

**COURSE OVERVIEW FE0866-10D**  
**AWS Certified Welding Inspector 9-year Recertification**

**Course Title**

AWS Certified Welding Inspector 9-Year Recertification

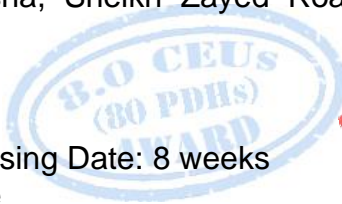
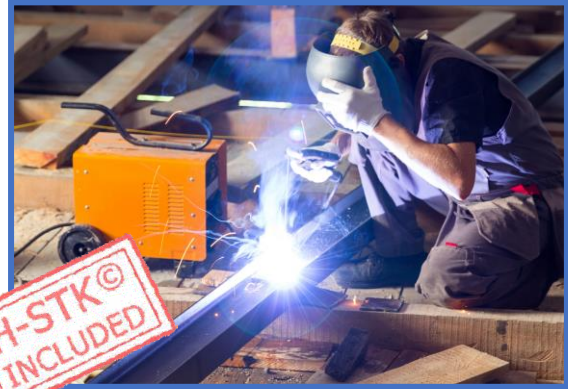
**Course/Exam Date/Venue**

November 03-14, 2024/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Exam Date : TBA

Exam Venue : TBA

Exam Registration Closing Date: 8 weeks before the course date



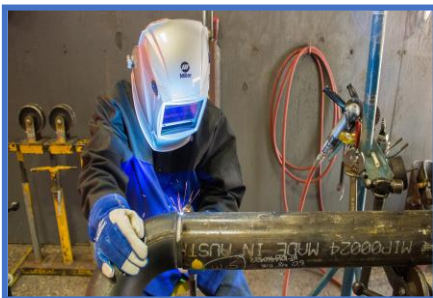
**Course Reference**

FE0866-10D

**Course Duration/Credits**

Ten days (80 hours)/8.0 CEUs/80 PDHs

**Course Description**



***This practical and highly-interactive course includes practical sessions and exercises where participants carry out 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.***



As an AWS Certified Welding Inspector or Senior Certified Welding Inspector, you must renew your certification every three years. Every nine years, you must recertify, either by examination, obtaining approved endorsements, by recertification course, or by demonstrating 80 hours of continuing education, along with other requirements. Neglecting to recertify prior to your expiration will result in the loss of your certification status and will require you to retest on all parts of the original exam to regain your certification.



**Upon the successful completion of this 80 PDHs CWI-9Y course, participants are exempted from undertaking any AWS examinations. To renew, simply submit your 9-Year renewal application accompanied by a copy of the Haward Certificate for this 80 PDHs course.**

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:-

- Renew your AWS-CWI Certificate without sitting for any AWS Examination
- Discuss the aspects of welding inspection, CWI and CWE tests as well as the skills, responsibilities and qualities of an effective inspector
- Carryout safe practices for welding inspectors as well as the method of metal joining and cutting processes
- Identify the weld joint geometry and welding symbols including the features, terminology and application
- Employ documentation governing weld inspection and qualification and describe the metal properties and destructive testing
- Distinguish the various metric practices for welding inspector
- Explain the welding metallurgy for the welding inspector, weld and base metal discontinuities and illustrate visual inspection and other NDE methods and symbols
- Recognize welding of pipelines and related facilities in accordance with API 1104
- Use tools properly for measuring and weld examination

## 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, sample video clips of the instructor’s actual lectures & practical sessions during the course conveniently saved in a **Tablet PC**.

### Who Should Attend

The course is intended for AWS Certified Welding Inspectors or Senior Certified Welding Inspectors who need to renew their certification every 9 years as mandated by AWS.

### 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
- API 1104 - Pipelines 21<sup>st</sup> Edition, December 2008/ Errata 1 April 2014
- AWS D1.2 - Structural Aluminum Code: 2014 Edition
- AWS D1.5 - Bridge Welding Code: 2015 Edition (including Clause 12)
- AWS D15.1 - Railroad: 2012 Edition
- AWS D17.1 - Aerospace: 2017 w/ Amendment 1
- ASME BPVC Sec IX, Power (B31.1) and Process (B31.3) Piping
- ASME BPVC Sec IX (2019 Edition), B31.1 (2018) and B31.3 (2018)
- ASME BPVC Sec VIII, Div. 1 (2015) and Sec IX (2015)

*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**

- AWS Certification Manual for Welding Inspectors
- AWS Welding Inspection Handbook
- AWS Structural Welding Code-Steel
- AWS Code Clinic Reference Manual
- AWS Study Guide for API Standard 1104  
Welding of Pipelines
- AWS Welding Inspection Technology
- AWS Welding Inspection Technology (Workbook)
- AWS Welding Inspection Technology Sample  
CWI Fundamentals Examination & Key

##### **Order Number**

CM  
WI: 2015  
D1.1/D1.1M: 2020  
CCRM: 2020 D1.1  
API-M: 2017  
  
WIT-T-2020  
WIT-W: 2020  
WIT-E: 2020

- 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-AMD1

◆ **OTHER RECOMMENDATIONS**

- AWS Welding Handbook Series **Order Number**  
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

**Training Methodology**

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Workshops & Work Presentations
- 30% Case Studies & Practical Exercises
- 20% Software, Simulators & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

**Training Fee**

**US\$ 10,000** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

**Exam Fees**

**US\$ 3,015** per Delegate + **VAT**.

**Accommodation**

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

**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.



**Howard Technology Middle East**

*Certifies that*

**Waleed Al Habeeb**

*Has successfully completed a course on*

**AWS Certified Welding Inspector  
9-year Recertification**

*and is hereby awarded 8.0 CEUs (Continuing Education Units)  
equivalent to 80 PDHs (Professional Development Hours)*

<b>Nov 13-24, 2022</b>	<b>74852/01/FE0866-10D/CAI/24.11.22</b>
<i>Course Date</i>	<i>Certificate Number</i>
<b>Nov 24, 2022</b>	<b>N/A</b>
<i>Certificate Issuance Date</i>	<i>Certificate Expiry Date</i>



Mr. Allen Noguera  
Course Instructor

ACTVET License No.  
0588/2013






Mr. Jaryl Castillo  
Academic Director

Certificate Accreditation  
Please see overleaf

## Certificate Accreditations


Haward Technology is accredited by the following international accreditation organizations:-

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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.


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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 **8.0 CEUs** (Continuing Education Units) or **80 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.

### 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. Essam Hammad**, BSc, ASNT-NDT, AWS-CWI, API, is a **Senior Engineer** with over **20 years** of extensive years within the **Oil & Gas, Refineries, Petrochemical and Power industries**. His expertise lies extensively in the areas of **Maintenance Management** of Building & Facilities, **Welded Tanks** for Oil Storage, **Storage Tank, Tank Emissions Monitoring & Prevention, Tank Inspection, Tank Repair & Maintenance, Tank Construction & Maintenance, Tank**

**Settlement, Pressure Vessel Inspection, Welding Engineering, Welding Technology, Welding & Corrosion Engineering, Welding & Fabrication, Welding Inspection & Metallurgy, Welding Defects Analysis, Welding Procedure Specification, Welding Quality & Control, Plastic Pipe Welding, Piping Design & Welding, Piping Inspection, Gas Compressors, Process & Pressure Piping, Piping & Pipe Support Systems Troubleshooting, Plant Utility Piping System, Pipe Support Design & Piping Stress Analysis, Piping Integrity Management, Non-Destructive Testing Procedure, Liquid Penetrant Testing (PT), Magnetic Particle Testing (MT), Ultrasonic Testing (UT), Radiography Testing (RT), HRSG, Boiler, Flanges, Fittings, Fabricated Valves, Rotating Equipment, Gear Boxes, Pressure Vessels, Silos, Material Classification & Testing, PWHT & FAT Procedure, Damage Mechanisms, Failure Mode Analysis, Root Cause Analysis, Risk Based Inspection & Asset Integrity Management, ASME Sec IX Welding & Brazing, Settlement Surveys, Steel Structure and Site Welder Qualification.**

During his career life, Mr. Essam has worked with numerous multi-national companies such as the **Intertek, Arab Steel Fabrication, IBSF, Tatweer, Petrojet, Total, SEC, ASORC, SABIC, Aramco MAG Engineering & Construction, Bechtel-Maaden Aluminum and Worley Parsons McDermott** holding various key positions as a **Metallurgical Engineer, QC Engineer, Vendor Inspection Engineer, Senior Inspection Engineer, Senior Welding Inspector, QA/QC Engineer, Technical Training Manager, Business Development Manager, API Authorized In-service Inspector, Vendor Expeditor, Senior Lecturer, Emergency First Responder, Inspection Team leader & Technical Consultant and NDE Operator.**

Mr. Essam has a **Bachelor's degree in Metallurgical Engineering**. Further, he is a **Certified Instructor/Trainer, a Certified Welding Inspector (AWS-CWI), a Certified ASNT-NDT Level II Inspector** in Liquid Penetrant Testing (PT), Magnetic Particle Testing (MT), Ultrasonic Testing (UT) and Radiography Testing (RT), a **Certified API 510 In-Service Pressure Vessel Inspector, a Certified API 653 In-Service Tank Inspector, a Certified API 570 In-Service Piping Inspector, an ISO 22301 Lead Auditor and an ISO 9001 & OHSAS 18001 Internal Auditor**. He has further delivered numerous courses, trainings, seminars and conferences 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: Sunday, 03<sup>rd</sup> of November 2024**

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	<b>PRE-TEST</b>
0830 – 0930	<b>Introduction</b> Aspects of Welding Inspection • Skills & Responsibilities of the Inspector • Aspects of the CWI & CWE Tests • Qualities of an Effective Inspector
0930 – 0945	Break
0945 – 1200	<b>Safe Practices for Welding Inspectors (Z 49.1)</b> General Aspects • Potential Hazards • Personal Protective Equipment • Safety Program & Management Support
1200 – 1300	Lunch
1300 – 1500	<b>Safe Practices for Welding Inspectors (Z 49.1) (cont'd)</b> Safety Training • Material Safety Data Sheets • Threshold Limit Value • Protective Screens • Fire Prevention
1500 – 1515	Break
1515 – 1630	<b>Safe Practices for Welding Inspectors (Z 49.1) (cont'd)</b> Hot Work Permits • Explosion Hazards • Fume Exposure Factors • Electrical Shock • Section Quiz • Safety Video
1630 – 1700	<b>Quiz</b>
1700 – 1730	<b>Distribute Homework &amp; Recap</b>
1730	End of Day One

#### **Day 2: Monday, 04<sup>th</sup> of November 2024**

0730 – 0830	<b>Homework Review</b>
0830 – 0930	<b>Metal Joining &amp; Cutting Processes</b> High Speed Welding Video
0930 – 0945	Break
1045 – 1200	<b>Metal Joining &amp; Cutting Processes (cont'd)</b> Common Features of Welding Processes
1200 – 1300	Lunch
1300 – 1500	<b>Metal Joining &amp; Cutting Processes (cont'd)</b> Basic Process Groups
1500 – 1515	Break
1515 – 1630	<b>Weld Joint Geometry &amp; Welding Symbols (A2.4)</b> Joint Arrangement • Joint Design • Joint Geometry • Edge Shapes • Weld Joint Features
1630 – 1700	<b>Quiz</b>
1700 – 1730	<b>Distribute Homework &amp; Recap</b>
1730	End of Day Two



**Day 3: Tuesday, 05<sup>th</sup> of November 2024**

0730 – 0830	<b>Homework Review</b>
0830 – 0930	<b>Weld Joint Geometry &amp; Welding Symbols (A2.4) (cont'd)</b> Weld Terminology • Penetration Terminology • Weld Size Terminology • Weld Application • Standard Welding Symbols
0930 – 0945	Break
1045 – 1200	<b>Documentation Governing Weld Inspection &amp; Qualification</b> General Information • Document Types • Fabrication Drawings • Dimensions • Tolerances • Notes
1200 – 1300	Lunch
1300 – 1500	<b>Documentation Governing Weld Inspection &amp; Qualification (cont'd)</b> Welding Details • Hold Points • Inspection Information • Types of Codes/Standards • Specifications
1500 – 1515	Break
1515 – 1630	<b>Documentation Governing Weld Inspection &amp; Qualification (cont'd)</b> Control of Materials • Material Test Reports • Material Control Systems • Material Control Methods • Alloy Identification Systems • Qualification
1630 – 1700	Quiz
1700 – 1730	<b>Distribute Homework &amp; Recap</b>
1730	End of Day Three

**Day 4: Wednesday, 06<sup>th</sup> of November 2024**

0730 – 0830	<b>Homework Review</b>
0830 – 0930	<b>Metal Properties &amp; Destructive Testing</b> Metal Properties • Strength • Behavior Under Load • Temperature Effects • Ductility • Directional Properties
0930 – 0945	Break
1045 – 1200	<b>Metal Properties &amp; Destructive Testing (cont'd)</b> Hardness • Indenter Types • Toughness • Stress Riser • Transition Temperature • Fatigue Strength
1200 – 1300	Lunch
1300 – 1500	<b>Metal Properties &amp; Destructive Testing (cont'd)</b> Endurance Limit • Chemical Properties • Elements in Steels • Dissolved Gases • Aluminum Alloys • Nickel Alloys • Copper Alloys
1500 – 1515	Break
1515 – 1630	Testing
1630 – 1700	Quiz
1700 – 1730	<b>Distribute Homework &amp; Recap</b>
1730	End of Day Four

**Day 5: Thursday, 07<sup>th</sup> of November 2024**

0730 – 0830	<b>Homework Review</b>
0830 – 0930	<b>Metric Practices for Welding Inspection</b> Metric System
0930 – 0945	Break
1045 – 1200	<b>Metric Practices for Welding Inspection (cont'd)</b> Metric System
1200 – 1300	Lunch

1300 – 1500	<i>Welding Metallurgy for The Welding Inspector</i>
1500 – 1515	<i>Break</i>
1515 – 1630	<i>Welding Metallurgy for The Welding Inspector (cont'd)</i>
1630 – 1700	<i>Quiz</i>
1700 – 1730	<i>Distribute Homework &amp; Recap</i>
1730	<i>End of Day Five</i>

**Day 6: Sunday, 10<sup>th</sup> of November 2024**

0730 – 0830	<i>Homework Review</i>
0830 – 0930	<i>Weld &amp; Base Metal Discontinuities (B1.11)</i>
0930 – 0945	<i>Break</i>
1045 – 1200	<i>Weld &amp; Base Metal Discontinuities (B1.11) (cont'd)</i>
1200 – 1300	<i>Lunch</i>
1300 – 1500	<i>Visual Inspection &amp; Other NDE Methods &amp; Symbols (B1.10)</i>
1500 – 1515	<i>Break</i>
1515 – 1630	<i>Visual Inspection &amp; Other NDE Methods &amp; Symbols (B1.10) (cont'd)</i>
1630 – 1700	<i>Quiz</i>
1700 – 1730	<i>Distribute Homework &amp; Recap</i>
1730	<i>End of Day Six</i>

**Day 7: Monday, 11<sup>th</sup> of November 2024**

0730 – 0830	<i>Homework Review</i>
0830 – 0930	<i>Two (2) Hour Timed Test (150 Questions)</i>
0930 – 0945	<i>Break</i>
1045 – 1145	<i>Two (2) Hour Timed Test (150 Questions) (cont'd)</i>
1145 – 1245	<i>Lunch</i>
1245 – 1500	<i>Discussion/Review</i>
1500 – 1515	<i>Break</i>
1515 – 1630	<i>Welding of Pipelines &amp; Related Facilities (API 1104) General • Referenced Publications • Definition of Terms</i>
1630 – 1700	<i>Quiz</i>
1700 – 1730	<i>Distribute Homework &amp; Recap</i>
1730	<i>End of Day Seven</i>

**Day 8: Tuesday, 12<sup>th</sup> of November 2024**

0730 – 0830	<i>Homework Review</i>
0830 – 0930	<i>Welding of Pipelines &amp; Related Facilities (API 1104) (cont'd) Specifications • Qualification of Welding Procedures for Welds Containing Filler-Metal Additives</i>
0930 – 0945	<i>Break</i>
1045 – 1200	<i>Welding of Pipelines &amp; Related Facilities (API 1104) (cont'd) Qualification of Welders • Design &amp; Preparation of a Joint for Production Welding</i>
1200 – 1300	<i>Lunch</i>
1300 – 1500	<i>Welding of Pipelines &amp; Related Facilities (API 1104) (cont'd) Inspection &amp; Testing of Production Welds • Acceptance Standards for Nondestructive Testing</i>
1500 – 1515	<i>Break</i>

1515 – 1630	<b>Welding of Pipelines &amp; Related Facilities (API 1104) (cont'd)</b> <i>Repair &amp; Removal of Defects • Alternative Acceptance Standards for Girth Welds</i>
1630 – 1700	<b>Quiz</b>
1700 – 1730	<b>Distribute Homework &amp; Recap</b>
1730	<i>End of Day Eight</i>

**Day 9: Wednesday, 13<sup>th</sup> of November 2024**

0730 – 0830	<b>Homework Review</b>
0830 – 0930	<b>Welding of Pipelines &amp; Related Facilities (API 1104) (cont'd)</b> <i>In-Service Welding • Procedures for Nondestructive Testing</i>
0930 – 0945	<i>Break</i>
1045 – 1200	<b>Welding of Pipelines &amp; Related Facilities (API 1104) (cont'd)</b> <i>Automatic Welding • Automatic Welding without Filler-Metal Additions</i>
1200 – 1300	<i>Lunch</i>
1300 – 1500	<b>API 1104 Exercise</b>
1500 – 1515	<i>Break</i>
1515 – 1630	<b>API 1104 Exercise (cont'd)</b>
1630 – 1700	<b>Quiz</b>
1700 – 1730	<b>Distribute Homework &amp; Recap</b>
1730	<i>End of Day Nine</i>

**Day 10: Thursday, 14<sup>th</sup> of November 2024**

0730 – 0930	<b>VIDEO (Use of Measuring Tools for The AWS CWI Hands-On Exam)</b>
0930 – 0945	<i>Break</i>
0945 – 1200	<b>Hands-On Workshop</b> <i>Use of Tools for Measuring &amp; Weld Examination</i>
1200 – 1300	<i>Lunch</i>
1300 – 1430	<b>Hands-On Workshop (cont'd)</b> <i>Use of Tools for Measuring &amp; Weld Examination (cont'd)</i>
1430 – 1530	<b>Part B Exam</b>
1530 – 1545	<i>Break</i>
1545 – 1645	<b>Part B Exam (cont'd)</b>
1645 – 1700	<b>Course Conclusion</b> <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course</i>
1700 – 1715	<b>POST-TEST</b>
1715 – 1730	<i>Presentation of Course Certificates</i>
1730	<i>End of Course</i>

**MOCK Exam**

Upon the completion of the course, participants have to sit for a MOCK Examination similar to the exam of the Certification Body through Haward's Portal. Each Participant will be given a username and password to log in Haward's Portal for the Mock exam during the 7 days following the course completion. Each participant has only one trial for the MOCK exam within this 7-day examination window. Hence, you have to prepare yourself very well before starting your MOCK exam as this exam is a simulation to the one of the Certification Body.

**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 “American Welding Society (AWS) Tool Kit” and “Structural Weld Replica Kit”, suitable for classroom training.



**Course Coordinator**

Mari Nakintu, Tel: +971 2 30 91 714, Email: [mari1@haward.org](mailto:mari1@haward.org)