

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)

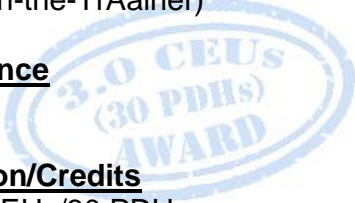
Course Reference

HE0161

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs

Course Date/Venue



Session(s)	Date	Venue
1	January 07-11, 2024	Al Aziziya Hall, The Proud Hotel Al Khobar, Al Khobar, KSA
2	April 28-May 02, 2024	Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
3	July 21-25, 2024	Club B Meeting Room, Ramada Plaza by Wyndham Istanbul City Center, Istanbul, Turkey
4	October 21-25, 2024	Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

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.



H₂S (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 H₂S gas.



This course covers the emergency response competency requirements and provides details of training required for personnel working in potential H₂S environments. It covers the characteristics of hydrogen sulphide gas and the potential physiological effects of exposure as well as the use of H₂S 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 H₂S 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 (H₂S) and be competent at the level appropriate to each task
- Explain the properties of H₂S and how it is formed including the standard hazard warning sign, where it can be found and the main health effects of H₂S as well as the short term and long term exposure limits (STEL/LTEL) for H₂S
- Explain the purpose and importance of the “buddy-buddy system” when operating in red and yellow H₂S zones
- Monitor H₂S on site, explain the procedures to be followed for H₂S alarm activation and classify H₂S 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 H₂S zone and the types of emergency rescue equipment that can be used
- Describe the emergency actions required on discovery of a suspected H₂S casualty as well as demonstrate the effective rescue techniques, effective first aid casualty management protocols and effective casualty management of H₂S casualty
- Recognize H₂S 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 H₂S PPE, pre-use checks required for H₂S 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 course conveniently saved in a **Tablet PC**.

Who Should Attend

This course provides an overview of how to respond to H₂S gas emergency in the work place including the use of SCBA sets for safety engineers and all personnel working in H₂S 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

Al Khobar	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.
Dubai	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.
Istanbul	US\$ 6,000 per Delegate + VAT . This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Abu Dhabi	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

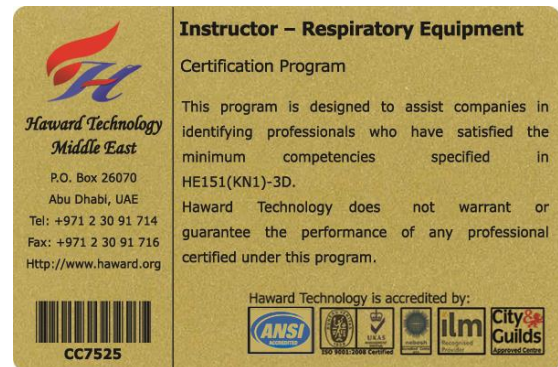
Course Certificate(s)

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

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Haward Technology Middle East
Continuing Professional Development (HTME-CPD)

CEU Official Transcript of Records







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

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
Marcel De Guzman
Marcel De Guzman
Academic Director

Haward Technology has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET) 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






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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. Peter Redbourn, MInstLM, GIFireE, MSET, PG Cert Ed, BSc, BTEC, is an **International Fire Fighting, Safety Expert & Senior HR Consultant** with over **30 years** of extensive practical experience within **Oil, Gas and Petrochemical** industries. His expertise includes **Fire Extinguishers, Fire Behaviour, Fire Investigation, Fire Rescue, Fire Prevention, Fire Extinction, Fire Safety, HAZID, HAZMAT, HAZWOPER, HAZOP, Safety Audit, HSE Management, Risk Management, Process Safety Management (PSM), Process Hazard Analysis (PHA), Emergency Readiness, Response & Recovery, Emergency Incident Management, Respiratory Hazards, Respiratory Equipment, Breathing Equipment Apparatus, Incident Command System, Incident Management, Behavioural Safety Audit, Confine Space, First Aid, Trauma Care, Fire & Rescue Planning & Operation, Risk Assessment, Hazard Identification, Hazardous Materials Emergency & Management, Life Support & Resuscitation, Road Traffic Accident, Offshore Emergency** along with **SHE, HAZMAT, HAZOP, HAZID** and **FMEA Standards**. He is also well-versed in **Human Resource Management (HRM), Human Resource Development & Management (HRDM), Office Management, Career Development & Training, Course Design & Development, Administrative Skills, Leadership Skills & Management, Supervisory Skills, Personnel Administration policies and procedures, Contract management and Project management**. He is currently the **Learning & Development Consultant** of one of the leading Health & Safety Institutes in UK wherein he is responsible for conducting trainings and seminars on firefighting, risk assessment, **breathing apparatus**, trauma care and first aid.

During his career life, Mr. Redbourn has gained his practical and field experience through his various significant positions and dedications as **Learning & Development Consultant, Training Strategist, Course Programmer/Designer, Designer/Tutor, Trainer/Lecturer, Support Officer & Counsellor, Mentor & Coach, Training Practitioner, Senior Tutor, Senior Teacher, Trauma Case/First Aid Instructor, Tutor, Risk Assessor, Lead Project Manager, Project Manager, Station Manager, Fire Lead Officer, Lead Officer, Fire Officer, Team Player/Leader, Ambulance Service Technician and Royal Marine Officer**.

Mr. Redbourn has a **Bachelor** degree in **Fire Engineering, Fire Prevention and Fire Extinction** from the **Institute of Fire Engineers** and a **Post Graduate Teaching Certificate** in **Education** as well as **BTEC** in **Fire Command & Management Studies** from the **University of Exeter** and the **University Central Lancashire** in UK respectively. He is also a **Graduate** from the **Institution of Fire Engineers** in UK and an active **Member** of the **Institute of Leadership & Management, Institute of Learning, Suffolk Accident Rescue Service** and the **Society for Education & Training**.

Further, Mr. Redbourn is an **Accredited Road Traffic Accident Instructor**, an **Accredited Breathing Apparatus Instructor**, a **Certified HAZMAT Advisor**, a **Human Performance Practitioner**, a **Certified Training Instructor** for **Flashover-Realistic Fire** and a **NEBOSH Certified** in **National General Certificate in Occupational Safety and Health**. Moreover, he is a **Certified Train-the-Trainer (Level 4 Certificate in Further Education Teaching)** by the **City & Guilds of London Institute**; a **Certified Instructor/Trainer**; a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)**; an **Approved Trainer & Assessor** by the **Babcock International Company**; and **Registered** with **Qualsafe Awards, NHS Paramedic** and **A1 Best Practice Assessor**.

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

0730 - 0800	Registration & Coffee
0800 - 0815	Welcome & Introduction
0815 - 0830	PRE-TEST
0830 - 0945	Introduction Properties of H ₂ S • How H ₂ S is Formed? • Standard H ₂ S Hazard Warning Sign • Where it can be Found – Site Specific • The Main Health Effects of H ₂ S • Short-Term & Long-Term Exposure Limits (STEL/LTEL) for H ₂ S
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	H₂S Zones The Purpose & Importance of the “Buddy-Buddy System” When Operating in Red & Yellow H ₂ S Zones
1245 - 1300	Break
1300 - 1420	H₂S Zones (cont'd) Monitor H ₂ S 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

0730 - 1015	H₂S Zones (cont'd) Procedures to be Followed for H ₂ S Alarm Activation – Single or Multiple • Zone & Working with H ₂ S Contaminated Streams • H ₂ S Zone Classification (How Zones are Identified, Controls for Entry into Red/Yellow Zones)
1015 - 1030	Break
1030 - 1130	H₂S 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 ₂ S Zone • Identify the Types of Emergency Rescue Equipment that could be Used
1130 - 1245	H₂S Casualty The Emergency Actions Required on Discovery of Suspected H ₂ S Casualty • Effective Rescue Techniques for an H ₂ S Casualty
1245 - 1300	Break
1300 - 1420	H₂S Casualty (cont'd) Effective First Aid Casualty Management Protocols for an H ₂ S Casualty • Effective Casualty Management of an H ₂ S 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

0730 – 1015	H₂S Emergency Escape <i>The Type of Site Emergency Siren Used • How Emergency Assembly Points can be Identified & their Location?</i>
1015 – 1030	<i>Break</i>
1030 – 1130	H₂S Emergency Escape (cont'd) <i>Personnel Gas Detector Alarms • Site Emergency Siren Sounds • Wind Direction Awareness & Routes of Egress</i>
1130 – 1245	H₂S PPE <i>Correct Use/Donning for H₂S PPE • Pre-Use Checks Required for H₂S PPE • Self-Contained Breathing Apparatus (SCBA) • Emergency Escape Breathing Device (EEBD)</i>
1245 – 1300	<i>Break</i>
1300 – 1420	H₂S PPE (cont'd) <i>Airline Breathing Apparatus • The Purpose & Importance of Correct "Face Fit" for SCBA/EEBD/Airline Breathing Apparatus</i>
1420 – 1430	Recap <i>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</i>
1430	<i>Lunch & End of Day Three</i>

Day 4

0730 – 1015	H₂S PPE (cont'd) <i>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</i>
1015 – 1030	<i>Break</i>
1030 – 1130	SCBA <i>Legal Requirements for Self-Contained Breathing Apparatus Use • Limitations of Self-Contained Breathing Apparatus • The Limitations and Capabilities of Various Types of Respirators</i>
1130 – 1245	SCBA (cont'd) <i>Types of Self-Contained Breathing Apparatus • Donning and Doffing Self-Contained Breathing Apparatus</i>
1245 – 1300	<i>Break</i>
1300 – 1420	Inspection and Maintenance of Self-Contained Breathing Apparatus <i>Manufacturer Guidelines for Inspection, Maintenance and Storage of Respiratory Protection Equipment for a Trainer Level</i>
1420 – 1430	Recap <i>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</i>
1430	<i>Lunch & End of Day Four</i>

Day 5

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 & H₂S Detector

Course Coordinator

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