Haward Technology Middle East

COURSE OVERVIEW FE0265
Pipeline Corrosion Management, Risk Assessment, Technical Integrity, Inspection, Remediation & Repair
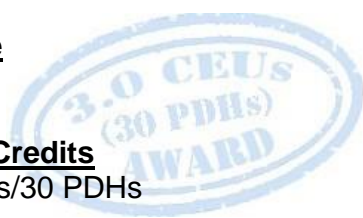
Course Title
Pipeline Corrosion Management, Risk Assessment, Technical Integrity, Inspection, Remediation & Repair

Course Reference
FE0265

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Date/Venue

Session(s)	Date	Venue
1	April 06-10, 2025	Crowne Meeting Room, Crowne Plaza Al Khobar, Al Khobar, KSA
2	August 03-07, 2025	Slaysel 02 Meeting Room, Movenpick Hotel & Resort Al Bida'a Kuwait, City of Kuwait
3	November 09-13, 2025	Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

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.*
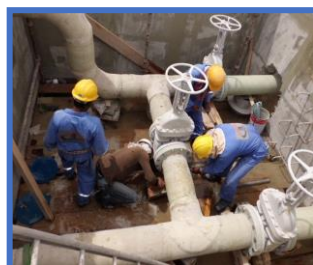
This course is designed to provide participants with a detailed and up-to-date overview of Pipeline Corrosion Management, Risk Assessment, Technical Integrity, Inspection, Remediation & Repair. It covers the pipeline integrity, the impact of corrosion on pipelines, other treats to pipeline integrity (non-corrosion related) and purpose of pipeline integrity programs; the public safety, reliability and deliverability of the pipeline system; the asset preservation, maintenance optimization and economics; managing corrosion; the forms of corrosion and corrosion control methods; the time-related pipeline defect types and inspection methods; and the stress corrosion cracking, corrosion monitoring methods, external corrosion and corrosion mediation methods.

Further, the course will also discuss the 49 CFR and integrity requirements; the data collection, verification and integration; the risk assessment, consequence analysis, calculating and quantifying risk, risk minimization through corrosion control and integrity verification; the integrity verification/assessment; the overall assessment on a pipeline system; and the criteria for selecting an integrity method.

During this interactive course, participants will learn the technical challenges to pipeline integrity; material properties and defects, pipe manufacturing, pipeline construction, pipeline operations and service, outside forces and time dependent mechanisms; the remediation activity/repair methods, discovery of anomalies, defect characterizations, development of a repair plan and repair protocol for "high consequence areas" (HCA) pipeline; the inspection and assessment intervals, confirmatory direct assessment, external corrosion confirmatory assessment (EC-CDA) and internal corrosion confirmatory assessment (IC-CDA); the post integrity assessment risk analysis including risk re-assessment in response to management of change processes and in response to changes due to remediation; the need for electronic database for data integration and specific data that shall be integrated into risk assessment plans; and the integrity management plan.

Course Objectives

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

- Apply and gain in-depth knowledge on pipeline corrosion management, risk assessment, technical integrity, inspection, remediation and repair

- Discuss pipeline integrity, the impact of corrosion on pipelines, other treats to pipeline integrity (non-corrosion related) and purpose of pipeline integrity programs

- Carryout public safety, reliability and deliverability of the pipeline system, asset preservation, maintenance optimization and economics

- Manage corrosion, illustrate the forms of corrosion and corrosion control methods and identify the time-related pipeline defect types

- Apply inspection methods, stress corrosion cracking, corrosion monitoring methods, external corrosion and corrosion mediation methods

- Discuss the 49 CFR and integrity requirements

- Employ data collection, verification and integration as well as risk assessment, consequence analysis, calculating and quantifying risk, risk minimization through corrosion control and integrity verification

- Carryout integrity verification/assessment including performing an overall assessment on a pipeline system and criteria for selecting an integrity method

- Identify technical challenges to pipeline integrity covering material properties and defects, pipe manufacturing, pipeline construction, pipeline operations and service, outside forces and time dependent mechanisms

- Apply remediation activity/repair methods including discovery of anomalies, defect characterizations, development of a repair plan and repair protocol for "high consequence areas" (HCA) pipeline

- Inspect and assess intervals, apply confirmatory direct assessment and perform external corrosion confirmatory assessment (EC-CDA) and internal corrosion confirmatory assessment (IC-CDA)

- Apply post integrity assessment risk analysis including risk re-assessment in response to management of change processes and in response to changes due to remediation

- Recognize the need for electronic database for data integration and specific data that shall be integrated into risk assessment plans as well as apply integrity management plan

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 provides an overview of all significant aspects and considerations of pipeline corrosion management, risk assessment, technical integrity, inspection, remediation and repair for those who are responsible for implementation and/or management of an integrity program for a pipeline system with an emphasis on integrity verification and maintenance optimization.

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 Fee

Al Khobar	**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.
Kuwait	**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.
Dubai	**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.

Accommodation

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

Course Certificate(s)

(1) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Certificates are valid for 5 years.

Recertification is FOC for a Lifetime.

Sample of Certificates

The following are samples of the certificates that will be awarded to course participants:-
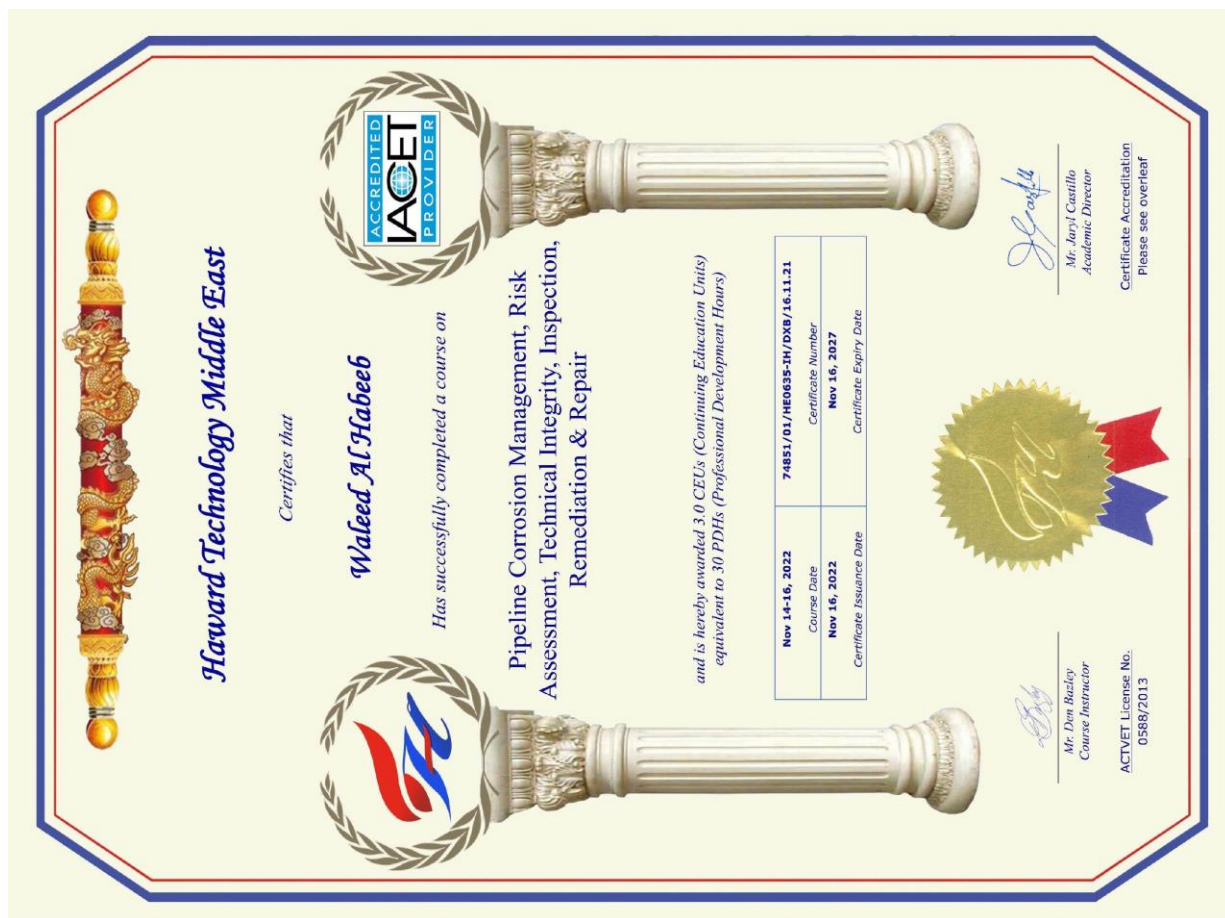
(2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course.

Haward Technology Middle East

Continuing Professional Development (HTME-CPD)

CEU Official Transcript of Records

TOR Issuance Date:	16-Nov-22
HTME No.	74851
Participant Name:	Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
FE0265	Pipeline Corrosion Management, Risk Assessment, Technical Integrity, Inspection, Remediation & Repair	November 14-16, 2021	30	3.0

Total No. of CEU's Earned as of TOR Issuance Date	3.0

TRUE COPY

Jaryl Castillo
Academic Director

Haward Technology has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this approval, Haward Technology has demonstrated that it complies with the ANSI/IACET 1-2013 Standard which is widely recognized as the standard of good practice internationally. As a result of their Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for programs that qualify under the ANSI/IACET 1-2013 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 Association 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 is accredited by

P.O. Box 26070, Abu Dhabi, United Arab Emirates | Tel.: +971 2 3091 714 | E-mail: info@haward.org | Website: www.haward.org

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

- **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.

- **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 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. John Dickerson, PE, BTech, is a **Senior Piping & Pipeline Engineer** with over **45 years** of experience within the **Oil & Gas**, **Petrochemical** and **Refinery** industries. His expertise lies extensively in the areas of **Liquid Hydrocarbon Pipelines & Storage Terminal** Systems, **Transmission Pipeline** Systems, **Pump** Stations, **LNG** Import, **Storage Regasification**, **Pipeline & Compression**, **Natural Gas Transport**, **Oil & Gas Pipeline Infrastructure**, **Pipeline** Inspection, **Testing & Integrity** Assessment, **Pipeline** Defect Assessment, **Pipeline** Integrity Management, **Pipeline Pigging**, **Pipeline & Piping** Design, **ASME B31.3 Process Piping** Design, **Forensic** Assessment, Single Point Mooring System, **Bulk Oil Storage & Transportation**, **Pipeline** Refurbishment & Recommissioning, **Raw & Stripped Associated Gas**, **Oil Depot**, **Tank Farm** Storage Depot, **NGL** Recovery & Stabilization, **LP Gas Compression**, **Gas Dehydration**, Gas Dew Point Control, HP Gas Booster Compression, Custody Transfer Metering, **Condensate** Stabilization, **Mechanical & Process** Design, Route Selection, Control System and **Onshore Pipeline Engineering** (ASME B31.3 & 31.8). He is also well versed in **Tank & Tank Farms**, **Cathodic Protection**, **Corrosion**, **Pressure Vessels**, **Storage Tanks**, **Offshore Pipeline**, **Subsea Pipeline**, **Slurry Pipeline**, **Gas Pipeline System** and **Gas Treatment**. He is a subject-matter expert in most ASME and API standards relating to pipelines, piping, pressure vessel and tanks such as **ASME B31**, **API 510**, **API 653**, **API 579**, **API 580**, **API 581**, **API 1169**, etc.

Mr. Dickerson has worked with major international clients including **Worley Parsons**, **Sasol**, **Qatar Petroleum**, J.P. Kenny Pty Ltd, Pipetech Pty Ltd, PLT Engineering Ltd (London), Pencol Engineering Consultants, Barrerra Nominees Pty Ltd, EPCM, CMPZ Storage Depot, 3PL Project Company SA, HOAPP, Padma Oil, NNPC, EWURA, Tanzania Petroleum Development Corp., Bulk Oil & Storage Transportation Company Ltd., and Perth Pipelines & Terminals as the **Director/Co-Founder**, **Project Director**, **Projects Lead**, **General Manager**, **Operations Manager**, **Project Manager**, **Technical Manager**, **Design Manager**, **Business Unit Manager**, **Engineering Manager**, **Study Manager**, **Chemical Specialist**, **Oil Pipeline Specialist**, **Consultant Engineer**, **Process Engineer**, **Senior Pipeline Engineer** and **Technical Advisor**.

Mr. Dickerson has **Bachelor** of **Technology** degree with **Honours** in **Chemical Engineering** from the **University of Bradford**, **UK**. Further, he is a **Registered Professional Engineer** from the Engineering Council of South Africa (**ECSA**), **Certified Instructor/Trainer**, a **Certified Internal Verifier/Trainer/ Assessor** and has delivered numerous trainings, courses, seminars and workshops internationally.

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	**PRE-TEST**
0830 – 0930	***Introduction to Pipeline Integrity*** *Pipeline Integrity ● Overview of Impact of Corrosion on Pipelines ●Other Treats to Pipeline Integrity (Non-Corrosion Related) ●Purpose of Pipeline Integrity Programs ● Public Safety ● Reliability & Deliverability of the Pipeline System ● Asset Preservation ●Maintenance Optimization ● Economics*
0930 – 0945	*Break*
0945 – 1100	***Managing Corrosion*** *Forms of Corrosion ● Overview of Corrosion Control Methods ● Time-Related Pipeline Defect Types ● Inspection Methods*
1100 – 1215	***Managing Corrosion (cont'd)*** *Stress Corrosion Cracking ● Corrosion Monitoring Methods ● External Corrosion ● Corrosion Mediation Methods*
1215 – 1230	*Break*
1230 – 1420	***Regulations*** *Overview of 49 CFR & Integrity Requirements*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***Standards***
0930 – 0945	*Break*
0945 – 1100	***Data Collection, Verification & Integration*** *Data Collection*
1100 – 1215	***Data Collection, Verification & Integration (cont'd)*** *Data Validation ● Data Integration*
1215 – 1230	*Break*
1230 – 1420	***Risk Assessment*** *Risk Assessment ● Overview of Risk Assessment Objectives ● History of Failure/Probability of Failure ● Consequence Analysis*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	**Risk Assessment (cont'd)** *Prescriptive & Performance Based ●Risk Assessment Models● Calculating & Quantifying Risk ● Risk Minimization Through Corrosion Control ● Integrity Verification*
0930 – 0945	*Break*
0945 – 1100	**Integrity Verification/Assessment** *Performing an Overall Assessment on a Pipeline System ● Criteria for Selecting an Integrity Method*
1100 – 1215	**Technical Challenges to Pipeline Integrity** *Material Properties & Defects ● Pipe Manufacturing*
1215 – 1230	*Break*
1230 – 1420	**Technical Challenges to Pipeline Integrity (cont'd)** *Pipeline Construction ● Pipeline Operations & Service ● Outside Forces ● Time Dependent Mechanisms*
1420 – 1430	**Recap** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Three*

Day 4

0730 – 0930	**Remediation Activity/Repair Methods** *Discovery of Anomalies ● Defect Characterizations ● Development of a Repair Plan*
0930 – 0945	*Break*
0945 – 1100	**Remediation Activity/Repair Methods (cont'd)** *Repair Protocol for "High Consequence Areas" (HCA) Pipeline ● Types of Remediation Activities/Repair Methods*
1100 – 1215	**Inspection & Assessment Intervals** *Assessment Intervals ● Remaining Life ● Growth Rate*
1215 – 1230	*Break*
1230 – 1420	**Inspection & Assessment Intervals (cont'd)** *Confirmatory Direct Assessment ● External Corrosion Confirmatory Assessment (EC-CDA) ● Internal Corrosion Confirmatory Assessment (IC-CDA)*
1420 – 1430	**Recap** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	**Post Integrity Assessment Risk Analysis** *Risk Re-assessment in Response to Management of Change Processes ● Risk Re-assessment in Response to Changes due to Remediation*
0930 – 0945	*Break*
0945 – 1100	**Post Integrity Assessment Risk Analysis (cont'd)** *The Need for Electronic Database for Data Integration● Specific Data that Should be Integrated into Risk Assessment Plans*
1100 – 1200	**Integrity Management Plan**

1200 - 1215	Break
1215 - 1300	**Management Perspectives** *Case Studies*
1300 - 1315	**Course Conclusion** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1315– 1415	**COMPETENCY EXAM**
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

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