COURSE OVERVIEW ME0462
ASME Section 8 Division 3

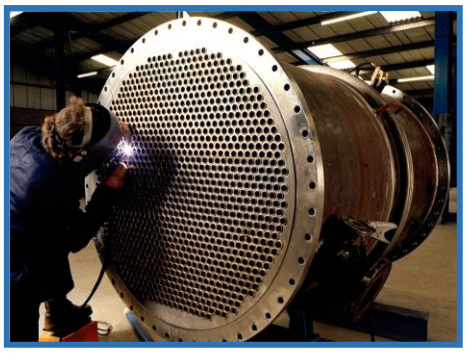
Course Title
ASME Section 8 Division 3

Course Date/Venue
Please see page 3

Course Reference
ME0462

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

Course Description



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

This course is designed to provide the participants with a detailed and up-to-date overview of ASME section 8 division 3. It covers the general requirements comprising of scope, jurisdiction, organization of the division, responsibilities and duties; the general rules for inspection and additional general requirements for composite reinforced pressure vessels (CRPV); the material requirements, mechanical property test for metals, supplementary requirements for bolting, material design data and requirements for laminate materials; and the requirements of design covering fatigue evaluation, fracture mechanics evaluation and design using autofrettage.

Further, this course will also discuss the design requirements for closures, integral heads, threaded fasteners, seals, attachments, supports, external heating and cooling jackets; the special design requirements for layered vessels, wire-wound vessels and frames; the vessels in hydrogen service, welded vessels, experimental design verification and composite reinforced pressure vessels (CRPV); and the general fabrication requirements, supplemental welding fabrication requirements, fabrication requirements for matesrials with protective linings, heat treatment of weldments, fabrication requirements for autofrettaged vessels, quenched and tempered steels.

During this interactive course, participants will learn the supplementary requirements for materials with welding restrictions, special fabrication requirements for layered vessels, wire-wound vessels and frames, aluminium alloys, welding age-hardening stainless steels and composite reinforced pressure vessels (CRPV); the general requirements of pressure relief devices including the requirements for rupture disk devices, pressure relief valves and power-actuated pressure relief systems; the requirements for examination procedures, personnel qualification, welds and acceptance criteria and final examination; the testing requirements, impact testing for welded vessels, hydrostatic tests, pressure test gages and transducers; and the proper method of marking and stamping as well as reviewing reports and records.

Course Objectives

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

- Apply and gain a comprehensive knowledge on ASME section 8 division 3
- Identify the general requirements comprising of scope, jurisdiction, organisation of the division, responsibilities and duties
- Employ general rules for inspection and additional general requirements for composite reinforced pressure vessels (CRPV)
- Identify material requirements, mechanical property test for metals, supplementary requirements for bolting, material design data and requirements for laminate materials
- Determine the requirements of design covering fatigue evaluation, fracture mechanics evaluation and design using autofrettage
- Recognize the design requirements for closures, integral heads, threaded fasteners, seals, attachments, supports, external heating and cooling jackets
- Describe special design requirements for layered vessels, wire-wound vessels and frames, vessels in hydrogen service, welded vessels, experimental design verification and composite reinforced pressure vessels (CRPV)
- Identify the general fabrication requirements, supplemental welding fabrication requirements, fabrication requirements for materials with protective linings, heat treatment of weldments, additional fabrication requirements for autofrettaged vessels, quenched and tempered steels.
- Discuss the supplementary requirements for materials with welding restrictions, special fabrication requirements for layered vessels, wire-wound vessels and frames, aluminium alloys, welding age-hardening stainless steels and composite reinforced pressure vessels (CRPV)
- Interpret the general requirements of pressure relief devices including the requirements for rupture disk devices, pressure relief valves and power-actuated pressure relief systems
- Explain the requirements for examination procedures, personnel qualification, welds and acceptance criteria and final examination
- Carryout testing requirements, impact testing for welded vessels, hydrostatic tests, pressure test gages and transducers
- Employ proper methods of marking and stamping as well as review reports and records

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 is intended for those involved directly or indirectly in the plant shutdown and turnaround operations. This includes maintenance and project staff such as managers, engineers, planners, supervisors and other technical people.

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 Date/Venue

Session(s)	Date	Venue
1	January 26-30, 2025	Oryx Meeting Room, Double Tree by Hilton Al Saad, Doha, Qatar
2	April 27-May 01, 2025	Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
3	July 07-11, 2025	Ajman Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
4	October 26-30, 2025	Al Khobar Meeting Room, Hilton Garden Inn, Al Khobar, KSA

Accommodation

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

Course Fee

Doha	**US$ 6,000** per Delegate. 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.
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.
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.

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: -

- 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.

- 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. Steve Magalios, CEng, PGDip (on-going), MSc, BSc, is a **Senior Mechanical & Maintenance Engineer** with almost **40 years** of extensive **On-shore/Offshore** experience in the **Oil & Gas**, **Construction**, **Refinery** and **Petrochemical** industries. His expertise widely covers in the areas of **Preventive & Predictive** Maintenance, **Reliability Centered** Maintenance, **Applied Maintenance** Management, **Reliability** Modelling, **Reliability** Techniques, **Reliability Design** Techniques, Advanced **Root Causes** Analysis & Techniques, **Reliability** Management, **Pipeline Hot Tapping**, **Hot Tapping** Equipment, **Hot Tapping Operation**, **Boiler** Inspection & Maintenance, **Boiler** Systems, **Boiler** instrumentation & Controls, **Boiler** Start-up & Shutdown, **Boiler** Operation & Steam System Management, **Pipe Cuttings**, **Flange Bolt Tightening** Sequence, **Hydro Testing**, **Pump** Technology, Fundamentals of **Pumps**, **Pump** Selection & Installation, **Centrifugal Pumps & Troubleshooting**, **Reciprocating & Centrifugal Compressors**, **Screw Compressor**, **Compressor** Control & Protection, **Gas & Steam Turbines**, **Turbine** Operations, **Gas Turbine** Technology, **Valves**, **Process Control Valves**, **Bearings & Lubrication**, Advanced **Machinery Dynamics**, **Rubber Compounding**, **Elastomers**, **Thermoplastic**, **Industrial Rubber Products**, **Rubber** Manufacturing Systems, **Heat Transfer**, **Vulcanization Methods**, **Welding** Engineering, **Fabrication** & Inspection, **Welding** Techniques, Practical **Welding** Technology, **Welding** Inspection, **Welding & Machine Shop**, **Welding & Machining**, **Welding** Types & Applications, **Welding** Safety, **Welding** Defects Analysis, **TIG & Arc Welding**, **Shielded Metal Arc Welding**, **Gas Tungsten & Gas Metal Arc Welding**, **Welding** Procedure Specifications & Qualifications (WPS & WPQ), **Aluminium Welding**, Safe **Welding**, International **Welding Codes**, **Welding Procedure** Specifications, **Welding & Brazing**, **Welder** Performance Qualification, **Pipeline** Operation & Maintenance, **Pipeline** Systems, **Pipeline** Design & Construction, **Pipeline** Repair Methods, **Pipeline** Engineering, Pipeline Integrity Management System (**PIMS**). Currently, he is the **Chartered Professional Surveyor Engineer & Urban-Regional Planner** wherein he is deeply involved in providing exact data, measurements and determining properly boundaries. He is also responsible in preparing and maintaining sketches, maps, reports and legal description of surveys.

During his career, Mr. Magalios has gained his expertise and thorough practical experience through challenging positions such as a **Project Site Construction Manager**, **Supervision Head/Construction Manager**, **Construction Site Manager**, **Project Manager**, **Deputy PMS Manager**, **Head of the Public Project Inspection Field Team**, **Technical Consultant**, **Senior Consultant**, **Consultant/Lecturer**, **Construction Team Leader**, **Lead Pipeline Engineer**, **Project Construction Lead Supervising Engineer**, **Lead Site Engineer**, **Senior Site Engineer Lead Engineer**, **Senior Site Engineer**, **Mechanical Engineer**, **R.O.W. Coordinator**, **Site Representative**, **Supervision Head**, **Contractor**, Client Site Representative and Acting Client Site Representative for international Companies such as the Public Gas Corporation, Penspen International Limited, Eptista Servicios de Ingeneria S.I., J/V ILF Pantec TH. Papaioannou & Co. – Emenergy Engineering, J/V Karaylannis S.A. – Intracom Constructions S.A., Ergaz Ltd., Alkyonis 7, Palaeo Faliro, Piraeus, Elpet Valkaniki S.A., Asprofos S.A., J/V Depa S.A. just to name a few.

Mr. Magalios is a **Registered Chartered Engineer** and has **Master** and **Bachelor** degrees in **Surveying Engineering** from the **University of New Brunswick**, **Canada** and the **National Technical University of Athens**, **Greece**, respectively. Further, he is currently enrolled for **Post-graduate** in **Quality Assurance** from the **Hellenic Open University**, **Greece**. He has further obtained a Level 4B Certificates in Project Management from the National & Kapodistrian University of Athens, Greece and Environmental Auditing from the Environmental Auditors Registration Association (EARA). Moreover, he is a **Certified Instructor/Trainer**, a **Chartered Engineer** of Technical Chamber of Greece and has delivered numerous trainings, workshops, seminars, courses and conferences 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

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***General Requirements*** *Scope & Jurisdiction ● Organization of This Division ● Responsibilities & Duties*
0930 – 0945	*Break*
0945 – 1100	***General Requirements (cont'd)*** *General Rules for Inspection ● Additional General Requirements for Composite Reinforced Pressure Vessels (CRPV)*
1100 – 1215	***Material Requirements*** *General Requirements ● Mechanical Property Test Requirements for Metals ● Supplementary Requirements for Bolting*
1215 – 1230	*Break*
1230 – 1420	***Material Requirements (cont'd)*** *Material Design Data ● Requirements for Laminate Materials*
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***Design Requirements*** *General ● Basic Design Requirements ● Fatigue Evaluation ● Fracture Mechanics Evaluation ● Design Using Autofrettage ● Design Requirements for Closures, Integral Heads, Threaded Fasteners & Seals ● Design Requirements for Attachments, Supports & External Heating & Cooling Jackets*
0930 – 0945	*Break*
0945 – 1100	***Design Requirements (cont'd)*** *Special Design Requirements for Layered Vessels ● Special Design Requirements for Wire-Wound Vessels & Wire-Wound Frames ● Special Requirements for Vessels in Hydrogen Service ● Design Requirements for Welded Vessels ● Experimental Design Verification ● Additional Design Requirements for Composite Reinforced Pressure Vessels (CRPV)*
1100 – 1215	***Fabrication Requirements*** *General Fabrication Requirements ● Supplemental Welding Fabrication Requirements ● Fabrication Requirements for Materials with Protective Linings ● Heat Treatment of Weldments ● Additional Fabrication Requirements for Autofrettaged Vessels ● Additional Fabrication Requirements for Quenched & Tempered Steels*
1215 – 1230	*Break*

1230 – 1420	***Fabrication Requirements (cont'd)*** *Supplementary Requirements for Materials with Welding Restrictions ● Specific Fabrication Requirements for Layered Vessels ● Special Fabrication Requirements for Wire-Wound Vessels & Frames ● Additional Fabrication Requirements for Aluminum Alloys ● Additional Fabrication Requirements for Welding Age-Hardening Stainless Steels ● Additional Fabrication Requirements for Composite Reinforced Pressure Vessels (CRPV)*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Pressure Relief Devices*** *General Requirements ● Requirements for Rupture Disk Devices ● Requirements for Pressure Relief Valves*
0930 – 0945	*Break*
0945 – 1100	***Pressure Relief Devices (cont'd)*** *Certification Mark ● Certification of Flow Capacity of Pressure Relief Valves ● Requirements for Power-Actuated Pressure Relief Systems*
1100 – 1215	***Examination Requirements*** *Requirements for Examination Procedures & Personnel Qualification ● Requirements for Examination & Repair of Material ● Examination of Welds & Acceptance Criteria*
1215 – 1230	*Break*
1230 – 1420	***Examination Requirements (cont'd)*** *Final Examination of Vessels ● Additional Examination Requirements for Composite Reinforced Pressure Vessels (CRPV)*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

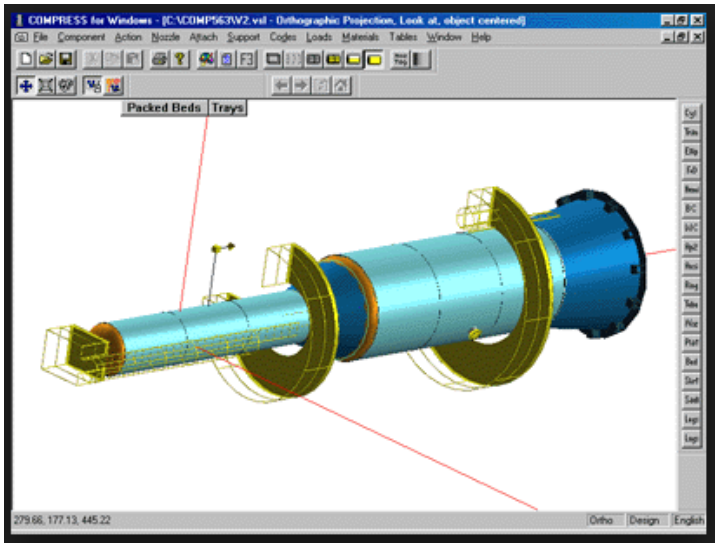
0730 – 0930	***Testing Requirements*** *Testing Requirements ● Impact Testing for Welded Vessels*
0930 – 0945	*Break*
0945 – 1100	***Testing Requirements (cont'd)*** *Hydrostatic Tests*
1100 – 1215	***Testing Requirements (cont'd)*** *Pressure Test Gages & Transducers*
1215 – 1230	*Break*
1230 – 1420	***Testing Requirements (cont'd)*** *Additional Testing Requirements for Composite Reinforce Pressure Vessels (CRPV)*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	***Marking, Stamping, Reports, & Records*** *Contents & Method of Stamping*
0930 – 0945	*Break*
0945 – 1100	***Marking, Stamping, Reports, & Records (cont'd)*** *Contents & Method of Stamping (cont'd)*
1100 – 1215	***Marking, Stamping, Reports, & Records (cont'd)*** *Obtaining & Using Certification Marks*
1215 – 1230	*Break*
1230 – 1345	***Marking, Stamping, Reports, & Records (cont'd)*** *Report Forms & Maintenance of Records*
1345 – 1400	***Course Conclusion***
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Simulator (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 the state-of-the-art "COMPRESS" simulator.



COMPRESS Simulator

Course Coordinator

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