Haward Technology Middle East

COURSE OVERVIEW FE0867-2D
AWS Certified Welding Inspector (CWI)
Part B Training & Certification

Course Title
AWS Certified Welding Inspector (CWI): *Part B Training & Certification*

Course/Exam Date/Venue

Course Date : February 02-03, 2025
Course Venue : B2, Elite Byblos Hotel, Dubai, UAE
Exam Date : February 04, 2025
Exam Venue : Haward Technology, Ajman Office, UAE
Exam Registration Closing Date: 8 weeks before the course date

Course Reference
FE0867-2D

1.2 CEUs (12 PDHs) AWARD

Course Duration/Credits
2 days/1.2 CEUs/12 PDHs

Course Description

This practical and highly-interactive course includes practical sessions and exercises where participants carryout welding inspection. Theory learnt in the class will be applied using the "American Welding Society (AWS) Tool Kit" and "Structural Weld Replica Kit" suitable for in-class training.

This course is designed by Haward Technology to prepare Welding Inspectors for the American Welding Society (AWS) Examination, in order to certify them as "*AWS Certified Welding Inspector*". This course is a combination of the following three courses which jointly constitute this Certified Welding Inspector Exam Preparation course:-

1. *Fundamental Welding Inspection Preparation Course:*
   This course is designed as a preparation for the AWS CWI (QC-1) Exam, part A, Fundamental Welding Inspection Exam. The participant will learn how to take the exam and the basic fundamentals of welding inspection. Information for inspector training is emphasized in this dual goal course
2. *Practical Welding Inspection Preparation Course:*
   This course is designed as a preparation for the AWS CWI (QC-1) Exam, Part B, Practical Welding Inspection (hands-on) Exam. This course is a must for the nine-year renewal CWI. The participant will learn how to use the tools required for the exam, as well as the AWS Specifications Book
3. *API 1104 Preparation Course:*
   This course is designed as a preparation for the AWS CWI (QC-1) Part C Code Book Exam. The participant will learn how to use the code book to solve inspection problems

The participant will receive in-depth instruction pertaining to passing the AWS CWI (QC-1) exam, as well as insight into the intricacy's students may expect to encounter in the working environment. This course is offered as both an in-house and an open enrollment class.

Additionally, quizzes are given at the end of each section; homework is handed out at the end of each class day, and is reviewed at the beginning of the following day, and a practice" exam is administered at the end of the course.

Course Objectives

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

- Prepare for the AWS welding inspector part B exam and have enough knowledge and skills to pass such exam in order to get the AWS Welding Inspector Certification
- Discuss the aspects of welding inspection, CWI and CWE tests as well as review of the book of specifications
- Recognize the workmanship requirements and visual inspection acceptance criteria for structural steel, pipeline and pressure piping
- Carryout base metal preparation and discuss fillet weld dimensional tolerances
- Identify procedure and performance qualification requirements as well as WPS requirements and procedure and performance qualification variables
- Recognize procedure and performance qualification test requirements, procedure and performance qualification acceptance criteria and procedure and performance qualification documentation

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

The course is intended for inspection, piping and welding engineers who are seeking AWS CWI (QC-1) certification. Other engineers, managers and technical staffs who are dealing with welding and fabrication will also benefit from this course.

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.

Exam Eligibility & Structure

To qualify as a Certified Welding Inspector, you must pass a vision test and have a combination of qualifying education and work experience, with supporting documentation.

Your education and experience should match at least one of the combinations in any one of the grids below:-

MINIMUM EDUCATION	MINIMUM WORK EXPERIENCE
Bachelor or higher degree in welding engineering or welding technology - (4) years maximum substitution	Minimum of (1) years welding based work experience
Associate or higher degree in welding or non-welding related engineering technology, engineering, or a physical science - (3) years maximum substitution	Minimum of (2) years welding based work experience
Engineering/Technical courses that can be applied to Bachelor or higher degree in Welding - (2) years maximum substitution	Minimum of (3) years welding based work experience
Trade/Vocational courses - (1) year maximum substitution for successfully completed courses	Minimum of (4) years welding based work experience
High school diploma or approved high school equivalency diploma	Minimum of (5) years welding based work experience
8th grade level of schooling	Minimum of (9) years welding based work experience
Less than 8th grade	Minimum of (12) years welding based work experience

Required Codes & Standards

Listed below are the effective editions of the publications required for the current Welding Inspector Certification Examination. **Each participant must purchase these documents separately and have them available for use during the class as their cost is not included in the course fees**:-

- **CODE SUBJECTS AVAILABLE AND CURRENT EXAM EDITIONS (applicants must provide own codebook for exam)**
  - AWS D1.1- Structural Steel Code: 2020 Edition including 2nd Printing Code clinic available - Codebook provided for D1.1 week seminar participants **only**
  - AWS API 1104 - Pipelines 21st Editions Code clinic available with Errata 1 (2013), Errata 2 (2014), Errata 3 (2014), Errata 4 (2015), Errata 5 (2018) and Addendum 1 (2014), Addendum 2 (2016)
  - AWS D1.2 - Structural Aluminum Code: 2014 Edition
  - AWS D1.5 - Bridge Welding Code: 2020 Edition (including Clause 12)
  - AWS D15.1 - Railroad: 2019 Edition
  - AWS D17.1 - Aerospace: 2017 w/ Errata and Amendment
  - ASME Sec IX: 2021 Edition, B31.1 (2020) & B31.3 (2018)
  - ASME Sec VIII (Div 1) & ASME Sec IX: 2021 Editions
  - Structural Drawing Reading

Note: The editions listed above apply to the English editions only. To verify the edition being used with language-assisted exams, please contact the AWS Certification department or the Agent.

- **AWS - RECOMMENDED SELF-STUDY (Examination Preparatory Material)**

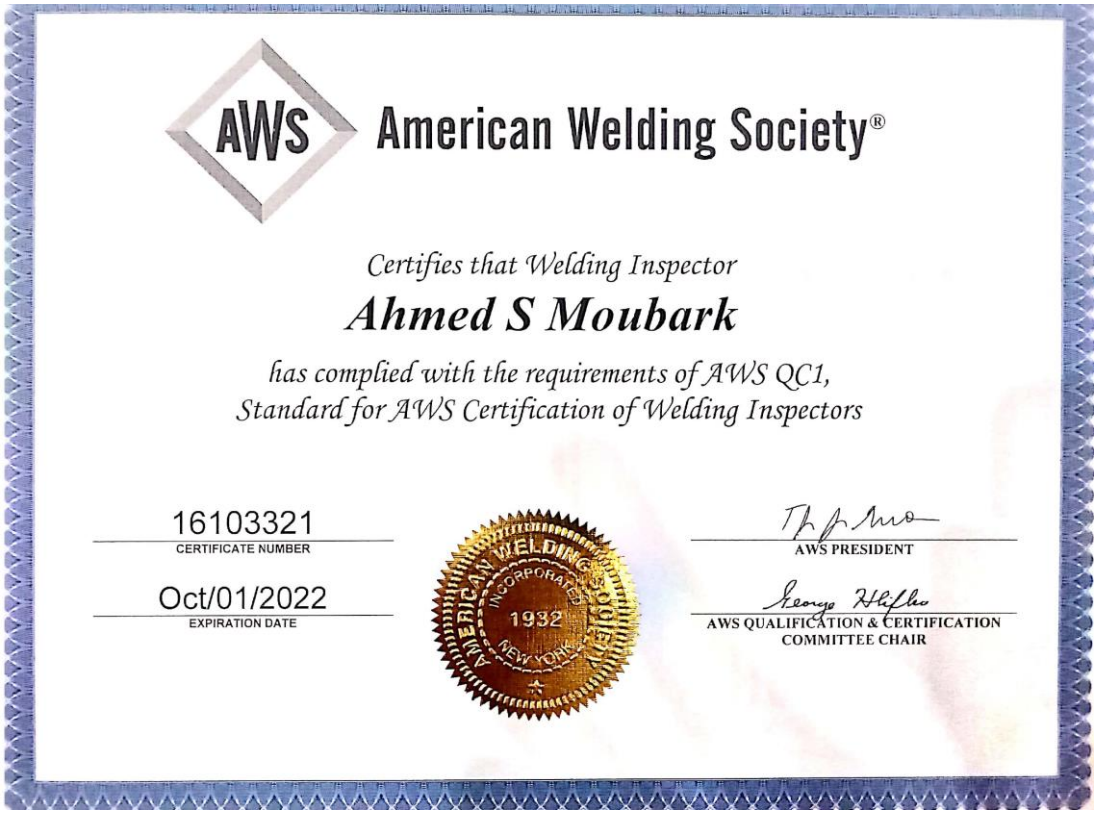
AWS Publications	Order Number
AWS Certification Manual for Welding Inspectors	CM: 2000
AWS Welding Inspection Handbook	WI: 2015

○ AWS D1.1/D1.1M Structural Welding Code-Steel	D1.1/D1.1M: 2020
○ AWS D1.1 Code Clinic Reference Manual	D1.1CCRM: 2015
○ AWS API 1104 Study Guide for API Standard 1104 Welding of Pipelines	API-M: 2017
○ AWS Welding Inspection Technology	WIT-T-2008
○ AWS Welding Inspection Technology (Workbook)	WIT-W: 2008
○ AWS Standard Welding Terms and Definitions	A3.0M/A3.0:2020
○ AWS Standard Symbols for Welding, Brazing, and Nondestructive Examination	A2.4: 2020
○ AWS Guide for the Nondestructive Examination of Welds	B1.10M/B1.10:2016
○ AWS Specification for the Qualification of Welding Inspectors	B5.1: 2013

♦ **OTHER RECOMMENDATIONS**	**Order Number**
○ AWS Welding Handbook Series	WHB-ALL
○ AWS Guide for the Visual Examination of Welds	B1.11: 2015
○ AWS Safety in Welding, Cutting and Allied Processes	ANSI Z49.1: 2012
○ AWS Standard Methods for the Mechanical Testing of Welds	B4.0: 2016
○ AWS Specification for Welding Procedure and Performance Qualification	B2.1: 2014
○ Standard for AWS Certification of Welding Inspectors	QCI: 2016

Course Certificate(s).

(1) Internationally recognized Wall Competency Certificates accredited by AWS will be issued to participants who have successfully completed the course and passed the exam on the last day of the course. Successful candidate will be certified as a *"Certified Welding Inspector (CWI)"*.



(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 * CEUs * Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology *

Haward Technology Middle East

Continuing Professional Development (HTME-CPD)

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CEU Official Transcript of Records

TOR Issuance Date: 13-Nov-19

HTME No. 8667-2014-9020-2555

Participant Name: Ali Al Hajri

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
FE0860-6D	AWS Certified Welding Inspector (CWI)	November 08-13, 2019	50	5.0

Total No. of CEU's Earned as of TOR Issuance Date **5.0**

TRUE COPY

Maricel De Guzman
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 | Fax: +971 2 3091 716 | E-mail: info@haward.org | Website: www.haward.org

Certificate Accreditations

Haward Technology is accredited by the following international accreditation organizations:

- American Welding Society (AWS)

  Haward Technology is the **International Agent** of the **American Welding Society (AWS)** and the Authorized Provider of AWS international certification examinations outside the USA. Haward Technology exhibits compliance and adherence to **AWS Quality Control Standards** in the development, conduct and delivery of certification courses and exams for welding and inspection professionals on behalf of the American Welding Society.

  The American Welding Society's certification programs are internationally recognized and are used as a benchmark of quality workmanship and skills within the welding industry around the world.

- 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 1-2013 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 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 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 **1.2 CEUs** (Continuing Education Units) or **12 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.

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. Talaat Mohamed, PGDip, BSc, is a **Certified Inspection Engineer** (**NDT-ASNT**) **& Certified Welding Inspector (CWI-AWS)** with **over 30 years** of extensive experience within the **Oil**, **Gas**, **Petrochemical**, **Petroleum** and **Refinery** industries. His thorough experience widely covers **Radiation** Safety & Protection, **Radioactive** Waste Management, **Radiation** Protection Instrumentation, **Nuclear & Radiological** Safety, **Nuclear** Engineering, **Radiation**, Safe Handling, **Non-destructive Testing** in **Radiography**, **Ultrasonic**, **Penetrant**, **Magnetic Particle**, **Visual Testing** and **Welding Inspection**. Further, he is also an expert in **Equipment Analysis & Piping Design**, **Welding**, **Corrosion & Risk Based Inspection**, **Fitness-for-Service Assessment**, **Boiler & Pressure Vessel**, **Fabrication**, Vibration, Heat Treatment, Inspection & Repair Procedures, Material **Damage Mechanism**, Material Failure Analysis, **Mechanical Integrity**, Isomerization, Distillation & Reforming Units, Pipelines, Pressure Piping, Stationary Equipment, **Tank Inspection**, Fired Boilers & Heaters, Heat Exchangers, Coolers, Pressure Vessels, Drums, Storage Tanks, Furnaces, Heaters, Pipelines, Columns, Reactors, Strippers and Safety Valves. He is also well-versed in UltraPIPE software, PCMS software and Lloyd's Register RBMI software as well as the API 571, API 510, API 572, API 570, API 653, API 560, Welding & Brazing Qualifications, API 573 and ASME B31.3 standards. He is currently the **Inspection General Manager** of Cairo Oil Refining Company (CORC) wherein he is responsible in developing the strategies for inspection and testing as well as designated as a certifying authority for ASNT-NDT levels certification according to SNT-TC-1A Personnel Qualification and Certification in Non-destructive Testing.

During his career life, Mr. Talaat has gained his practical and field experience through his various significant positions such as the **Inspection General Manager**, Technical Studies **Department Manager**, **Isomerization Inspection Department Manager**, **NDT & Inspection Section Head**, **Training Instructor**, **Technical Trainer**, **NDT Instructor**, **Inspection Engineer**, **QA/QC Team Leader** and **Team Leader** for numerous international companies like the Khalda Petroleum Company, Suez Oil Processing Co., Agiba Co., El-Nasr Petroleum Co., Suez Oil Co., General Petroleum Co., Petrobel Co., Egyptian Gas Co., Gulf Petroleum Co., as well as for Cairo Oil Refining Company, Welding Academy, GASCO and United Gas Derivatives Company.

Mr. Talaat has a **Bachelor** degree in **Mechanical Engineering** and a **Post-Graduate Diploma** in **Metallurgy & Material Engineering**. Further, he is a **Certified ASNT Level III NDT Inspector** in **Radiographic Testing** (**RT**), **Ultrasonic Testing** (**UT**), **Penetrant Testing** (**PT**), **Magnetic Particle Testing** (**MT**) and **Visual Non-destructive Testing** (**VT**); a **Certified Welding Inspector** (**CWI-AWS**), a **Certified Instructor/Trainer**; a **Certified Trainer/Assessor/Internal Verifier** by the **Institute of Leadership & Management** (**ILM**); and holds a certification in Quality Assurance, ISO 9000, API Heat Exchangers & Cooling Towers, Internal Quality System Auditing and Internal Quality System Auditing for ISO 9001/2000. Moreover, he is an active member of the American Society of Non-destructive Testing (**ASNT**), the Engineers Syndicate, the Society of Mechanical Engineers, the American Welding Society (**AWS**) and the Supreme Committee of Quality and delivered countless trainings, workshops and seminars worldwide.

Accommodation

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

Course Fee

US$ 3,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Exam Fee

US$ 1,815 per Delegate + **VAT**.

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, 08th of December 2024***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 1015	***Introduction*** *Aspects of Welding Inspection • Aspects of the CWI & CWE Tests • Review of the Book of Specifications*
1015 – 1030	*Break*
1030 – 1130	***Workmanship Requirements & Visual Inspection Acceptance Criteria – Structural Steel*** *Base Metal Preparation • Workmanship Requirements • Visual Inspection Acceptance Criteria • Fillet Weld Dimensional Tolerances*
1130 – 1230	***Workmanship Requirements & Visual Inspection Acceptance Criteria – Pipeline*** *Workmanship Requirements • Visual Inspection Acceptance Criteria*
1230 – 1245	*Break*
1245 – 1350	***Workmanship Requirements & Visual Inspection Acceptance Criteria – Pressure Piping*** *Workmanship Requirements • Visual Inspection Acceptance Criteria*
1350 – 1420	***Quiz***
1420 – 1430	***Distribute Homework & Recap***
1430	*Lunch & End of Day One*

Day 2: ***Monday, 09th of December 2024***

0730 – 0930	***Procedure Qualification Requirements*** *WPS Requirements • Procedure Qualification Variables • Procedure Qualification Test Requirements • Procedure Qualification Acceptance Criteria • Procedure Qualification Documentation*
0930 – 0945	*Break*
0945 – 1130	***Performance Qualification Requirements*** *General • Performance Qualification Variables • Performance Qualification Test Requirements • Performance Qualification Acceptance Criteria • Performance Qualification Documentation*

1130 – 1245	***MOCK EXAM***
1245 – 1300	*Break*
1300 – 1400	***MOCK EXAM (cont'd)***
1400 – 1430	***MOCK EXAM CONCLUSION***
1430	*Lunch & End of Course*

Day 3: ***Tuesday, 10th of December 2024***

0730 – 0930	***VIDEO (Use of Measuring Tools for The AWS CWI Hands-On Exam)***
0930 – 0945	*Break*
0945 – 1100	***Hands-On Workshop*** *Use of Tools for Measuring & Weld Examination*
1100 - 1230	***Hands-On Workshop (cont'd)*** *Use of Tools for Measuring & Weld Examination (cont'd)*
1230 - 1245	*Break*
1245 - 1415	***AWS-CWI-Part-B Practical Examination***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Practical Sessions

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout welding inspection using the "AWS Tool Kit" and "Structural Weld Replica Kit", suitable for classroom training.

AWS Tool Kit

Structural Weld Replica Kit

Course Coordinator

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