

Scope Revision Announcement

Task Group to Revise Section VIII Scope Rules

November 18, 2014

Executive Summary

In 2007, the ASME Boiler and Pressure Vessel Standards Committee sought to incorporate the latest technologies and be more competitive through a complete rewrite of Section VIII, Division 2. It was proposed during the rewrite project to replace the current scope and exemptions with a stored energy relationship. The Committee is now proposing to modify the scope rules found in the Introduction of Section VIII Division 1. This action will remove several current exclusions and more clearly define vessels that were considered when developing the rules of this Division. There will be a Town Hall meeting during the ASME Boiler and Pressure Vessel Code Week on November 18, 2014 in Orlando, Florida to present the proposed changes and answer any questions from affected stakeholders. The proposed changes will not be incorporated into the 2015 edition.

Background

The scope is found in the *Introduction* of the 2013 edition of Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code. "Scope" has two meanings in the ASME Code.

1. Description of what equipment was considered when the rules were developed. The Committee makeup is driven by the type of equipment the rules are being written for.
2. Geometric scope and what is covered by Code stamping (e.g. vessel boundary ends at the first circumferential joint to piping, or the face of the first flange connection to piping),

Paragraph U-1(c) describes the basis for the scope and applicability of this Division.

The scope of this Division has been established to identify the components and parameters considered in formulating the rules given in this Division. Laws or regulations issued by municipality, state, provincial, federal, or other enforcement or regulatory bodies having jurisdiction at the location of an installation establish the mandatory applicability of the Code rules, in whole or in part, within their jurisdiction. Those laws or regulations may require the use of this Division of the Code for vessels or components not considered to be within its Scope. These laws or regulations should be reviewed to determine size or service limitations of the coverage which may be different or more restrictive than those given here.

The Committee currently excludes certain classes of pressure vessels from the scope of this Division. Paragraph U-1(c)(2) states "*Based on the Committee's consideration, the following classes of vessels are not included in the scope of this Division.*" While the scope of this Division does not exempt a pressure vessel from the jurisdictional authority for the installation location, jurisdictions, as well as owners and users, have often used the *Introduction* paragraphs to determine which pressure vessels would require the Code Symbol Stamp. The requirement for ASME Code application rests with the jurisdiction where the equipment is installed and operated. To help

clarify the definition of scope of this Division, the Committee issued Interpretation VIII-1-07-43 on February 15, 2008. The question and reply follows.

Question: Paragraph U-1(c)(2) provides the definition of classes of vessels not considered to be within the scope of Section VIII, Division 1. Is it required to apply the ASME Code symbol [U or UM] to equipment that is not listed in the scope exemptions or only partially satisfies the provisions of U-1(c)(2) for a specific item?

Reply: See U-1(c)(1). The Code does not mandate the application of the ASME Code symbol for any piece of equipment. The laws or regulations issued by the municipality, state, provincial, federal, or other enforcement or regulatory bodies having jurisdiction at the location of an installation establish the mandatory applicability of the Code rules, in whole or in part, within their jurisdiction. Those laws or regulations may require the use of this Division of the Code for vessels or components not considered to be within its Scope.

The exemptions given in U-1(c)(2) began as a revision prepared by a special committee in the 1940's to restrict application of the Code to those for which the product of volume and pressure exceeded 60 psi-cubic feet). This was the original basis for the application of the 6-inch rule (currently U-1(c)(2)(i)) and 15 psi (currently U-1(c)(2)(h)). Over time, the Committee has considered additional exclusions in paragraph U-1(c)(2).

- a. Vessels within the scope of other Sections*
- b. Fired process tubular heaters*
- c. Pressure containers integral to rotating equipment*
- d. Piping*
- e. Piping components*
- f. Vessels containing water under pressure*
- g. Hot water supply storage tank*

In spite of the above vessel class exclusions from the scope of Section VIII Division 1, the design and fabrication rules currently published in Section VIII, Division 1 adequately cover these vessels.

Scope Modification

In January 2011, the BPV VIII Executive Committee requested the creation of a Task Group to Revise Section VIII Scope Rules. This committee's objective was to revise the scope of Section VIII Division 1 by considering the introduction of a pressure/volume relationship to replace the current list of scope exclusions. The outcome of the Task Group's work, which is scheduled to be balloted to the ASME Standards Committee on Pressure Vessels, is summarized below.

Vessels considered within the scope of Section VIII Division 1 will encompass:

- a. Vessels with an internal or external design pressure exceeding 15 psi (103 kPa), for multi-chambered vessels, the design pressure on the common elements exceed 15 psi (103 kPa), and
- b. Vessels with the product of Pressure and Volume greater than 90 psi-cu. ft (17 kPa-cu. meters).

The new pressure-volume relationship is independent of the fluid or gas contained in the vessel and is intended to replace the 6 inch rule [U-1(c)(2)(i)]. This pressure-volume limit is slightly larger than the limits first proposed in the early editions of Section VIII and is similar to other international pressure vessel standards. Additional proposed changes include:

- Vessels exclusively within the scope of other Sections of the ASME Boiler and Pressure Vessel Code will not be included in the scope of this Division and shall not be stamped with the U Designator. This requirement currently exists in Section VIII Division 2 primarily due to the Committee's concern that the necessary Committee membership expertise is available to adequately develop design and construction rules.
- The exclusion for vessels containing water including those containing a cushion of air will be eliminated. [U-1(c)(2)(f)]
- The exclusion for hot water supply storage tanks will be eliminated. [U-2(c)(2)(g)]

Affected Stakeholders

A preliminary review of pressure vessel laws in the United States by the task group reveals the proposed revisions would have little to no immediate impact to most jurisdictions. A majority of the states have laws and/or rules that are more restrictive rules than those currently provided by Section VIII Division 1 including requirements for pressure and temperature limits and exemptions for vessels for domestic supply purposes.

There will be a Town Hall meeting during the ASME Boiler and Pressure Vessel Code Week on November 18, 2014 in Orlando, Florida to present the proposed changes, solicit comments, and answer any questions from affected stakeholders. The proposed changes will not be incorporated into the 2015 edition. An advanced copy of the proposed rule changes can requested from Mr. Steve Rossi, ASME Secretary BPV-VIII [RossiSJ@ASME.org].