

COURSE OVERVIEW HE1526 Technical Integrity Verification (TIV)

Course Title

Technical Integrity Verification (TIV)

Course Date/Venue

December 08-12, 2024/ Boardroom,
Warwick Hotel Doha, Doha, Qatar

Course Reference

HE1526

Course Duration/Credits

Five days/3.0 CEUs/30 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 participants with a detailed and up-to-date overview of Technical Integrity Verification. It covers the relevant standards, regulations, verification process and objectives; the technical integrity verification system requirements and specifications, verification plan, methods and tools; the suitable verification environment, necessary hardware, software, and tools; configuring test environments and test data; the test design techniques, test execution and results analysis; the regression testing and change management; and the suitable tools for test automation, automate test cases and analyzing the benefits.



Further, the course will discuss the performance and stress testing, performance metrics and objectives; the security and vulnerability testing and common vulnerabilities and threats; the safety and reliability testing, safety-critical aspects and failure modes; the compliance and regulatory requirements and relevant standards regulations; the tests to ensure compliance and documenting evidence; the importance of documentation; the clear and concise verification reports; and communicating results effective to stakeholders.

During this interactive course, participants will learn the risk assessment, potential risks and risk mitigation strategies; the quality assurance processes, areas for process improvement and best practices; incorporating verification activities into agile methodologies; the agile test planning, execution and collaborating and communicating agile verification teams; integrating verification into DevOps processes; the continuous integration and automated verification; ensuring traceability and repeatability in verification activities; the common challenges in technical integrity verification; and the strategies for problem-solving, troubleshooting and tips for effective collaboration and teamwork.

Course Objectives

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

- Apply and gain an in-depth knowledge on technical integrity verification
- Discuss the relevant standards, regulations, verification process and objectives of technical integrity verification
- Identify the system requirements and specifications, develop verification plan and identify verification methods and tools
- Set up a suitable verification environment, identify necessary hardware, software, and tools and configure test environments and test data
- Carryout test design techniques, test execution and results analysis as well as regression testing and change management
- Identify suitable tools for test automation, automate test cases and analyze the benefits
- Apply performance and stress testing and identify performance metrics and objectives
- Conduct security and vulnerability testing and identify common vulnerabilities and threats
- Implement safety and reliability testing and identify safety-critical aspects and failure modes
- Recognize compliance and regulatory requirements, relevant standards regulations as well as conduct tests to ensure compliance and documenting evidence
- Discuss the importance of documentation, create clear and concise verification reports and communicate results effectively to stakeholders
- Apply risk assessment, identify potential risks and develop risk mitigation strategies
- Illustrate quality assurance processes, identify areas for process improvement and implement best practices
- Incorporate verification activities into agile methodologies, apply agile test planning and execution and collaborate and communicate agile verification teams
- Integrate verification into DevOps processes, apply continuous integration and automated verification as well as ensure traceability and repeatability in verification activities
- Identify the common challenges in technical integrity verification and apply strategies for problem-solving, troubleshooting and tips for effective collaboration and teamwork

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

The course provides an overview of all significant aspects and considerations of technical verification integrity for all senior project managers, team leaders, shareholders and other stakeholders.

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\$ 6,000 per Delegate. This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

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: -

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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 **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.

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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:

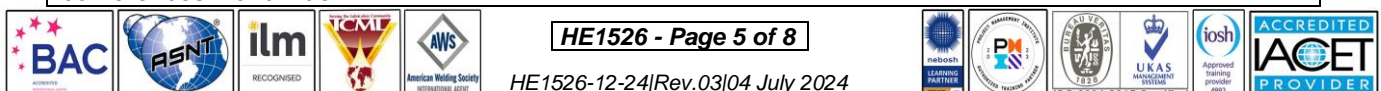


Mr. John Burnip, CSA, SMT, PSS, EHS, SAC, STS, IOSH, OSHA, NEBOSH-ENV, NEBOSH-IGC, NEBOSH-IFC, NEBOSH-PSM, NEBOSH-IOG, TechIOSH, is a **NEBOSH Approved Instructor** and a **Senior HSE Consultant** with over **45 years** of practical **Offshore & Onshore** experience within **Oil, Gas, Refinery, Petrochemical** and **Nuclear** industries. His wide experience covers **NEBOSH International General Certificate in Occupational Health & Safety, NEBOSH National Certificate in Construction Health & Safety, NEBOSH Environmental Management, Hazardous Materials & Chemicals Handling, PHA, HAZOP, HAZCOM, HAZMAT, HAZID, Hazard & Risk Assessment, Emergency**

Response Procedures Behavioural Based Safety (BBS), Confined Space Entry, Fall Protection, Emergency Response, H₂S, Safety Management System (ISO 45001), Accident/Incident Investigation System and Report PSM, Risk Assessment, SCE FMEA Failure Investigations, Site Management Safety Training (SMSTS), Occupational Health & Safety and Industrial Hygiene, Crisis Management & Damage Control in Oil & Gas Industry, Enhancing HSE Safety Performance & Effectiveness, Overhead & Gantry Crane Safety, HSE Principles & Practices Advanced, Lifting & Rigging Equipment Lifting Tackles Inspection License/Relicense, API 780 Security Risk Assessment Methodology for Petroleum & Petrochemical, Advanced Process Safety Management with PHA, Quantitative and Qualitative Risk Assessment, IADC/API Mobile Drilling Rig Inspections, Maintenance and Audits, H2s Training and Rescue with Respiratory Equipment, Job Safety Analysis (JSA), Work Permit & First Aid, Project HSE Management System, Health & Hygiene Inspection, PTW Control, Process Modules Fire & Gas Commissioning, MSDS, Ergonomics, Lockout/Tagout, Fire Safety & Protection, Oilfield Startup & Operation, Steel Fabrication, OSHA, ISO 9001, ISO 14001, OHSAS 18001 and IMO (SOLAS) Regulations. Mr. Burnip has greatly contributed in upholding the highest possible levels of safety for numerous International Oil & Gas projects, Generation Systems & Platform Revamp, LPG & Gas Compression, Marine, Offshore and Power Plant Construction. Currently, he is the **HSE Advisor** of Solvay wherein he is responsible in planning and implementation of the corporate safety program (OSHA codes).

During Mr. Burnip's long career life, he had successfully carried out numerous projects in **Europe, North America, South America, Southeast Asia, Middle East** and the **North Sea**. He had worked for Delta Offshore Group, Solvay Asia Pacific, Likpin Dubai, SADRA/DOT, **ZADCO, McDermott International** (USA, Qatar, Egypt, India, Oman, Dubai and Abu Dhabi), **PDO, Shell, ARAMCO**, Salman Field, Leman Offshore Gas Field, GEC, Harland & Wolff PLC Belfast in North Ireland, Howard Doris – Kishorn in Scotland, **Westinghouse Electric** in Brazil and South Korea and **Chevron Oil** in Scotland as the **Commissioning Project Engineer, Project & Safety Engineer, Estimating Engineer, Senior Instrument Engineer, Instrument Field Engineer, Lead Instrument Engineer, Instrument Engineer, Engineer, Emergency Response Training Manager, HSE Advisor, HSE Instructor, HSE Supervisor, Instrumentation Supervisor, Instrumentation Specialist, Project Coordinator, Instrumentation Technician** and **Tank Farm Instrumentation Technician**.

Mr. Burnip has a **Bachelor's degree in Business Studies** from the **Somerset University (UK)**. He is a **Certified/Registered Tutor** in **NEBOSH Certificate in Environmental Management, NEBOSH International General Certificate, NEBOSH International Certificate in Fire Safety & Risk Management, NEBOSH Process Safety Management Certificate** and **NEBOSH International Oil & Gas Certificate**; a **Certified Safety Auditor (SAC)**; a **Certified ISO 45001 Auditor**; an **Environmental Health and Safety Management Specialist** on **Fall Protection, Elevated Structures, Material Handling, Trenching & Excavations**; a **Welding Brazing Safety Technician**; a **Certified Safety Administrator (CSA)** - General Industry; a **Safety Manager/Trainer** – General Industry; a **Petroleum Safety Manager (PSM)** - Drilling & Servicing; a **Petroleum Safety Specialist (PSS)** - Drilling & Servicing; a **Safety Planning Specialist**; a **Safety Training Specialist**; a **Certified Instructor/Trainer**; a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)** and further holds a Certificate in **Mechanical Engineering Craft Practice** from the **City & Guilds of London Institute**; a **NEBOSH Level 3 Construction Certificate (UK)**; and holds a **Cambridge Teaching Certificate**. He is a well-regarded member of the **National Association of Safety Professionals, the Association of Cost Engineers (UK), Institution of Occupational Safety & Health (TechIOSH)** and an **Associate Member of World Safety Organization**. Further, he has conducted innumerable trainings, workshops and conferences worldwide.





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 December 2024

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 1000	Introduction to Technical Integrity Verification Technical Integrity Verification & Its Importance in Various Industries • Relevant Standards & Regulations • The Verification Process & Its Objectives
1000 – 1015	Break
1015 – 1130	System Requirements & Specifications System Requirements & Specifications • Different Types of Requirements (Functional, Performance, Safety, etc.) • Techniques for Documenting & Managing System Requirements
1130 – 1230	Verification Planning & Strategy Developing a Verification Plan • Verification Objectives, Scope & Criteria • Verification Methods & Tools
1230 – 1245	Break
1245 – 1420	Verification Environment Setup Setting up a Suitable Verification Environment • Necessary Hardware, Software & Tool • Configuring Test Environments & Test Data
1420 – 1430	Recap
1430	Lunch & End of Day One

Day 2: Monday, 09th of December 2024

0730 – 1000	Test Design & Development Test Design Techniques • Creating Test Cases & Test Scenarios • Documenting Test Procedures & Expected Results
1000 – 1015	Break
1015 – 1130	Test Execution & Results Analysis Test Cases & Scenarios • Logging Test Results & Defects • Analyzing Test Results & Identifying Trends or Patterns
1130 – 1230	Regression Testing & Change Management Regression Testing & Its Importance • Developing Regression Test Suites • Managing Changes & Their Impact on Verification Activities
1230 – 1245	Break
1245 – 1420	Test Automation & Tools Test Automation • Suitable Tools for Test Automation • Automating Test Cases & Analyzing the Benefits
1420 – 1430	Recap
1430	Lunch & End of Day Two

Day 3: Tuesday, 10th of December 2024

0730 – 1000	Performance & Stress Testing Performance & Stress Testing • Performance Metrics & Objectives • Conducting Performance Tests & Analyzing the Results
1000 – 1015	Break
1015 – 1130	Security & Vulnerability Testing Security Testing & Its Objectives • Common Vulnerabilities & Threats • Conducting Security Tests & Analyzing the Findings





1130 – 1230	Safety & Reliability Testing Safety-Critical Aspects & Failure Modes • Conducting Safety & Reliability Tests & Analyzing the Results
1230 – 1245	Break
1245 – 1420	Compliance & Regulatory Testing Compliance & Regulatory Requirements • Relevant Standards & Regulations • Conducting Tests to Ensure Compliance & Documenting Evidence
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4: Wednesday, 11th of December 2024

0730 – 1000	Documentation & Reporting Importance of Documentation in Technical Integrity Verification • Creating Clear & Concise Verification Reports • Communicating Results Effectively to Stakeholders
1000 – 1015	Break
1015 – 1130	Risk Assessment & Mitigation Risk Assessment & Its Role in Verification • Potential Risks & their Impact • Developing Risk Mitigation Strategies
1130 – 1230	Quality Assurance & Process Improvement Quality Assurance Processes • Areas for Process Improvement • Implementing Best Practices & Lessons Learned
1230 – 1245	Break
1245 – 1420	Verification in Agile Development Incorporating Verification Activities into Agile Methodologies • Agile Test Planning & Execution • Collaboration & Communication in Agile Verification Teams
1420 – 1430	Recap
1430	Lunch & End of Day Four

Day 5: Thursday, 12th of December 2024

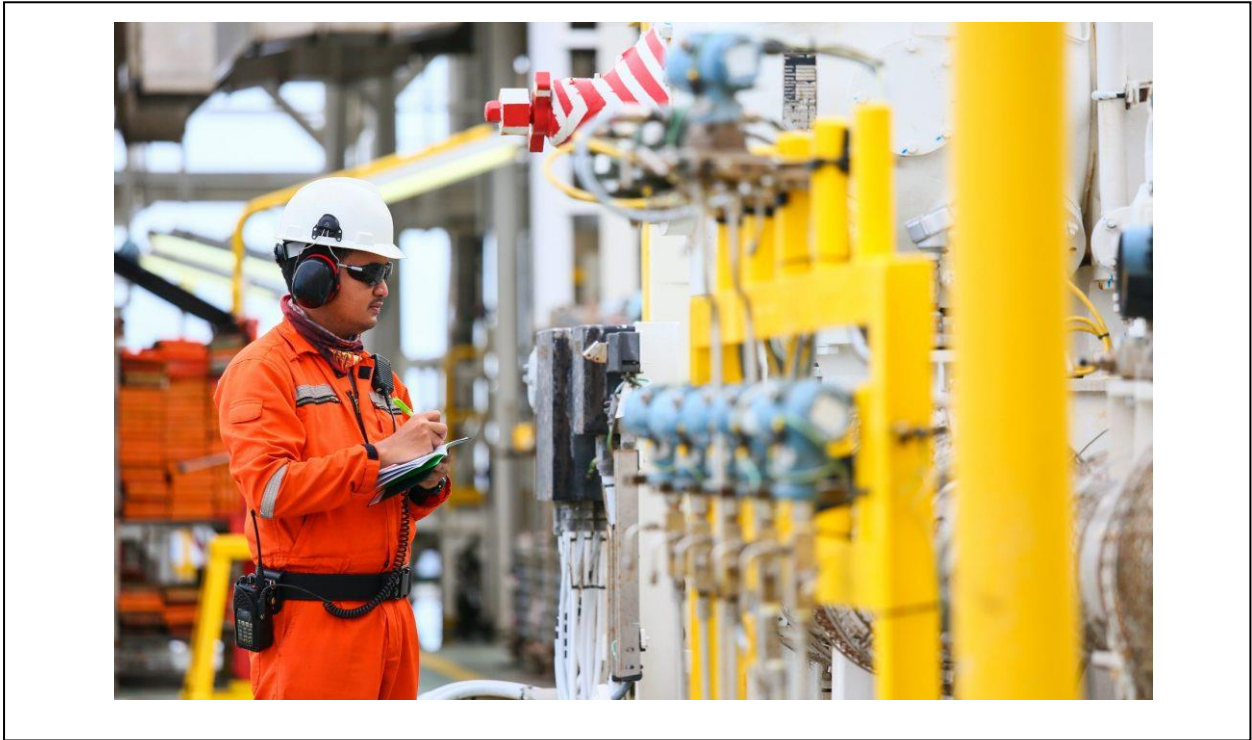
0730 – 1000	Verification in DevOps & Continuous Integration Integrating Verification into DevOps Processes • Continuous Integration & Automated Verification • Traceability & Repeatability in Verification Activities
1000 – 1015	Break
1015 – 1130	Verification Challenges & Problem Solving Common Challenges in Technical Integrity Verification • Strategies for Problem-Solving & Troubleshooting • Tips for Effective Collaboration & Teamwork
1130 – 1230	Case Studies & Real-World Examples Reviewing Case Studies & Real-World Examples of Technical Integrity Verification • Analyzing Challenges & Lessons Learned from Different Industries • Best Practices & Innovative Approaches
1230 – 1245	Break
1245 – 1345	Final Project & Course Wrap-Up The Knowledge Gained Throughout the Course in a Final Project • Presenting the Project & Receiving Feedback • Course Review, Q&A Session & Closing Remarks
1345 – 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course





Practical Sessions

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



Course Coordinator

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