dr. Mohamed is the **General Manager of Helwan Factory** that produces industrial chemicals for **Chemical Industries (HELWANCHEM)**. Earlier in his career, he acquired his practical and technical expertise and held key positions as the **Cathodic Protection Engineer, R&D Manager, Operations Manager and Technical Manager** in prestigious and various international companies.

Dr. Mohamed has **PhD, Master and Bachelor** degrees in **Chemistry**. Further, he is a **Certified Instructor/Trainer** and an active member of the **Egyptian Corrosion Society & Egyptian Paints Society**.

Course Fee

Istanbul	US\$ 5,000 per Delegate + VAT . This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Al Khobar	US\$ 4,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course 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	<i>Registration & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0830 – 0930	Protective Coatings Introduction <i>Definition of Corrosion</i>
0930 – 0945	<i>Break</i>
0945 – 1100	Corrosion Protection Techniques
1100 – 1230	Types of Coatings
1230 – 1245	<i>Break</i>
1245 – 1420	Characteristics of Coatings <i>One Component • Two Components Epoxy & Polyurethane • The Advanced Polyurea Coating System</i>
1420 – 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2

0730 – 0915	Lining with Glass Fiber Reinforced Polyester <i>Case Study: Interior Tank Lining</i>
0915 – 0930	<i>Break</i>
0930 – 1100	British Standard Code of Practice for Protective Coating of Steel <i>BS 5493 Environment • BS 5493 Life Required of Coating</i>
1100 – 1230	Coating Application Statement <i>Surface Preparation</i>
1230 – 1245	<i>Break</i>
1245 – 1420	Surface Pretreatment of Steel & Aluminum
1420 – 1430	Recap
1430	<i>Lunch & End of Day Two</i>

Day 3

0730 – 0930	Priming, Build Coat & Top Coat
0930 – 0945	<i>Break</i>
0945 – 1100	Application Methods <i>Spray, Brush & Roller Application</i>
1100 – 1230	Hot Dipping Metallic Coating <i>Case Study: Galvanized Steel Pipes with Zinc</i>
1230 – 1245	<i>Break</i>
1245 – 1420	Joint Protection Using Mastic & Sealants
1420 – 1430	Recap
1430	<i>Lunch & End of Day Three</i>

Day 4

0730 – 0830	Coverage Rate of Coatings
0830 – 0930	Case Study <i>Exterior Oil Tank Protection • Interior Water Tank Protection</i>

0930 – 0945	Break
0945 – 1100	Concrete Protection Coatings with Case Study Anti-Slip Surface
1100 – 1230	The Testing of Paints Tests for Basic Properties • Tests for Specific Properties
1230 – 1245	Break
1245 – 1345	Coating Maintenance Program
1345 – 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

Practical Sessions

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



Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org