

## **COURSE OVERVIEW HE0924**

### **NFPA 25**

**Course Title**  
NFPA 25

**Course Date/Venue**  
June 29-July 03, 2025/Boardroom 1, Elite  
Byblos Hotel Al Barsha, Sheikh Zayed Road,  
Dubai, UAE

**Course Reference**  
HE0924

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

### **Course Description**



***This practical and highly-interactive course includes practical sessions and demonstration where participants carryout firefighting. Theory learnt in the class will be applied using a fire extinguisher through hands-on practical sessions.***

This course is designed to provide participants with a complete and up-to-date overview of NFPA 25. It covers the purpose and scope of NFPA 25 and the importance of ITM (inspection, testing, and maintenance); the water-based fire protection systems and the inspection, testing, and maintenance; the water supply requirements for fire protection systems, system impairments and NFPA 25 documentation and reporting; the types of sprinkler systems and components and sprinkler system inspection requirements; the standpipe and hose system inspections, fire pump inspection and maintenance, alarm devices and supervisory systems and pipe and fittings inspection; and the testing procedures for sprinkler systems, fire pump testing and performance checks and standpipe and hose system testing.

During this interactive course, participants will learn the testing alarm and supervisory devices and preventive maintenance of sprinkler systems; the valve maintenance and troubleshooting, fire protection system impairments and management and inspection and maintenance of fire water storage tanks; the foam-water fire protection systems and corrosion and obstruction investigations; the water mist system components and functionality; testing and maintaining water mist nozzles and dry chemical system inspection requirements; and the NFPA 25 code updates and revisions, developing an effective ITM program and emergency response and troubleshooting failures.



### Course Objectives

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

- Apply and gain an in-depth knowledge on the inspection, testing and maintenance of water-based fire protection systems in accordance with NFPA 25 standards
- Discuss the purpose and scope of NFPA 25 and the importance of ITM (inspection, testing, and maintenance)
- Recognize water-based fire protection systems and the fundamental of inspection, testing, and maintenance
- Identify water supply requirements for fire protection systems, system impairments and NFPA 25 documentation and reporting
- List the types of sprinkler systems and components and sprinkler system inspection requirements
- Carryout standpipe and hose system inspections, fire pump inspection and maintenance, alarm devices and supervisory systems and pipe and fittings inspection
- Employ testing procedures for sprinkler systems, fire pump testing and performance checks and standpipe and hose system testing
- Identify the testing alarm and supervisory devices and apply preventive maintenance of sprinkler systems
- Carryout valve maintenance and troubleshooting, fire protection system impairments and management and inspection and maintenance of fire water storage tanks
- Recognize foam-water fire protection systems and apply corrosion and obstruction investigations
- Identify water mist system components and functionality, test and maintain water mist nozzles and discuss dry chemical system inspection requirements
- Discuss NFPA 25 code updates and revisions, develop an effective ITM program and apply emergency response and troubleshooting failures

### 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 all significant aspects and considerations on the inspection, testing and maintenance of water-based fire protection systems in accordance with NFPA 25 standards for fire protection engineers, fire safety managers, maintenance technicians and supervisors, facility managers, building engineers, safety managers, emergency responders, inspectors and auditors and other technical staff.

### 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.

### Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

- 

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.
- 

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 **3.0 CEUs** (Continuing Education Units) or **30 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.

### 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.

### 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. 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 **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, 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

### **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.

### **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, 29<sup>th</sup> of June 2025**

0730 – 0800	<i>Registration and Coffee</i>
0800 – 0815	<i>Welcome &amp; Introduction</i>
0815 – 0830	<b>PRE-TEST</b>
0830 – 0930	<b>Introduction to NFPA 25</b> <i>Purpose &amp; Scope of NFPA 25 • Importance of ITM (Inspection, Testing &amp; Maintenance) • Legal &amp; Regulatory Requirements • Responsibilities of Owners &amp; Inspectors</i>
0930 – 0945	<i>Break</i>
0945 – 1035	<b>Overview of Water-Based Fire Protection Systems</b> <i>Types of Water-Based Systems (Sprinkler, Standpipe, Foam-Water, etc.) • Components of Fire Protection Systems • Role of Water Supply in Fire Protection • Common Deficiencies in Water-Based Systems</i>
1035 – 1125	<b>Inspection, Testing &amp; Maintenance Fundamentals</b> <i>Definitions of Inspection, Testing &amp; Maintenance • Frequency &amp; Schedule Requirements (Daily, Weekly, Monthly, etc.) • Documentation &amp; Record-Keeping • Authority Having Jurisdiction (AHJ) &amp; Compliance</i>
1125 – 1230	<b>Water Supply Requirements for Fire Protection Systems</b> <i>Sources of Water Supply (Municipal, Tanks, Wells, etc.) • Water Pressure &amp; Flow Rate Considerations • Fire Pumps &amp; their Role • Common Water Supply Issues &amp; Solutions</i>
1230 – 1245	<i>Break</i>
1245 – 1330	<b>Understanding System Impairments</b> <i>Types of Impairments (Planned versus Emergency) • Procedures for Managing Impairments • Notification Requirements (Authorities, Building Occupants) • Restoring Systems After an Impairment</i>
1330 – 1420	<b>NFPA 25 Documentation &amp; Reporting</b> <i>Inspection Reports &amp; Testing Records • ITM Forms &amp; Checklists • Digital versus Paper Recordkeeping • Importance of Accurate &amp; Timely Documentation</i>
1420 – 1430	<b>Recap</b> <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 &amp; End of Day One</i>

**Day 2 Monday, 30<sup>th</sup> of June 2025**

0730 – 0830	<b>Types of Sprinkler Systems &amp; Components</b> Wet Pipe Systems • Dry Pipe Systems • Pre-Action & Deluge Systems • System Valves, Sprinkler Heads & Piping
0830 - 0930	<b>Sprinkler System Inspection Requirements</b> Frequency & Scope of Inspections • Visual Inspections of Sprinkler Heads & Piping • Corrosion & Obstruction Issues • Identifying Leaks & Physical Damage
0930 – 0945	Break
0945 – 1100	<b>Standpipe &amp; Hose System Inspections</b> Standpipe System Components • Hose Inspection & Testing • Pressure Regulation & Gauge Inspection • NFPA 25 Compliance for Standpipes
1100 – 1230	<b>Fire Pump Inspection &amp; Maintenance</b> Fire Pump Components & Function • Inspection Procedures & Frequency • Testing Requirements (Flow, Churn & Annual Testing) • Common Fire Pump Issues & Troubleshooting
1230 – 1245	Break
1245 – 1330	<b>Alarm Devices &amp; Supervisory Systems</b> Inspecting Waterflow & Tamper Switches • Supervisory Signal Functionality • Testing Alarm Valve Assemblies • Communication with Fire Alarm Systems
1330 – 1420	<b>Pipe &amp; Fittings Inspection</b> Identifying Corrosion & Scaling • Inspecting Underground & Above-Ground Piping • Testing Pipe Integrity & Water Flow • Ensuring Proper Pipe Supports & Clearance
1420 – 1430	<b>Recap</b> 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, 01<sup>st</sup> of July 2025**

0730 – 0830	<b>Testing Procedures for Sprinkler Systems</b> Flow Testing for Wet & Dry Systems • Hydrostatic Testing for System Integrity • Main Drain Testing Procedures • Annual versus Five-Year Testing Requirements
0830 - 0930	<b>Fire Pump Testing &amp; Performance Checks</b> Weekly No-Flow Testing • Annual Flow Testing & Performance Evaluation • Battery & Controller Inspection • Preventive Maintenance & Troubleshooting
0930 – 0945	Break
0945 – 1100	<b>Standpipe &amp; Hose System Testing</b> Hose Valve & Connection Testing • Pressure & Flow Rate Verification • Gauge Testing & Replacement • Fire Department Connection (FDC) Testing
1100 – 1230	<b>Testing Alarm &amp; Supervisory Devices</b> Waterflow Alarm Testing • Tamper & Supervisory Switch Testing • Audible & Visual Alarm Verification • Reporting & Documentation of Test Results
1230 – 1245	Break
1245 – 1330	<b>Preventive Maintenance of Sprinkler Systems</b> Cleaning & Replacing Sprinkler Heads • Lubricating & Testing Valves • Addressing Corrosion & Biofilm Growth • Pipe Flushing & Obstruction Removal

1330 – 1420	<b>Valve Maintenance &amp; Troubleshooting</b> Inspecting Control Valves (OS&Y, PIV, Butterfly) • Testing Deluge & Pre-Action Valves • Addressing Leaks & Valve Failures • Valve Tampering & Security Measures
1420 – 1430	<b>Recap</b> 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, 02<sup>nd</sup> of July 2025**

0730 – 0830	<b>Fire Protection System Impairments &amp; Management</b> Types of Impairments (Planned versus Unplanned) • Steps to Minimize Risks During Impairments • Communication Protocols & Notifications • Restoring Service & System Recommissioning
0830 - 0930	<b>Inspection &amp; Maintenance of Fire Water Storage Tanks</b> Types of Fire Water Storage Tanks • Tank Inspection Procedures (NFPA 25 Guidelines) • Water Quality & Contamination Prevention • Tank Drainage & Cleaning Requirements
0930 – 0945	Break
0945 – 1100	<b>Foam-Water Fire Protection Systems</b> Overview of Foam-Water Systems • Inspection & Testing of Foam Concentrates • Ensuring Proper Mixing & Discharge Performance • Foam System Maintenance & NFPA Compliance
1100 – 1230	<b>Corrosion &amp; Obstruction Investigations</b> Causes of Corrosion in Fire Protection Piping • Identifying Microbiologically Influenced Corrosion (MIC) • NFPA 25 Guidelines for Internal Pipe Inspections • Methods for Pipe Flushing & Cleaning
1230 – 1245	Break
1245 – 1330	<b>ITM of Water Mist &amp; Dry Chemical Systems</b> Water Mist System Components & Functionality • Testing & Maintaining Water Mist Nozzles • Dry Chemical System Inspection Requirements • Ensuring Proper Agent Distribution & Performance
1330 – 1420	<b>Case Studies &amp; Common Violations</b> Real-World NFPA 25 Compliance Failures • Lessons Learned from Fire Incidents • Common Inspection Deficiencies & How to Avoid Them • Best Practices for Ensuring ITM Compliance
1420 – 1430	<b>Recap</b> 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, 03<sup>rd</sup> of July 2025**

0730 – 0930	<b>NFPA 25 Code Updates &amp; Revisions</b> <i>Recent Changes to NFPA 25 • Impact of New Regulations on ITM Procedures • Upcoming Changes &amp; Future Trends • Understanding NFPA 25 in Relation to Other Codes</i>
0930 – 0945	<i>Break</i>
0945 – 1130	<b>Developing an Effective ITM Program</b> <i>Creating an ITM Schedule &amp; Checklist • Training Requirements for Personnel • Coordination with Fire Departments &amp; Insurance Agencies • Establishing ITM Policies &amp; Procedures</i>
1130 – 1230	<b>Hands-On Practical Inspections &amp; Testing</b> <i>Conducting an On-Site Sprinkler System Inspection • Performing a Flow Test on a Fire Pump • Simulating a System Impairment Scenario • Reviewing Real Inspection Reports for Compliance</i>
1230 – 1245	<i>Break</i>
1245 – 1345	<b>Emergency Response &amp; Troubleshooting Failures</b> <i>Identifying Critical System Failures • Responding to Fire Protection System Malfunctions • Emergency Repairs &amp; Temporary Solutions • Coordinating with Authorities &amp; Firefighters</i>
1345 – 1400	<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>
1400 – 1415	<b>POST-TEST</b>
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch &amp; End of Course</i>



### **Simulators (Hands-on 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 various exercises using fire extinguishers.



**Fire Extinguisher**

### **Course Coordinator**

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