COURSE OVERVIEW HE0161
Certified Training in Respiratory Equipment for Safety Engineers (Train-the-Trainer)

Course Title
Certified Training in Respiratory Equipment for Safety Engineers (Train-the-Trainer)

Course Date/Venue
September 28-October 02, 2025/Slaysel 02 Meeting Room, Movenpick Hotel & Resort Al Bida'a Kuwait, City of Kuwait

Course Reference
HE0161

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

Course Description

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using SCBA & H2S Detector.

H_2S (hydrogen sulphide) is a gas that can be created by natural biological processes or by human activity and poses a serious threat to people or assets because of its extremely toxic and corrosive properties. It is important, therefore, for oil and gas personnel to be competent in emergency response practices necessary for them to stay and work in an environment with potential for exposure to H_2S gas.

This course covers the emergency response competency requirements and provides details of training required for personnel working in potential H_2S environments. It covers the characteristics of hydrogen sulphide gas and the potential physiological effects of exposure as well as the use of H_2S detection equipment and escape breathing apparatus (SCBA).

The respiratory system of the human body is the most vulnerable to injury, especially from toxic conditions and gases encountered in refineries, oil and gas fields. Self-contained breathing apparatus (SCBA) is one of the most important items of personal protective equipment used in case of H_2S release. This course is designed to provide participants with proper techniques and skills for inspection and using self-contained breathing apparatus (SCBA) sets.

Course Objectives

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

- Demonstrate understanding of need and application of various types of respirators and their limitations (SCBA, airline mask, emergency escape sets and air purifying respirators)
- Get certified in respiratory equipment and hydrogen sulfide (H_2S) and be competent at the level appropriate to each task
- Explain the properties of H_2S and how it is formed including the standard hazard warning sign, where it can be found and the main health effects of H_2S as well as the short term and long term exposure limits (STEL/LTEL) for H_2S
- Explain the purpose and importance of the "buddy-buddy system" when operating in red and yellow H_2S zones
- Monitor H_2S on site, explain the procedures to be followed for H_2S alarm activation and classify H_2S zone
- Discuss the factors to be considered to establish a temporary exclusion zone as well as identify the rules that shall be followed before entry into a red/yellow H_2S zone and the types of emergency rescue equipment that can be used
- Describe the emergency actions required on discovery of a suspected H_2S casualty as well as demonstrate the effective rescue techniques, effective first aid casualty management protocols and effective casualty management of H_2S casualty
- Recognize H_2S emergency escape including the type of site emergency siren used and how emergency assembly points can be identified and their location on a specific site as well as personnel gas detector alarms, site emergency siren sounds and wind direction and routes of egress
- Demonstrate the correct use/donning for H_2S PPE, pre-use checks required for H_2S PPE including self-contained breathing apparatus (SCBA), emergency escape breathing device (EEBD) and airline breathing apparatus
- Explain the purpose and importance of correct "face-it" for SCBA/EEBD/airline breathing apparatus, the circumstances under which the specific types of RPE shall be used and the controls required for safe use of airline breathing apparatus
- Demonstrate capability of pre-donning checks, safe use in normal conditions, emergency situations and shutdown
- Perform the correct use/donning for SCBA/EEBD/airline breathing apparatus in a professional manner
- Identify SCBA legal requirements, limitations, types as well as donning and doffing
- Demonstrate the knowledge and use of these equipment including donning and doffing
- Inspect and maintain SCBA in a professional manner
- Demonstrate knowledge of storage guidelines and periodical inspections

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 how to respond to H_2S gas emergency in the work place including the use of SCBA sets for safety engineers and all personnel working in H_2S area/zone or inside process plants, oil & gas fields and refineries.

Pre-requisites: Trainees shall be medically fit and must have undergone fit testing with the type of respiratory equipment to be used during training.

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.

Accommodation

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

Course Fee

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

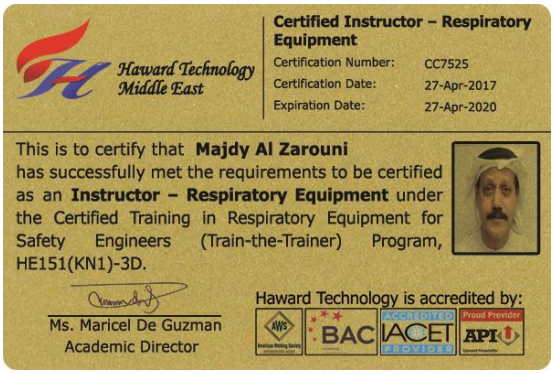
Course Certificate(s)

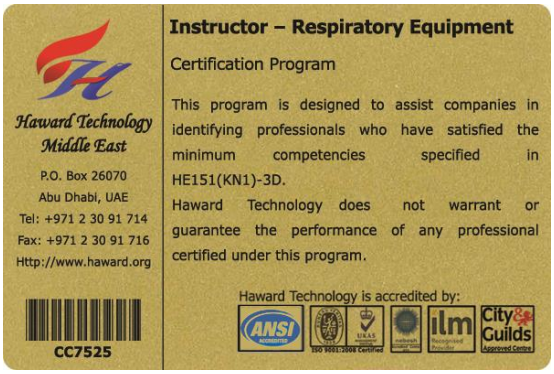
(1) Internationally recognized Wall Competency Certificates and Plastic Wallet Card Certificates will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Successful candidate will be certified as a *"Certified Instructor – Respiratory Equipment".* Certificates are valid for 5 years.

Recertification is FOC for a Lifetime.

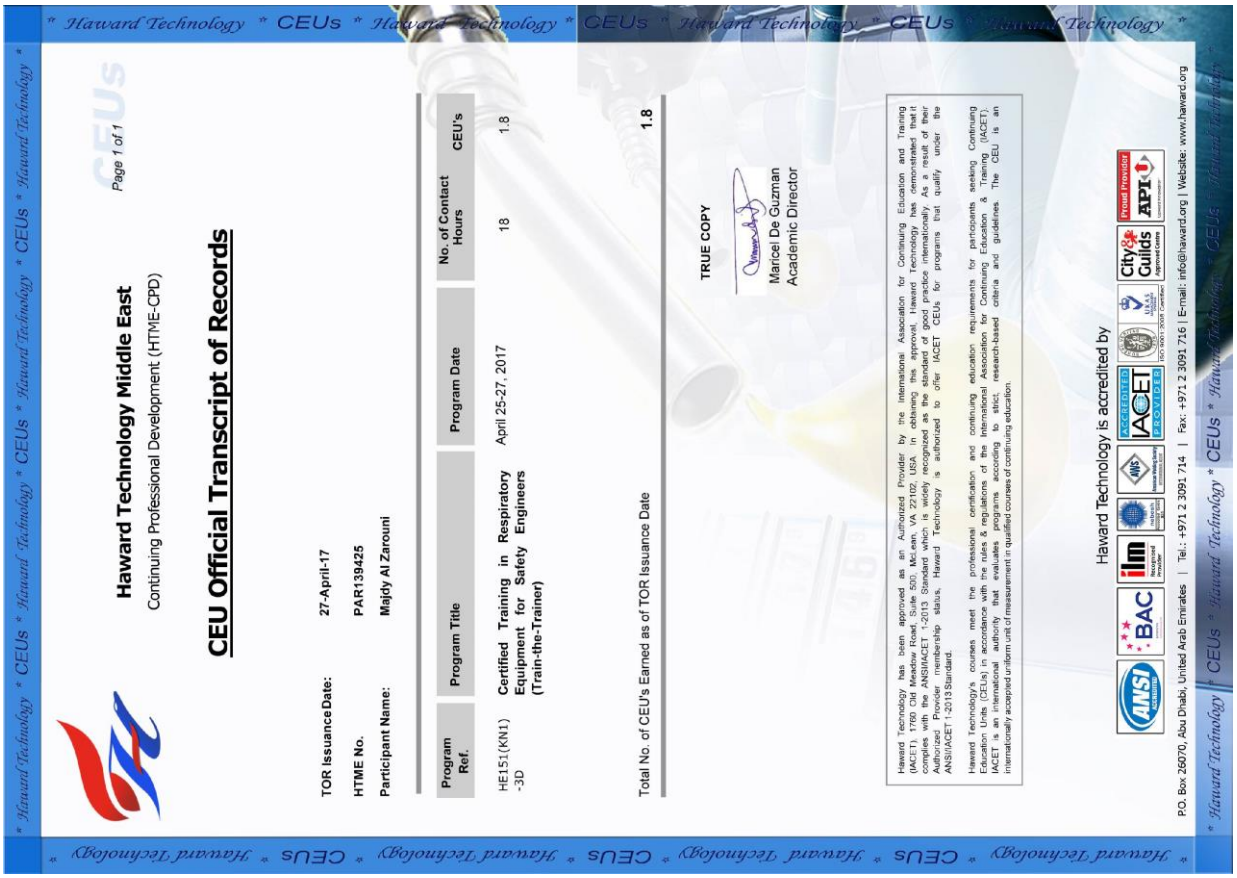
Sample of Certificates

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)

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CEU Official Transcript of Records

TOR Issuance Date: 27-April-17
HTME No. PAR139425
Participant Name: Majdy Al Zarouni

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE151(KN1)-3D	Certified Training in Respiratory Equipment for Safety Engineers (Train-the-Trainer)	April 25-27, 2017	18	1.8

Total No. of CEU's Earned as of TOR Issuance Date 1.8

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), 1760 Old Meadow Road, Suite 500, Mc.ean, VA 22102, USA. In obtaining this approval, 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 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 short term unit of measurement of qualified courses of continuing education.

Haward Technology is accredited by

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HT-CIP® Stamp

Each successful candidate will be given a unique instructor number and a self-inking stamp valid for 3 years. Instructor's name and Haward Technology Certified Instructor Number will appear in the stamp as per the following sample:-

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. Francis Almeida, PgDip, BSc, NEBOSH-ENV, NEBOSH-IGC, NEBOSH-IFC, NEBOSH-IOGC, NEBOSH-PSM, is a **Senior Health, Safety & Environmental** (**HSE**) **Consultant** with over **30 years** of practical experience within the **Oil** and **Gas** industry. He is a **NEBOSH Approved Instructor** for various certification programs. His expertise lies extensively in the areas of **Accident/Incident Investigation & Risk Management**, **NEBOSH** Environmental Management, **NEBOSH** International General Certificate, **NEBOSH** Fire Safety & Risk Management International Certificate, **NEBOSH** International Oil & Gas Certificate, **NEBOSH** Process Safety Management, **HAZOP & HAZID**, **HAZMAT & HAZCOM** Storage & Disposal, As Low as Reasonably Practicable (**ALARP**), Process Hazard Analysis (**PHA**), Process Safety Management (**PSM**), **Hazardous Materials & Chemicals** Handling, **Pollution Control**, **Environment, Health & Safety** Management, **Process Risk** Analysis, Effective Tool Box Talks, Construction Sites Safety, **HSSE Management** System, **HSSE Audit & Inspection**, **HSEQ Procedures**, **Authorized Gas** Testing, **Confined Space Entry & Rescue**, **Risk** Management, **Quantitative & Qualitative Risk** Assessment, **Working at Height**, **Firefighting** Techniques, **Fire** & **Gas** Detection System, **Fire Fighter & Fire** Rescue, **Fire Risk** Assessment, **HSE Industrial Practices**, **Manual Handling**, **Rigging Safety Rules**, **Machinery & Hydraulic Lifting Equipment**, **Warehouse Incidents & Accidents Reporting**, **Incident & Accident Investigation**, **Emergency Planning**, **Emergency Response & Crisis** Management Operations, **Waste Management** Monitoring, **Root Cause Analysis**, Hazard & Risk Assessment, Task Risk Assessment (**TRA**), **Incident Command**, Job Safety Analysis (**JSA**), Behavioral Based Safety (**BBS**), **Fall Protection**, **Work Permit & First Aid** and various international codes and standards such as the ISO 9001, OHSAS 18001, ISO 14001, SA8000, ISO 9001-2000 and ISO 9002. He was the **Offshore Safety Specialist** of **Chevron** wherein he was in-charged in HSE inspections, hazard analysis, incident investigation and implementing corrective actions.

During his career life, Mr. Almeida has gained his practical and field experience through his various significant positions and dedication as the **Quality Manager**, **HSE Specialist/Acting On-Scene Commander**, **Quality Auditor**, **Quality Supervisor**, **QHSE Engineer**, **Metallurgical Engineer**, **HSE Coordinator**, **Suppliers Auditor**, **Senior Instructor/Consultant**, **Oil & Gas Construction Specialist**, **Business Administration Specialist** and **Oil & Gas Management Technology Specialist** for various international companies and institutions such as the IBEC, Lopes & Almeida, IMA, EXPRO Group, UNESA, Vetco Aibel, ABB Oil & Gas, Brazilian Aluminum Foundry, DNV and ABIFA.

Mr. Almeida has a **Bachelor** degree in **Metallurgical Engineering** and a **Post Graduate Diplomas** in **Safety Engineering** and **Industrial Administration**. Further, he is a **Certified Instructor/Trainer**, an **Approved Lead Tutor** in **NEBOSH Environmental Management Certificate**, **NEBOSH International General Certificate**, **NEBOSH International Oil & Gas Certificate** and **NEBOSH Process Safety Management Certificate** and an **Approved Practical Assessor/Lead Tutor** in **NEBOSH Fire Safety & Risk Management**. Moreover, he is a **Certified ISO 9001:2000 Lead Auditor**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership and Management** (**ILM**) and has further delivered numerous trainings, courses, seminars, conferences and workshops globally.

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, 28th of September 2025***

0730 - 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 - 0945	***Introduction*** *Properties of H_2S ● How H_2S is Formed? ● Standard H_2S Hazard Warning Sign ● Where it can be Found – Site Specific ● The Main Health Effects of H_2S ● Short-Term & Long-Term Exposure Limits (STEL/LTEL) for H_2S*
0945 - 1000	*Break*
1000 – 1130	***Introduction (cont'd)*** *Respiratory Hazards in the Refinery During Normal Conditions, Emergency Situations and Turnaround Maintenance ● Why Respirators are Necessary and How Improper Fit, Usage, or Maintenance can Comprise the Protective Effect of the Respirator(s)*
1130 – 1245	***H_2S Zones*** *The Purpose & Importance of the "Buddy-Buddy System" When Operating in Red & Yellow H_2S Zones*
1245 – 1300	*Break*
1300 – 1420	***H_2S Zones (cont'd)*** *Monitor H_2S on Site?*
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: ***Monday, 29th of September 2025***

0730 – 1015	***H_2S Zones (cont'd)*** *Procedures to be Followed for H_2S Alarm Activation – Single or Multiple ● Zone & Working with H_2S Contaminated Streams ● H_2S Zone Classification (How Zones are Identified, Controls for Entry into Red/Yellow Zones)*
1015 – 1030	*Break*
1030 – 1130	***H_2S Zones (cont'd)*** *The Factors to be Considered to Establish a Temporary Exclusion Zone ● Identify the Rules that should be Followed Before Entry into a Red/Yellow H_2S Zone ● Identify the Types of Emergency Rescue Equipment that could be Used*
1130 – 1245	***H_2S Casualty*** *The Emergency Actions Required on Discovery of Suspected H_2S Casualty ● Effective Rescue Techniques for an H_2S Casualty*
1245 – 1300	*Break*
1300 – 1420	***H_2S Casualty (cont'd)*** *Effective First Aid Casualty Management Protocols for an H_2S Casualty ● Effective Casualty Management of an H_2S Casualty*
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:	Tuesday, 30th of September 2025
0730 – 1015	**H_2S Emergency Escape** *The Type of Site Emergency Siren Used ● How Emergency Assembly Points can be Identified & their Location?*
1015 – 1030	*Break*
1030 – 1130	**H_2S Emergency Escape (cont'd)** *Personnel Gas Detector Alarms ● Site Emergency Siren Sounds ● Wind Direction Awareness & Routes of Egress*
1130 – 1245	**H_2S PPE** *Correct Use/Donning for H_2S PPE ● Pre-Use Checks Required for H_2S PPE ● Self-Contained Breathing Apparatus (SCBA) ● Emergency Escape Breathing Device (EEBD)*
1245 – 1300	*Break*
1300 – 1420	**H_2S PPE (cont'd)** *Airline Breathing Apparatus ● The Purpose & Importance of Correct "Face Fit" for SCBA/EEBD/Airline Breathing Apparatus*
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:	Wednesday, 01st of October 2025
0730 – 1015	**H_2S PPE (cont'd)** *The Circumstances Under which the Specific Types of RPE should be Used ● The Controls Required for Safe Use of Airline Breathing Apparatus ● Correct Use/Donning for SCBA/EEBD/Airline Breathing Apparatus*
1015 – 1030	*Break*
1030 – 1130	**SCBA** *Legal Requirements for Self-Contained Breathing Apparatus Use ● Limitations of Self-Contained Breathing Apparatus ● The Limitations and Capabilities of Various Types of Respirators*
1130 – 1245	**SCBA (cont'd)** *Types of Self-Contained Breathing Apparatus ● Donning and Doffing Self-Contained Breathing Apparatus*
1245 – 1300	*Break*
1300 – 1420	**Inspection and Maintenance of Self-Contained Breathing Apparatus** *Manufacturer Guidelines for Inspection, Maintenance and Storage of Respiratory Protection Equipment for a Trainer Level*
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:	Thursday, 02nd of October 2025
0730 – 0845	**Inspection & Maintenance of Self-Contained Breathing Apparatus (cont'd)** *Daily Maintenance ● Monthly Maintenance ● Annual and Biannual Maintenance*
0845 - 0900	*Break*
0900 - 1030	**Inspection & Maintenance of Self-Contained Breathing Apparatus (cont'd)** *Changing the SCBA Cylinders ● Servicing SCBA Cylinders*

1030 – 1200	***Practical Sessions*** *Demonstrate, Train and Test Student's Ability to Properly Don & Doff SCBA etc. ● Don Self-Contained Breathing Apparatus in 45 Seconds ● Don Personal Emergency Escape RPE in 20 Seconds*
1200 - 1215	*Break*
1215 – 1300	***Practical Sessions*** *How to Use the Respirator Effectively in Emergency Situations, Including Situations in Which the Respirator Malfunctions ● How to Recognize Medical Signs and Symptoms that may Limit or Prevent the Effective Use of Respirators*
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/Site Visit

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using SCBA & H2S Detector.

SCBA & H_2S Detector

Course Coordinator

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