COURSE OVERVIEW FE0445-4D

Protective Coating Technology

Course Title
Protective Coating Technology

Course Date/Venue
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 varous 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.

Course Fee

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 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: -

- 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.

- 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**.

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 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: Monday, 23rd of December 2024

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	**PRE-TEST**
0830 – 0930	**Protective Coatings Introduction** Definition of Corrosion
0930 – 0945	Break
0945 – 1100	**Corrosion Protection Techniques**
1100 – 1230	**Types of Coatings**
1230 – 1245	Break
1245 – 1420	**Characteristics of Coatings** One Component • Two Components Epoxy & Polyurethane • The Advanced Polyurea Coating System
1420 – 1430	**Recap**
1430	Lunch & End of Day One

Day 2: Tuesday, 24th of December 2024

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

Day 3: Wednesday, 25th of December 2024

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

Day 4:	***Thursday, 26th of December 2024***
0730 – 0830	***Coverage Rate of Coatings***
0830 - 0930	***Case Study*** *Exterior Oil Tank Protection • Interior Water Tank Protection*
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