

Information Bulletin No. IB22-017

October 13, 2022

**ASME Code Requirements
Regarding the Use of SI Units in Pressure Equipment
Design Registration and Shop Construction**

This information bulletin replaces IB02-006 which has been withdrawn.

Design submissions may be in SI (Metric) units, U. S. Customary (Imperial) units or any local customary units, but there should be consistency, without a mix of units in the same design submission. For ASME Code stamped construction, in accordance with the ASME Code requirements, the Manufacturer’s Data Reports and nameplates must be in units consistent with the fabrication drawings as well as be acceptable to the receiving jurisdiction.

Different units may be used during production in accordance with the fabricator’s practice. The conversion of units for verification of Code compliance and to ensure that dimensional consistency is maintained, should be included in the design submission and shall be in accordance with the following:

- (1) Conversion factors shall be accurate to at least four significant figures.
- (2) The results of conversions of units shall be expressed to a minimum of three significant figures.

Conversion of units, using the precision specified above, shall be performed to assure that dimensional consistency is maintained. Conversion factors between U.S. Customary and SI units may be found in Nonmandatory Appendix GG, Guidance for the Use of U.S. Customary and SI Units in the ASME Boiler and Pressure Vessel Code (for Section VIII-1), in A-391 through A-393 of Nonmandatory Appendix A (for Section I), in the Nonmandatory Appendix M, Guidance for the Use of U.S. Customary and SI Units in the ASME Boiler and Pressure Vessel Code (for Section IV) or Annex 1-C (for Section VIII-2).

ASME Code has also made it clear that material manufactured and certified to either the U.S. Customary or SI material specification (e.g., SA-516M) may be used regardless of the unit system used in design. Standard fittings (e.g., flanges, elbows, etc.) that have been certified to either U.S. Customary or SI units may be used regardless of the units system used in design.

The following table provides examples of correct and incorrect use of units for plate material:

Incorrect use	Correct use
Plate material 25.4 mm thick, SA-516-70	Plate material 1 inch thick, SA-516-70
	or
	Plate material 25 mm thick, SA-516M-485

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The following table provides examples of correct and incorrect use of units for pipe material:

Incorrect use	Correct use (SA-106, SA-333)
Pipe material 33 mm OD, Schedule 40, SA-106 Grade B Seamless	Pipe material NPS 1, Schedule 40, SA-106 Grade B Seamless
	Correct use (SA-53/53M)
	Pipe material NPS 1, Schedule 40, SA-53 Grade B Seamless
	or
	Pipe material DN 25, Schedule 40, SA-53M Grade B Seamless

For ASME Code Stamped constructions, you are reminded that these requirements may be influenced by future ASME Code revisions or interpretations. In that case, we will provide an advisory bulletin accordingly.

For non-ASME Code Stamped constructions, CSA B51 Manufacturer’s Data Reports and nameplates, the same rules apply.

<original signed by>

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