Monday Workshop Program

When: April 7th 2025, 9am – 5pm

Where: Shell Energy Transition Campus – Amsterdam NL

What: Registration required

Monday is complementary ASME B31.3 related Workshops, breakfast and lunch will be served. Workshops are open to all, with no obligation. You are encouraged, but not obligated to attend the Tues-Friday ASME B31.3 and B31.12 committee meetings, tours, and presentations. Registration is required via the ASME B31.3 Amsterdam website so that your badge will be available, and entrance into the building is approved prior to arrival.

Professional Development Hours (PDH) Certificates will be provided to attendees.

9am-12 noon (3 hrs. PDH)

ASME B31.3 Process Piping Overview – by Dr Charles (Chuck) Becht IV, PE, ASME Fellow

Dr Becht is the CEO of Becht Inc, a consulting firm supporting the energy industries worldwide including refineries, petrochemical, midstream, ammonia, renewables, power, etc. He is also Chairman of Becht Industrial Group, which provides field services. Dr Becht has been an ASME B31.3 Committee member for over 35 years and held the position as ASME B31.3 Chairman from 2006 – 2012. He was formerly Chairman of the ASME Post Construction Committee (PCC), founding Chair of ASME PCC-2 Repair of Pressure Equipment in Piping and member/chair of 11 other ASME Code committees. He is the author of over 60 technical papers and two books, ASME B31.1 Power Piping – The Complete Guide, and ASME B31.3 Process Piping – The Complete Guide.

This tutorial provides an overview of the rules contained in The Process Piping Code, ASME B31.3. The Code covers a very wide range of services and has separate rules for highly toxic ffuids, high pressure ffuids, low hazard ffuids, nonmetallic systems, and high purity systems. Its organizational features and intent are described to help understand the flow of the rules and how they are intended to be applied. The tutorial also provides an update on significant changes that have been made to the Code in recent editions through the 2022 edition.

<u>12pm-1pm (1 hr. PDH)</u>

ASME B31.3 vs ASME Section IX Welding Requirements, including High Purity and High-Pressure rules – by John Swezy, ASME Fellow

John Swezy is an ASME Fellow and a longtime member of ASME BPV Section IX Welding Committee. He is the current Vice Chair of ASME B31.3 and Chair of Subgroup C (Edit). Mr. Swezy has 30 years of experience as an Authorized Inspector Supervisor and an ASME Codes and Standards Committee Member.

John will discuss why ASME Section IX welding procedures, submitted by a contractor may not be necessarily approved as-written for ASME B31.3 piping construction. Differences in impact test and PWHT rules will be discussed as well as welding requirements for High Purity and High-Pressure piping. Lunch will be served.

MONDAY AFTERNOON – TRACK 1 – ASME Post Construction Codes Overview

<u>1pm – 3pm (2 hrs. PDH)</u>

ASME PCC-1 – Overview of the Bolted Joint – by Scott Hamilton

Mr. Scott Hamilton is the past chairman of ASME PCC-1 and the xxx for VSP Technologies. VSP provides bolting solutions and how it affects plant down-time.

This presentation will discuss how ASME PCC-1 transformed from a "Guideline" to a "Standard." We will also discuss the decisions made in the rewriting of the document and the new ASME Style Guide Format. Topics will include:

- Who is the document intended for.
- How the format was chosen.
- Input from the past on how to ensure certain items were clearer.
- How the body of the document is supplemented by the Non-Mandatory Appendices.

The second part of the discussion will highlight some of the more significant changes in the document:

- Appendix A Different levels of training.
- Appendix D Machining of flanges and the recommendations around machining.
- Appendix J & K Why did we combine those two appendices?
- Appendix R The development of a Records Appendix.

The third part of the workshop will explain the group's upcoming tasks and end with a question-and-answer section.

<u> 3pm – 5pm (2 hrs. PDH)</u>

ASME PCC-2 – Overview of "Repair of Pressure Equipment and Piping" – by Steve Roberts, ASME Fellow

Mr. Roberts is the current Chairman of ASME Section VIII Pressure Vessel Code and is a member of 13 other ASME code committees.

ASME PCC-2 is a standard that provides guidelines for repairing pressure equipment, heat exchangers, piping, pipelines, and all related mechanics included under ASME Pressure Technology Codes and Standards once the equipment is in operation.

Mr. Roberts' presentation will cover design, fabrication, inspection, and testing practices, whether temporary or permanent, depending on the circumstance. The standard applies when an inspection and flaw assessment indicate that equipment requires repair, but provides evaluation techniques that allow the owner to safely delay repairs until opportunity presents itself.

Though ASME PCC-2 is a thorough standard, it does not address inspection and flaw evaluation procedures. The related inspection and flaw assessment information exists in the other ASME standard. As stated in the official document, ASME PCC-2 advises the standard is used for general purposes and may not be suitable for all applications. Engineers and subject-matter experts should determine the applicability of a specific method based on sound engineering practices and judgment.

- 1. The first part applies to all articles in this standard while covering the scope, organization, and purpose.
- 2. The next part discusses the repair methods involving metal deposits, such as welding, brazing, soldering, or other similar techniques.
- 3. The third part regulates mechanical repairs, with or without using sealants, such as bolted clamps or fixtures, and covers all repair methods not included in Part 2 or 4.
- 4. The fourth part modulates repairs with non-metallic materials, such as non-metallic liners and wraps, and bonding using epoxy or joining metallic components.
- 5. The last part talks about testing and examination methods.

MONDAY AFTERNOON – TRACK 2 – Insights to ASME/EN/PED Pipe Stress Compliance

<u>1pm – 230pm (1.5 hr. PDH)</u>

Pipe Stress Evaluation in Accordance with B31.3 Codes, includes EN 13480– by Chris Bradshaw, Hexagon

Chris Bradshaw is Product Owner for the Pipe Stress Engineering discipline at Hexagon ALI. Pipe Stress Engineering includes CAESAR II and PIPESTRESS. With a Mechanical Engineering Background, along with many years of experience in the industry, Chris is ideally positioned to translate customer requirements and industry trends for the development team to implement. Prior to becoming CAESAR II and PIPESTRESS Product Owner, Chris was previously an Industry Consultant for Volume Sales at Hexagon PPM, responsible for presales activities for Hexagon's CADWorx, Analysis and BricsCAD products.

This talk, presented by a representative of a popular pipe stress analysis tool and familiar with both B31.3 and EN 13480, will review the B31.3 paragraphs defining stress analysis and comment on how commercial software addresses these issues. The presentation will include worked examples using commercial software to further these discussion points. In addition, comments and comparisons with the European standard EN 13480-3 will also be covered, both in comparison with B31.3 and, again, included examples worked within the software which will highlight areas of interest when comparing the two standards.

Eng-Tips https://www.eng-tips.com→ threads→ changing-to-en-13...
Changing to EN 13480 from ASME B31.3 ♥
Nov 20, 2015 - The design rules are much more extensive than B31.3, there's a formula for almost anyting in the code. On the other hand, there are a lot of ...
5 answers · 0 votes: "Designs" will be very similar, I wouldn't think there is advantage to change ...
EN 13480 vs ASME B31.3 1
5 answers Jun 30, 2018
EN 13480 or ASME B31.3 - Pipelines, Piping and ...
17 answers Dec 21, 2023
BS EN 13480/A sequivalent for ASME B31.3
4 answers May 31, 2015
PED/EN13480/ASME/31.3 2
7 answers Dec 19, 2003
More results from www.eng-tips.com

<u>230pm – 4pm (1.5 hr. PDH)</u>

Improving the B31.3 Codes – recent work on ASME B31J, B31H, and B31H – by Tony Paulin (PRG and Paulin Labs LLC)

As the original author of CAESAR II, co-author of FE Pipe, member of the B31 Mechanical Design Committee and responsible for two decades of Markl Fatigue testing in Houston Texas, Tony Paulin is a recognized name in piping system and piping component analysis and evaluation. Tony is a contributor to several B31 code documents, namely –

- 1. B31J (Standard Test Method for Determining Stress Intensification Factors (i-Factors) for Metallic Piping Components)
- 2. B31H (Standard Method to Establish Maximum Allowable Design Pressures for Piping Components) Not Released by ASME yet to the Public
- 3. Update of B31E (Standard for the Seismic Design and Retrofit of Above Ground Piping Systems)

Tony's involvement with these documents and their path forward should make this presentation interesting and engaging to pipe stress engineers.

<u> 4pm – 5pm (1 hr. PDH)</u>

Satisfying the EU Pressure Equipment Directive for ASME B31.3 – by Geronimo Zamora Garcia, Tecnicas Reunidas and Nikola Jacimovic, Stressman Engineering

Geronimo Zamora Garcia, a member of the B31.3 Subgroup on Design, is currently the Piping Stress Chief Deputy of TR (Tecnicas Reunidas), he possesses a strong and extensive knowledge in piping, pipe stress analysis, support, materials, plant design and the proper use and interpretation of International Codes and standards, especially ASME B31.3.

Nikola Jacimovic, a member of the B31.3 International Review Group and Subgroup on Design, is currently the CTO of Stressman Engineering AS. He has deep expertise in pipe stress analysis, pressure vessel calculations, finite element analysis, and plant design, with a comprehensive understanding of international codes and standards, most notably ASME B31.3. His experience also includes ensuring compliance with Directive 2014/68/EU (pressure equipment directive).

B31.3 is an international code, but when developing projects to be built in Europe, engineers, in some instances, must apply additional criteria to ensure that B31.3 will satisfy the European Pressure Equipment Directive (PED). ASME B31.3 addresses these

PED safety requirements in B31.3 Appendix N, N301. They will give an overview of provisions for factors and allowable stresses, comparing some of PED and its harmonized codes requirements with B31.3 and how these might affect stress analysis results. This work is part of a project to provide a PED example as part of B31.3 Appendix S.

They will also go over the possible use and application of B31J to calculate the SIFs and their corresponding k factors as the more directly applicable data in accordance with EN 13480-3, 12.2.7.4.

The Moderators

David Diehl will moderate Monday afternoon Pipe Stress presentations. Now retired, Dave's career centered around commercial software for pipe system stress analysis where he focused on introducing engineers to the proper use of such software. Dave has contributed much of his time to ASME B31.3 where he served as B31.3 Chair of Subgroup Design (2014-2017) and Chair of the B31.3 Process Piping Committee (2017-2020). It is from this background that Dave came to know these three speakers who are presenting interesting topics for European pipe stress engineers.

Chip Eskridge, PE, CWI will moderate Monday morning and the Monday afternoon PCC presentations. Chip is the current Chairman of ASME B31 Standards and the ASME B31.3 Process Piping committee. Chip is a multi-discipline licensed Professional Engineer (Mechanical and Metallurgical) and has over 40 years' experience in the chemical, petrochemical, nuclear and fossil power industries. Chip is an ASME Fellow, recipient of the 2023 ASME Dedicated Service Award, and has vast experience with obtaining jurisdictional approval of non-compliant pressure equipment. Chip is a 3-term governor appointee to the Kentucky Boiler/Pressure Vessel/Piping Board representing the welding/metallurgy industry and is a Certified Inspector holding an API 510 (Pressure Vessel), API 570 (Pressure Piping), and API 653 (Storage Tank) certification.

<u>515pm – 630pm</u>

Social Hour sponsored by Hexagon - Yotel Hotel Amsterdam (8 min walk)

Asterweg 33, 1031 HM Amsterdam, Netherlands

Directions/Website

