COURSE OVERVIEW FE0938
API SIFE: Source Inspector Fixed Equipment
(API Exam Preparation Training)

Course Title
API SIFE: Source Inspector Fixed Equipment *(API Exam Preparation Training)*

Course Date/Venue
Course Date : September 08-12, 2024
Course Venue : TBA Meeting Room, Crowne Plaza Al Khobar, Al Khobar, KSA
Exam Window : November 01-22, 2024
Exam Venue : Abu Dhabi, Dubai, Al-Khobar, Jeddah, Kuwait, Amman, Beirut, Cairo, Manama and Muscat. Participant has the option to attend at any of the above cities
Exam Registration Closing Date: August 23, 2024

Course Reference
FE0938

Course Duration/Credits
Five days/4.0 CEUs/40 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 an up-to-date knowledge and skills for source inspectors for the purpose of providing a consistent method of Supplier/Vendor (S/V) quality surveillance for the oil, petrochemical and gas industries. It is intended for individuals willing to take the API Source Inspector Certification examination.

The course covers the process of providing quality surveillance of materials, equipment and fabrications being supplied for use in the oil, petrochemical and gas Industry, including upstream, midstream and downstream segments. Participants will be trained in providing a systematic approach to risk-based source inspection in order to provide confidence that materials and equipment being purchased meet the minimum requirements as specified in the project documents and contractual agreements. The course will guide source inspectors acting on behalf of purchasers to determine whether manufacturers/fabricators own quality systems have functioned appropriately, such that the purchased equipment and materials will meet contractual agreements.

This course focuses primarily on pressure containing and structural equipment (fixed equipment) including: vessels, columns/towers, heat exchangers, piping, valves, pressure relief devices, tubulars, and associated structural fabrications.

Haward Technology is proud of its **90% pass rate** on all our API sponsored courses.

Course Objectives

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

- Prepare for the next API SIFE exam and have enough knowledge and skills to pass such exam in order to get the API SIFE certification
- Analyse the scope, purpose, definitions, abbreviations and acronyms of API SIFE guide
- Describe the source inspection management program as well as the project specific source inspection planning activities
- Evaluate the source inspection performance including the inspector conduct and safety and review of project documents
- Review the various API, ASME, ASNT, AWS and SSPC Codes, Standards and references
- Carryout the welding procedures, qualifications, NDE procedures and project schedules
- Perform source inspection and recognize the source inspection work process scheduled planning events
- Employ proper methods of report writing and identify the nonconformance/deviations
- Carryout source inspection project continuous improvement and source inspector continuous improvement
- Recognize the examination methods, tools and equipment
- Identify the various nondestructive examination (NDE) techniques
- Apply destructive testing, pressure/leak testing, performance/functional testing, surface preparation/coatings inspections and final acceptance
- Illustrate the manufacturing and fabrication processes, welding processes and welding defects
- Identify the metallurgy issues associated with manufacturing and fabrication processes
- Discuss pressure vessels, piping and structural components

Who Should Attend

This course provides a wide understanding and deeper appreciation of fixed equipment inspection in the source according to API source inspection and quality surveillance of fixed equipment guide for those who are engaged in inspection of bought out materials and components for fixed equipment like pressure vessels, piping and structurals. Further, the course is beneficial to all QA/QC engineers and inspectors, project engineers and inspectors of industrial plants and pressure equipment inspectors of inspection bodies and agencies.

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.

Training Fee

US$ 7,500 per Delegate + **VAT**. This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Exam Fee

US$ 620 per Delegate + **VAT**

Required Codes and Standards

Listed below are the effective editions of the publications required for this examination on the date(s) shown above. **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**:-

API Documents

API Recommended Practice 588, *Recommended Practice for Source Inspection and Quality Surveillance of Fixed Equipment, 1st Edition, 2019*

API Recommended Practice 572, *Inspection of Pressure Vessels,4th Edition, December 2016, Sections 3 and 4*

API Recommended Practice 577, *Welding Inspection and Metallurgy, 3rd Edition, October 2020*

API Recommended Practice 578, *Material Verification Program for Alloy Piping Systems, 3rd Edition, February 2018*

API Standard 598, *Valve Inspection and Testing, 10th Edition, October 2016*

American Welding Society (AWS)

AWS D1.1, *Structural Welding Code- Steel, 24th Edition, 2020*

American Society of Nondestructive Testing (ASNT)

Recommended Practice SNT TC-1A *Personal Qualification and Certification in Nondestructive Testing Personnel, 2011 Edition*

American Society of Mechanical Engineers (ASME) - Boiler and Pressure Vessel Code (BPVC)

Section II *Materials*, Part A, B, C, D, 2021

-Sections SA-20, SA-370, SA-6

Section V *Nondestructive Examination*, 2021

- All definitions in Subsection A, Article 1, Appendix 1 and Subsection B, Article 30, SE- 1316.
- Articles 1, 4, 6, 7, 9, 10, and 23 (section 797 only)

Section VIII *Rules for Construction of Pressure Vessels, Division 1 and 2,* 2021

- All definitions in Appendix 3
- Sections UG 4 – 15; UG 75 – 85; UG 90 – 103; UG 115 - 120
- Sections UW 1 – 3; UW 5; UW 26 – 42; UW 46 – 54; UW 60,
- UCS 56 57

Section IX *Welding and Brazing Qualifications, Welding only*, 2021

- QW 100 – 190; QW 200 – 290; QW 300 - 380
- QW 400 – 490; QW 500 - 540

ASME B31.3, *Process Piping*, 2018 Edition

- Chapters I, III, IV, V, VI

ASME B16.5 *Pipe Flanges and Flanged Fittings*, 2020

- Chapters 1-8

Society for Protective Coatings (SSPC)

SSPC – PA 2 *Procedure for Determining Conformance to Dry Coating Thickness Requirements, 2022*

SSPC Surface Preparation Guide, the following sections only:

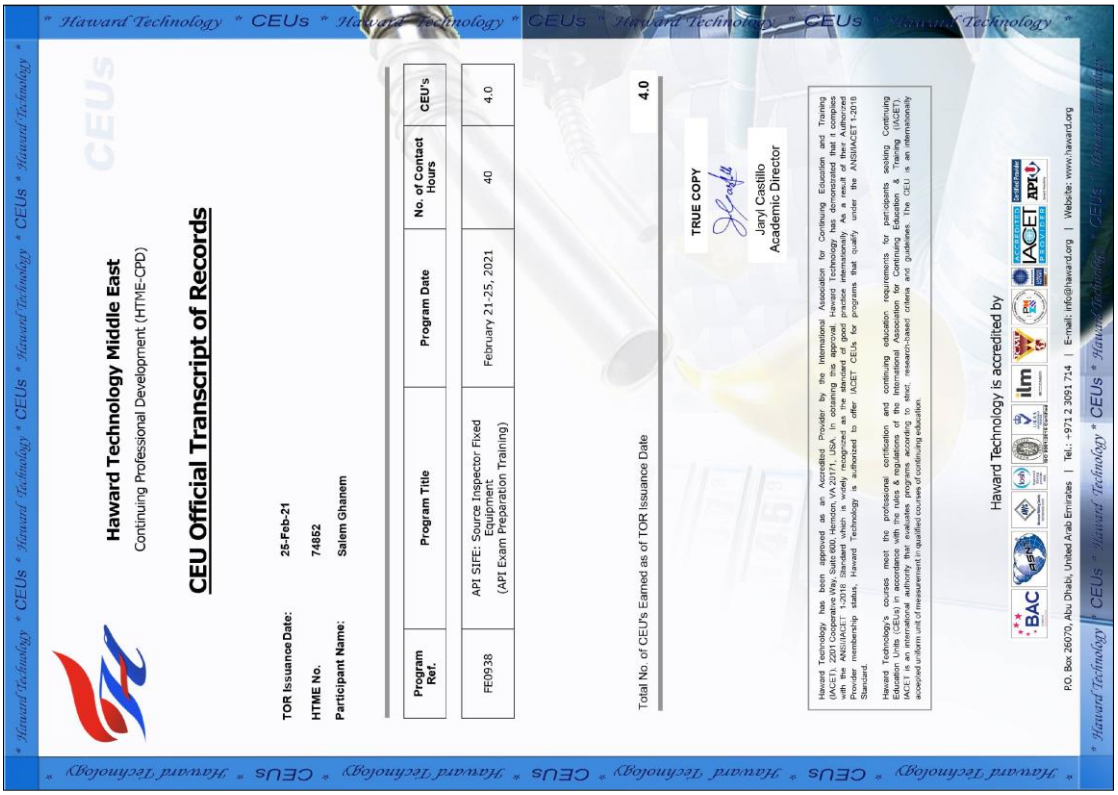
- SSPC-SP1 *Solvent Cleaning*, 2015
- SSPC-SP3 *Power Tool Cleaning*, 2004
- SSPC-SP5 *NACE 1 White Metal Blast Cleaning*, 2007
- SSPC-SP6 *NACE 3 Commercial Blast Cleaning,* 2007
- SSPC-SP7 *NACE 4 Brush-Off Blast Cleaning*, 2007
- SSPC-SP10 *NACE 2 Near-White Blast Cleaning*, 2007
- SSPC-SP11 *Power Tool Cleaning to Bare Metal*, 2013

Note: **API and ASME publications are copyrighted material. Photocopies of API and ASME publications are not permitted.**

API Certificate(s)

API-SIFE certificate will be issued to participants who have successfully passed the API-SIFE examination.

(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.



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 **4.0 CEUs** (Continuing Education Units) or **40 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:

Mr. Marei Hamad, MSc, API, CSWIP, is a **Senior Inspection Engineer** with **25 years** of extensive experience within the **Oil** & **Gas**, **Refinery**, **Petrochemical** and **Refining** industries. His fields of specialization covers in the areas of **Piping Inspection**, **Corrosion & Materials Inspection**, **Welding Inspection & Metallurgy**, **Risk Based Inspection**, **Aboveground Storage Tank Inspection**, **Pressure Vessel Inspection**, **Turnaround** Inspection, **Platform Structures & Pressure System Equipment** Inspection, **Static Equipment** Inspection, **Pressure Relief Valves** Inspection & Testing, **Risk Based** Assessment, **Pipeline Defect** Assessment, **Non-Destructive Testing** (MT, PT, UT, RT), **Phased Array** Testing, **NDT & Corrosion** Monitoring, **Radiography & Vibration**, **Piping & Storage Tanks**, **Heat Exchangers**, **Process Side Vessels & Piping**, **Integrity** Management System, **Corrosion** Management, Fitness-for-Service (**FFS**), Flare Boom & Exhaust Tower Structure Inspection, PFP **Coatings**, **Blast** Walls, **Hull Void & Blast** Tanks, Well **X-Tree** Jacket, Sigma Phase Formation of **Duplex Stainless Steel**, **Dehydration** System, Learning Management System (**LMS**), Engineering **Project** Management, Integrity & Reliability, Life Cycle Analysis, Engineering Structural Drawings, Isometric Drawings & **P&IDs**, **Jack up** Platform Structure Inspection, Permit to Work (**PTW**), Confined Space, HSE & Risk Assessment, Hazard Identification & Task Risk Assessments, OPITO Approved Further Offshore Emergency, HUET & EBS and TBOSIET. Further, he is also knowledgeable in using software like **MAXIMO** and Asset Condition Evaluation Tool (**ACET**) along with the international industry standards such as ASME, API, TEMA, BS/EN, ANSI & AWS. He is currently the **Offshore Inspection Engineer** of Oceaneering International wherein he performs routine visual inspection and integrity assessment.

During his career life, Mr. Marei has gained his practical and field experience through his various significant positions and dedication as the **Senior Inspection Engineer**, **Offshore Inspection Engineer**, **Senior Plant Inspector**, **Welding Inspector**, **NDT Inspector**, **Turnaround Inspection Coordinator**, **Senior Instructor/Trainer** and **Inspection Trainee** from West Chirag Platform, Shah Deniz Platform, LNG Plant-Sirte Oil Co., Methanol Plant-Sirte Oil Co., Urea Plant-Lifeco, El Brega Oil & Gas Marketing Co. and Azzawia Refinery Co., just to name a few.

Mr. Marei has a **Master's** degree in **Asset Integrity Management** from the **Robert Gordon University**, **UK** and holds a Scottish Qualifications Authority (**SQA**) Higher National Certificate (**HNC**) in **Welding**, **Fabrication & Inspection** and a **Diploma** in **Technical Inspection**. Further, he is a **Certified API 570 Piping Inspector**, a **Certified API 571 Corrosion and Materials**, a **Certified API 577 Welding Inspection & Metallurgy**, a **Certified API 580 Risk Based Inspection**, a **Certified API 653 Aboveground Storage Tank Inspector** and a **Certified API 510 Pressure Vessel Inspector** from the American Petroleum Institute (**API**), a **Certified API SIFE Source Inspector Fixed Equipment;** a **Certified CSWIP 3.2.2 Senior Welding Inspector** (Level III with RI), a **Certified CSWIP 3.1 Welding Inspector** (Level II) and a **Certified CSWIP Plant Inspector** (Level I) from the Certification Scheme for Weldment Inspection Personnel (**CSWIP**); and a **Certified ASNT-NDT Level II** in Radiographic Testing (**RT**), Ultrasonic Testing (**UT**), Magnetic Particle Testing (**MT**) and Liquid Penetrant Testing (**PT**). Moreover, he is a **Certified Instructor/Trainer**, an **Incorporated Engineer** (UKAS Cat 2), a **Member** of the **Institution of Mechanical Engineer** (IMechE) and has further delivered numerous trainings, courses, seminars, conferences 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: ***Sunday, 08th of September 2024***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Scope/Purpose***
0930 – 0945	*Break*
0945 – 1030	***Definitions, Abbreviations & Acronyms***
1030 – 1115	***Training***
1115 – 1200	***Source Inspection Management Program***
1200 – 1300	*Lunch*
1300 – 1400	***Project Specific Source Inspection Planning Activities*** *Equipment Risk Assessment • Development of a Source Inspection Project Plan • Development of Inspection & Test Plans • Selection of an Inspector • Coordination of Inspection Events • Report Review*
1400 – 1500	***Source Inspection Performance*** *Inspector Conduct & Safety • Review of Project Documents*
1500 – 1515	*Break*
1515 – 1645	***API Codes & Standards*** *API RP 572 (Inspection Practices of Pressure Vessels) • API RP 577 (Welding Inspection & Metallurgy) • API RP 578 (Material Verification Program for New & Existing Alloy Piping Systems) • API 598 (Valve Inspection & Testing)*
1645 – 1700	***Distribute Homework & Recap***
1700	*End of Day One*

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

0730 – 0800	*Review Homework Answers*
0800 – 0945	***ASME Codes & Standards*** *ASME BPVC Section II-Materials (Part A, B, C & D) • ASME BPVC Section V-Nondestructive Examination • ASME BPVC Section VIII, Division 1-Rules for the Construction of Pressure Vessels • ASME BPVC Section VIII, Division 2-Rules for the Construction of Pressure Vessels-Alternative Rules • ASME BPVC Section IX-Welding & Brazing Qualifications Procedures, Welders, Brazers, & Welding & Brazing Operators • ASME B31.3-Process Piping • ASME B16.5-Pipe Flanges & Flanged Fittings*
0945 – 1000	*Break*
1000 – 1100	***ASNT Standards*** *ASNT SNT-TC-1A*
1100 – 1200	***AWS Standards & References*** *The Welding Inspection Handbook • AWS D1.1 Structural Welding Code*
1200 – 1300	*Lunch*
1300 – 1400	***SSPC Standards*** *SSPC-PA 2 Coating Applications Standard No. 2, Procedure for Determining Conformance to Dry Coating Thickness Requirements • SSPC Surface Preparation Guide*
1400 – 1500	***Welding Procedures & Qualifications***

1500 – 1515	Break
1515 – 1600	**NDE Procedures**
1600 – 1645	**Project Schedules**
1645 – 1700	**Distribute Homework & Recap**
1700	End of Day Two

Day 3: Tuesday, 10th of September 2024

0730 – 0800	Review Homework Answers
0800 – 0930	**Performing the Source Inspection**
0930 – 0945	Break
0945 – 1045	**Source Inspection Work Process Scheduled Planning Events** Pre-purchase Meeting (Prior to Contract Placement) • Pre-inspection Meeting (Prior to Start of Fabrication)
1045 – 1200	**Report Writing**
1200 – 1300	Lunch
1300 – 1400	**Nonconformance/Deviations**
1400 – 1500	**Source Inspection Project Continuous Improvement**
1500 – 1515	Break
1515 – 1600	**Source Inspector Continuous Improvement**
1600 – 1645	**Examination Methods, Tools & Equipment** Review & Confirmation of Materials of Construction • Dimensional Inspections • Visual Inspections
1645 – 1700	**Distribute Homework & Recap**
1700	End of Day Three

Day 4: Wednesday, 11th of September 2024

0730 – 0800	Review Homework Answers
0800 – 0900	**Nondestructive Examination (NDE) Techniques** General • Penetrant Testing (PT) • Magnetic Testing (MT) • Radiographic Testing (RT) • Ultrasonic Testing (UT) • Hardness Testing (HT) • Positive Material Identification (PMI)
0900 – 1000	**Destructive Testing**
1000 – 1015	Break
1015 – 1100	**Pressure/Leak Testing**
1100 – 1200	**Performance/Functional Testing**
1200 – 1300	Lunch
1300 – 1400	**Surface Preparation/Coatings Inspections**
1400 – 1500	**Final Acceptance**
1500 – 1515	Break
1515 – 1600	**Manufacturing & Fabrication (M&F) Processes**
1600 – 1645	**Welding Processes & Welding Defects** Casting • Forging • Machining • Assembly
1645 – 1700	**Distribute Homework & Recap**
1700	End of Day Four

Day 5: Thursday, 12th of September 2024

0730 – 0800	Review Homework Answers
0800 – 1000	**Metallurgy Issues Associated with Manufacturing & Fabrication Processes** The Structure & Metals • Physical Properties of Metals • Mechanical Properties of Metals • Hardness & Hardenability of Metals • Weldability of Metals • Preheating & Postweld Heat Treatment (PWHT)

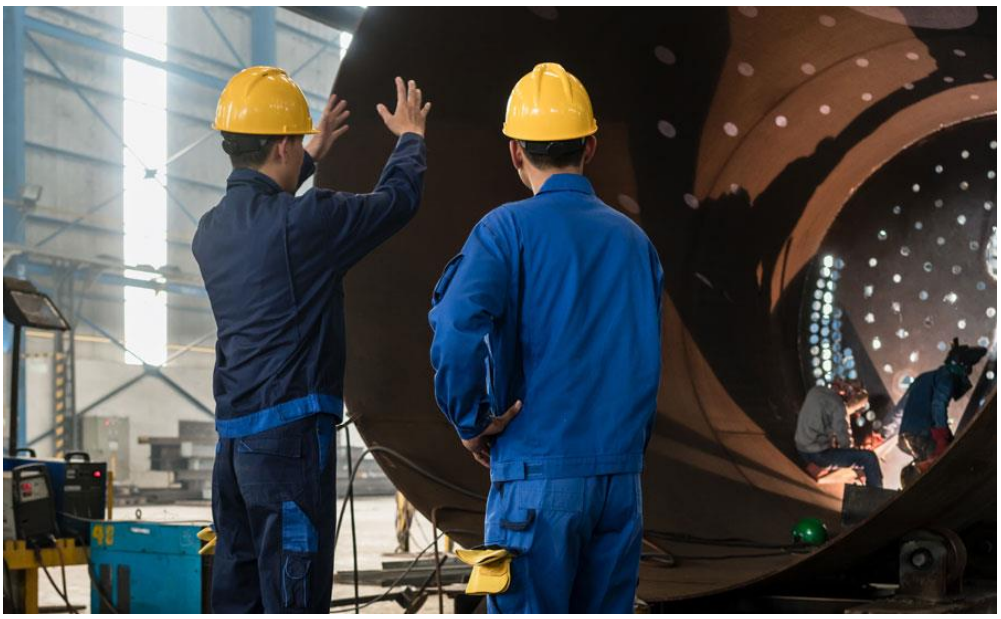
1000 – 1015	*Break*
1015 – 1200	***Pressure Vessels*** *Vessel Methods of Construction • Vessel Materials of Construction • Vessel Internal Components • Vessel Design & Construction Standards • Dimensional Check of Pressure Vessels • Heat Exchangers*
1200 – 1300	*Lunch*
1300 – 1500	***Piping*** *Valves • Flanges • Fittings*
1500 – 1515	*Break*
1515 – 1615	***Structural Components***
1615 – 1630	***Course Conclusion***
1630 - 1645	***POST-TEST***
1645 – 1700	*Presentation of Course Certificates*
1700	*End of Course*

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

This practical and highly-interactive course includes real-life case studies and exercises:-



Course Coordinator

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