

## ASME BVP Code Section VIII, Division 1 – Workshop Design Calculation

Date: Mon. – Wed., 12 - 14 February 2024 – Online

**ASME Code vessels don't always have to be "fatter"!** Following a brief general introduction into the ASME Code the participants will be made familiar with the applicable ASME Code Section VIII, Division 1 design requirements. Many different practical examples and exercises will offer a deep insight into the ASME Code specific design rules. During the course the participants will calculate typical pressure components on their own, assisted by an experienced design engineer who is also an Authorized Inspector Supervisor. Having attended this course, the applicants have the necessary basic knowledge to perform their own design calculations and/or review such calculations for Code compliance.

The seminar language is English.

**Duration:** 3 days

### Overview of the topics:

- ASME Code – general introduction, Code Cases, Interpretations
- Structure of Section VIII, Division 1
- Design basics: determining the specific Section VIII, Division 1 design data (MAWP, design pressure, test pressure, design temperature, MDMT, seismic and wind loads, external nozzle loads, etc.)
- Material (ASME, ASTM, EN) and establishing the allowable stress values as listed in ASME Code Sec. II
- Joint categories, types and efficiency factors E and the corresponding scope of NDE examination
- Calculation of cylinders and cones, dished heads and flat covers, for internal and external pressure
- Nozzles (reinforcement, large openings, external nozzle loads, UG-45, etc.)
- Dimensioning flanges according to Appendix 2 and ASME B16.5
- Vessel supports (saddles, lugs, skirts)
- Special services UW-2 (lethal service, direct firing, low temperature service)
- Finite element analysis in Section VIII, Division 1
- Fatigue analysis requirements for Division 1 vessels
- Impact test requirements as an integral design element
- Proof test to establish the maximum allowable working pressure in VIII-1
- Appendix 46 – Use of Section VIII, Division 2 rules for Division 1 vessels
- Calculations using non-ASME procedures/formulas covered by par. U-2(g) of Section VIII-1 (e.g. FEA, British Standard, AD 2000, EN13445, etc.)
- Pressure testing requirements of Division 1

Instructor: Dipl.-Ing. Michael Frohnert – E-Mail: [frohnert@cis-inspector.com](mailto:frohnert@cis-inspector.com)

Michael Frohnert's main field of activities is preparing and reviewing design calculations according to the ASME Code and other international Codes and Standards for the plant and mechanical engineering industries as well as performing ASME inspections and audits. Before changing to CIS GmbH, he started his professional career at ONE/TÜV/BV in Essen where he worked as a design engineer, inspector and seminar instructor. During his time with One/TÜV/BV he qualified in the ASME Code business as an ASME Authorized Inspector and went on to become an experienced Authorized Inspector Supervisor. He also holds a National Board endorsement as Authorized Nuclear Inspector. Michael has held numerous public seminars and tailor-made in-company trainings and workshops covering a wide range of topics. His in-depth involvement in the practical application of the ASME design rules is a very beneficial and valuable feature of his seminar work. On behalf of ASME he conducts their Section VIII, Division 2 seminars in Europe and Middle East. Michael Frohnert represents CIS GmbH in the ASME Group of Interested Experts managed by the ASME Delegate of Germany.

For further information please do not hesitate to contact directly the instructor or our seminar team:

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# ASME Code Weeks Online 2024



company	<p>For <b>online</b> registration go to:  <a href="http://www.cis-inspector.com/asme-code-weeks">www.cis-inspector.com/asme-code-weeks</a></p> <p>For <b>postal</b> or <b>e-mail</b> registration please contact the registration center in Germany below:</p> <p><b>CIS GmbH, Laubenhof, 6, 45326 Essen, Germany</b>                  Fax: +49 201 74 72 75-29                  E-Mail: <a href="mailto:service@cis-inspector.com">service@cis-inspector.com</a></p>
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Title	Surname	First Name	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	H15

Sem.	Date	Title	Price
H1	05.02.2024	ASME Boiler & Pressure Vessel Code: An Introduction	490 €
H2	06. - 07.02.2024	ASME BPV Code, Section VIII, Division 1: Pressure Vessels	960 €
H3	08.02.2024	ASME BPV Code Section VIII, Division 2: Alternative Rules for Pressure Vessels	490 €
H4	09.02.2024	ASME BVP Code and PED ReHuirements	490 €
H5	12. - 14.02.2024	ASME BPV Code Section VIII, Division 1: Workshop Design Calculation	1300 €
H6	14.02.2024	Material Requirements of the ASME BPV Code	490 €
H7	15. - 16.02.2024	ASME BVP Code Section IX – Welding	960 €
H8	15. - 16.02.2024	EN 13445: The European Standard for Pressure Vessels	960 €
H9	19.02.2024	ASME B31.3 and B31.1: Process & Power Piping	490 €
H10	20.02.2024	EN 13480: The European Piping Code	490 €
H11	21.02.2024	ASME B16.34: Valves	490 €
H12	22. - 23.02.2024	ASME BPV Code, Section V: NDE Procedures and Personnel	960 €
H13	19. - 20.02.2024	ASME BVP Code, Section III – Nuclear Codes	1050 €
H14	21. - 22.02.2024	ASME NQA-1 - Nuclear Quality Assurance	1050 €
H15	23.02.2024	Lead Auditor Examination	500 €

All prices plus VAT