

**ACI Meeting
Teleconference
2021-08-16**

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ASME BPV liaison report

The last group of the ASME Boiler and Pressure Vessel Code Week meetings were held virtually from July 26th to 31st, 2021 because of COVID-19 pandemic. Earlier this year, the ASME meetings were held virtually from May 9th to 14th, 2021 and from February 7th to 12th, 2021. Highlights include:

ASME response to COVID-19 pandemic

All ASME Boiler Code Meetings will be virtual through December 2021. For 2022, the plan is to have virtual meetings in February, August, and November and May meeting in person (New Orleans). ASME is evaluating if the return to in person meetings or hybrid approach may be implemented for the 2022 meetings currently scheduled to be virtual.

Technical Oversight Management Committee (TOMC)

ASME's TOMC and the ASME Section VIII Standards Committee are working on the rules for remote inspections that will be first proposed for use in Section VIII. They can also be used by different codes of constructions also. This development work is not related to COVID-19. It should allow quicker introduction, adoption, and use of new technologies and innovations in the remote inspections.

NB reported to TOMC that NB is planning to introduce Electronic Data Transfer (EDT) system replacement in 2022. This action may require adjustments in the current ASME Data Report forms.

It was reported that the committee on Qualifications for Authorized Inspection (QAI) has been working on a proposal that will address situations where an Authorized Inspector Supervisor and client (manufacturer) cannot agree. In those cases, a non-conformance shall be reported to ASME for resolution.

CA-1, 2020 Edition was published in December 2020 and introduced definitions of "field sites" and "temporary locations". The new edition of CA-1 does not refer to the term "Intermediate site". It requires that any work outside of the shop at a place other than

the final installation location of the boiler or pressure vessel shall be called a “temporary location”. CA-1 provides the requirements that Certificate holders shall address in their quality management systems when they perform work outside their shops. CA-1 describes the process for obtaining the authorization from ASME.

Retention of Radiographs rules will be revised.

Hydrogen is coming back – more activity and requirements for specific rules for hydrogen vessels – need for storing and tracking Hydrogen

Additive manufacturing is coming sooner than expected. ASME formed a Task group to develop requirements for additive manufacturing.

Section I

The Task Group on Modernization is working on the modernization rules for power boilers. Some of these modernization initiatives will include high temperature rules (e.g. material properties, welding requirements, PWHT, preheat), creep design rules, and creep-fatigue rules. Some of these new rules were published in the 2021 Edition of Section I. The work continues for the 2023 edition. Two research projects have been completed in support of Section I Modernization:

- Elevated temperature material property roadmap – this project will support design by analysis rules
- Creep fatigue flaw growth analysis – this project will support elevated temperature flaw size acceptance criteria

Sections II and IV

In 2019 Edition, the stress tables provided in Section IV were mandatory and tables provided in Section II were for information only. In the 2021 Edition, Section II tables became mandatory in 2021 and Section IV deleted them.

It was reported that Article 8 was omitted in the 2021 edition of ASME BPVC Section IV. Currently, Section IV does not have rules for modular heating boilers. The errata was issued to publish Section IV, Part HG, Article 8 and return modular boiler rules in the code. See attached file.

Sequence of events leading to the issue and how it was resolved:

- Section IV Committee wanted to consolidate all requirements for modular boilers in one place.
- The Committee revised paragraphs HG-330.6, HG-530.3, HG-607, HG-615, HG-710.4, HG-716, HLW-801.3 and deleted the requirements for modular boilers

from these paragraphs. At the same time, they created NEW Part HG, Article 8 with consolidated rules for modular boilers.

- The change was approved for publication but it was inadvertently left out of the code in the 2021 edition.
- Errata was issued (it should be on the ASME web page) but many are not aware of this document.

Section IV Standards Committee initiated the creation of International Working Groups (IWGs). The action has been postponed due to COVID-19. It is expected that the project will continue later in 2021.

Sections II and IV are working on a project to update or add tensile and yield values for ferrous and non-ferrous materials in table 6 of Section II-D.

Section VIII

Section VIII reported that backlog of interpretations is down and on the manageable level currently.

Major changes in 2021 edition:

- The Task Group working on the revision of U-2(g) rules completed their work. The last item was published and it specifies activities where an engineer must provide oversight. The code change introduced the requirements for responsible engineer and designer, and the manufacturer will be required to establish the minimum competence requirements for performing design activities, and the qualification and certification requirements for personnel.
- Overpressure protection requirements were removed from Section VIII and moved in Section XIII
- In the 2021 edition of the ASME BPV code, Section VIII, Divisions 1 and 2 specified requirements for test gaskets and test bolts for hydrostatic and pneumatic pressure tests. Custom designed flange assemblies, including modified standard flange assemblies where additional calculations are required, shall be tested with the identical gaskets used for operation of the pressure vessel and bolting having identical allowable stresses at room temperature as used in the design calculations. The user, or their designated agent, may allow either or both requirements to be waived by including such a statement in the General Notes section of Form U-DR-1 or Form U-DR-2 for Division 1 vessels or in the User's Design Specification for Division 2 vessels. (Item 15-301)

Work in Progress:

In the next several months, ASME is planning to publish the following white paper - *INITIATING REQUIREMENTS FOR CERTIFYING ENGINEER IN ASME SECTION VIII DIVISION 1 PRESSURE VESSEL CODE*. With the onset of new Certifying Engineer

requirements in the new Appendix 47 (2021 Edition), this white paper should provide guidance and commentary to all users to better understand the changes. This paper will also serve as clarifying information for the Committee to use in understanding intent to better assist in answering potential interpretations.

Some of the items that Section VIII are developing for the next edition:

- Restructure Section VIII Div. 1 and the Standards Committee
 - o Complete the reshape of the Division 1 book for the 1st consideration ballot around May 2024 (for 2025 edition)
 - o Change to Periodic Maintenance by 2027 or 2029
- Definition of unfired steam boiler
- Moving UG-20(f) requirements in UCS-66
- Development rules for design and construction of fired heater treater vessels
- ASME and the refrigeration industry have been discussing the Section VIII scope issue since 2017. ASME prepared the Section VIII Scope Deliberation Report and sent this document to industry at the beginning of 2021. The response from the refrigeration industry was received just before the May Code Week. More discussion occurred in the July meeting and it will continue in the November meeting. ASME's plan is to resolve the issue and publish the scope revisions in the 2023 code edition.
- ASME is still working on a code revision that will clarify the mandatory evaluation of external loads on standard flanges. The proposed code revision will allow the use of three evaluations methods (the current UG-44(b) and 4.16.12 methods from Brown, plus a new method from Koves) and provides a reference to EN 1591 for evaluation of external loads on standard flanges.
- The Sub Group General Requirements (SGGR) is developing rules for Engineering Contractors, including a proposal for a new Data Report form U-1B. Engineering Contractors are vessel Manufacturers that may or may not have fabrication facilities. This item was discussed in detail at the SGGR May meeting. It was decided that the representative from the International Working Group – Germany (initiator of this item) will provide the revised proposal for the next SGGR meeting,
- The Committee is working on a proposal that will provide the rules for the design of components that operate at high temperatures in the time dependent regime (creep). When completed, these rules will help designers of large Section I boilers and specific process vessels designed per Section VIII, Div. 2.

Section IX

Section IX reported that backlog of interpretation and revision work is down and on the manageable level currently.

Section IX Standards committee formed Task Groups that should evaluate and consider developing rules for:

- remote welding qualification supervision – possibly future Mandatory Appendix
- increase in the thickness exempt from PWHT for P-No.1 and some low alloy steels
- qualification requirements (e.g. P-Number, Group number classifications) for duplex stainless steels

Section XII (cargo transport vessels)

Issues with the Regulatory adoption in US

- Section XII was developed in 2004 at the request of the US DOT and industry
- ASME requested in 2004 that DOT incorporate the new standard in the Hazardous Material Regulations (HMR)
- As of now (May 1, 2021) DOT has not adopted Section XII in CFR, though PHMSA representatives have stated they are working on it.
- Due to sluggish response from US DOT and international interest (countries which otherwise lack solid rules), ASME has started making more effort to ensure BPV XII is workable as an international standard.

Section XIII

A new ASME BPVC Section XIII has been published on July 1st, 2021.

In addition, each code of construction there is a guide (e.g. Section VIII Non-mandatory Appendix PP) to the relocation of overpressure protection requirements. These guides will be in the code books one or two code editions.

Section XIII Standards Committee has been

- developing strategic items list and
- working on enhancements of rules for each type of pressure relief devices and conceptual requirements for system design that should be included in 2023 edition of the code

Section XIII open items to start transfer of overpressure protection requirements from B31 codes (e.g. B31.1, B31.3, B31.5, B31.8 and B31.12) into Section XIII.

ASME B31.3

ASME B31.3 2020 edition has been published on June 18, 2021.

The delay in publication of the 2020 edition of B31.3 is similar as the delay in publication of the 2018 edition. As a reminder, the 2018 Edition of the ASME B31.3 Process Piping Code was published at the beginning of August 2019, as there were issues with the printing of the code.

ASME B31P - Standard Heat Treatments for Fabrication Processes

ASME B31T - Standard Toughness Requirements for Piping

These standards may be used as alternative rules to the existing rules in B31 codes. The plan is to remove the rules from the B31 codes and refer to B31P or B31T in the future.

CSA Z662

Technical Committee (TC) meeting was held virtually June 16, 17 & 18, 2021. The TC and its subcommittee are working on items for the next edition of Z662 scheduled for publication in June 2023. The next meeting is scheduled for end November and it will last three or four days in order to catch up with the items that progress slower.

Some of the items that CSA Z662 TC is working on are:

- item to incorporate requirements for H₂ and renewable (biogas, synthetic) gases into Z662
- developing safety class methodology (class locations).
- addressing the HAZ softening issues