



COURSE OVERVIEW FE0087 **ASME PCC 2 - Repair of Pressure Equipment**

Course Title

ASME PCC 2 - Repair of Pressure Equipment

Course Date/Venue

January 24-28, 2027/TBA Meeting Room, Waldorf
Astoria Doha West Bay, Doha, Qatar

Course Reference

FE0087

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes real-life case studies 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 Repair of Pressure Equipment and Piping (PCC-2). It covers the scope, purpose, and framework of the PCC-2 standard; the common types of damage in pressure equipment and piping; the various repair methods covering welded, mechanical, and non-metallic; the selection of appropriate materials based on the existing system and the type of damage; the basics of welding techniques used in repairs, including safety considerations; the proper procedures for welded repairs; the calculation for welded repairs and mechanical repairs; and the guidelines for temporary and permanent mechanical repairs.



During this interactive course, participants will learn the safety and quality assurance in welding including nonmetallic and bonded repairs; the design and application of engineered wrapping; the methods and techniques for testing repaired equipment to ensure functionality and safety; setting the acceptance criteria and reviewing temporary repairs; choosing between temporary and permanent repairs; documenting repair processes and final checks before implementation; the guidelines to prevent damage during repair; and the systematic process for reviewing and getting approval on selected repair methods.



Course Objectives/Outcomes & Benefits for the Participants

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

- Apply and gain an in-depth knowledge on the repair of pressure equipment and piping (PCC-2)
- Discuss the scope, purpose and framework of the PCC-2 standard
- Identify and classify the common types of damage in pressure equipment and piping including various repair methods covering welded, mechanical, and non-metallic
- Select appropriate materials based on the existing system and the type of damage
- Apply the basics of welding techniques used in repairs, including safety considerations
- Carryout proper procedures for welded repairs, calculation for welded repairs, mechanical repairs and guidelines for temporary and permanent mechanical repairs
- Employ safety and quality assurance in welding including nonmetallic and bonded repairs
- Illustrate the design and application of engineered wrapping as well as the methods and techniques for testing repaired equipment to ensure functionality and safety
- Set acceptance criteria, review temporary repairs and choose between temporary and permanent repairs
- Document repair processes and final checks before implementation before implementation including the guidelines to prevent damage during repair
- Apply systematic process for reviewing and getting approval on selected repair methods

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 a wide understanding and deeper appreciation of pressure equipment and piping (PCC-2) for integrity assessment engineers, operations engineers, maintenance engineers, maintenance supervisors, facility integrity supervisors, corrosion engineers, corrosion specialists, site inspection engineers, inspectors, piping engineers, mechanical engineers and other technical staff

Course Fee

US\$ 6,000 per Delegate. 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

Haward's 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**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). 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.

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:



Mr. George Poulos, MBA, MSc, BSc, CEng, is a **Senior Corrosion & Metallurgical Engineer** with over **30 years** of extensive experience within the **Oil & Gas, Petrochemical, Refinery, Construction, Aircraft & Shipbuilding** Industry. His wide experiences cover in the areas of **ASME PCC-2, 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 **EWI/IW** (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.



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.

Learning Design & Customization

This course can be customized to the exact requirements of clients. Haward Technology is so proud of our huge capabilities in tailoring our courses to the training needs of our valued clients.

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: Sunday, 24th of January 2027

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Introduction to ASME PCC-2: Understanding the Scope, Purpose, & Framework of the PCC-2 Standard
0930 – 0945	Break
0945 – 1045	Overview of Damage Mechanisms: Identifying & Classifying Common Types of Damage in Pressure Equipment & Piping
1045 – 1145	Types of Repairs: Exploring Various Repair Methods Including Welded, Mechanical, & Non-Metallic
1145 – 1230	Material Considerations for Repair: How to Select Appropriate Materials Based on the Existing System & Type of Damage
1230 – 1245	Break
1245 – 1420	Welded Repairs: Basics of Welding Techniques Used in Repairs, Including Safety Considerations
1420 – 1430	Recap
1430	Lunch & End of Day One

Day 2: Monday, 25th of January 2027

0730 – 0830	Workshop: Assessing Damage & Selecting Repair Methods: Practical Exercises to Apply the Morning's Learnings on Sample Damaged Components
0830 – 0930	Detailed Procedures for Welded Repairs: Step-By-Step Guide to Welded Patches, Box Enclosures, & Sleeve Repairs
0930 – 0945	Break
0945 – 1100	Calculation for Welded Repairs: Real-Life Calculations for Designing Fillet Welded Patches & Sleeves



1100 – 1215	Mechanical Repairs Overview: Introduction to Clamps, Sleeves, & Other Mechanical Methods
1215 – 1230	Break
1230 – 1420	Guidelines for Temporary & Permanent Mechanical Repairs: Differentiating Between Repair Types & Choosing the Correct Approach
1420 – 1430	Recap
1430	Lunch & End of Day Two

Day 3: Tuesday, 26th of January 2027

0730 – 0930	Safety & Quality Assurance in Welding: Ensuring Proper Safety Measures Are Followed & Quality Standards Are Met During Welding
0930 – 0945	Break
0945 – 1100	Nonmetallic & Bonded Repairs: Techniques for Using Nonmetallic Materials to Repair Piping & Equipment
1100 – 1215	Design & Application of Engineered Wrapping: Guidelines for the Application & Design Considerations
1215 – 1230	Break
1230 – 1420	Examination & Testing of Repairs: Methods & Techniques for Testing Repaired Equipment to Ensure Functionality & Safety
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4: Wednesday, 27th of January 2027

0730 – 0930	Set Acceptance Criteria & Review Temporary Repairs: Defining Criteria for Acceptance of Repairs & Reviewing Temporary Repair Methods
0930 – 0945	Break
0945 – 1100	Case Studies: Real-Life Examples of Nonmetallic Repairs: Analysis of Past Repair Cases to Understand Challenges & Solutions
1100 – 1215	Choosing Between Temporary & Permanent Repairs: Criteria & Decision-Making Processes for Selecting the Type of Repair
1215 – 1230	Break
1230 – 1420	Finalizing Repair Plans & Documentation: How to Document Repair Processes & Final Checks Before Implementation
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 5: Thursday, 28th of January 2027

0730 – 0930	Workshop: Designing & Calculating Temporary Repairs: Participants Use Spreadsheets to Calculate & Design Temporary Repairs Based on Real Parameters
0930 – 0945	Break
0945 – 1100	Guidelines to Prevent Damage During Repair: Techniques to Minimize Additional Damage During the Repair Process
1100 – 1200	Review & Approval of Repair Methods: Process for Reviewing & Getting Approval on Selected Repair Methods
1200 – 1215	Break
1300 – 1345	Final Examination & Course Wrap-Up: A Comprehensive Test to Assess Participants' Understanding & A Feedback Session to Conclude the Training
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

Jaryl Castillo, Tel: +974 6652 9196, Email: jaryl@haward.org