ASME B36.19-2026
(Revision of ASME B36.19-2022)

Welded and Seamless Wrought Stainless Steel Pipe

AN AMERICAN NATIONAL STANDARD

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FOREWORD

This Standard for corrosion-resistant piping, designated categorically as *stainless,* is based on the same principles that formed the background for the development of ASME B36.10M, Welded and Seamless Wrought Steel Pipe, and reference is made to this source of information.

The more recent development of the highly alloyed stainless steels has brought about a minor conflict with convention. With these newer materials, the need for standards is just as great and the present types of threads are just as satisfactory, but the basic cost of the metal is much higher and the art of fusion welding has developed concurrently. The character of stainless steel permits the design of thin-wall piping systems without fear of early failure due to corrosion, and the use of fusion welding to join such piping has eliminated the necessity of threading it. For these reasons, the wall-thickness dimensions shown under Schedule 10S have been developed, based on the conventional formula, but then modified to correspond to the nearest Birmingham Wire Gage (B.W.G.) number.

Following publication of the 1949 edition, a demand developed for a still lighter wall pipe. A Schedule 5S was determined cooperatively by representatives of chemical companies, processing industries, and manufacturers of welding fittings. This was endorsed by the American Standards Association (ASA) Chemical Industry Correlating Committee and the Manufacturers Standardization Society of the Valve and Fittings Industry. The new schedule was included in the revised standard that was approved by ASA [now American National Standards Institute (ANSI)] on April 7, 1952.

In 1956, it was recommended that the wall thickness of 12 in. 5S be lessened, and a new revision of the standard was issued shortly after its approval by ASA on February 27, 1957. In this fourth edition, dimensions were expanded beyond 12 in. pipe size by inclusion of, and reference to, ASTM Specification A409. This revision was approved by ASA on October 29, 1965.

The B36 Standards Committee membership was asked in March 1970 for recommendations as to what action should be taken on ANSI B36.19-1965 since, according to ANSI procedures, this Standard was due for revision or affirmation. The B36 Standards Committee recommended reaffirmation. This action was approved by the Secretariat and by ANSI on May 26, 1971.

In 1975, the B36 Standards Committee undertook a review of the standard, considering its acceptability and usefulness. The results were favorable; some editorial refinements and updates were proposed, along with the incorporation of factors for conversion to SI (metric) units. The revision was approved by the Standards Committee, the Secretariat, and subsequently ANSI on October 4, 1976.

The standard was revised in 1984 to include SI dimensions. The outside diameters and wall thicknesses were converted to millimeters by multiplying the inch dimensions by 25.4. Outside diameters larger than 16 in. were rounded to the nearest 1 mm, and outside diameters 16 in. and smaller were rounded to the nearest 0.1 mm. Wall thicknesses were rounded to the nearest 0.01 mm. These converted and rounded SI dimensions were added. A formula to calculate the SI plain end mass, kg/m, using SI diameters and thicknesses, was added, and the calculations were added. These changes in the standard were approved by the Standards Committee, the Sponsor, and ANSI, and it was designated an American National Standard on October 7, 1985.

The text of the standard was revised in the 2004 edition to conform to the format and content, as appropriate, of ASME B36.10M-2004. A new table was added, combining the information in the previous tables into a single table. Also, the roster of the disbanded B36 Committee was replaced by the roster of the B32 Committee. The 2004 edition was approved as an American National Standard on June 23, 2004.

The 2018 edition revised some of the outside diameters and plain end masses in Table 2-1 (formerly Table 1). A number of editorial revisions were also made to Table 2-1 and sections 1, 2, 4, 5, and 7. The 2018 edition was approved as an American National Standard on August 13, 2018.

The 2022 edition modified the SI outside diameter rounding rules, updated the calculated plain end mass listings in Table 2-1, and added new Schedule 160S nominal wall thicknesses for standard sizes from NPS $\frac{1}{8}$ to NPS 3 (DN 6 to DN 80) and from NPS 4 to NPS 6 (DN 100 to DN 150). In addition, the designation of the Committee was changed from the B32 to the B36 Committee. Additionally, ASME B36.19 was changed from a periodic maintenance to a continuous maintenance standard. ASME B36.19-2022 was approved by ANSI on March 31, 2022.

This Standard is available for public review on a continuing basis. Public review provides an opportunity for additional public review input from industry, academia, regulatory agencies, and the public-at-large.

This 2026 edition makes a number of technical and editorial changes to sections 1 through 9, including revising the scope and the nominal weight (mass) equations, adding direct text permitting the use of ASME B36.10 for sizes and thicknesses not covered by ASME B36.19, and deleting the Schedule 160S listings from Table 2-1. Each plain end weight (mass) listing in Table 2-1 has also been updated. ASME B36.19-2026 was approved by ANSI on August 3, 2026.

ASME B36 COMMITTEE
Nominal Wrought Pipe Sizes and Wall Thicknesses

(The following is the roster of the committee at the time of approval of this Standard.)

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B. Bounds, *Chair*
L. Stanford, *Secretary*

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D. Frikken, Engineering Consulting
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General. ASME codes and standards are developed and maintained by committees with the intent to represent the consensus of concerned interests. Users of ASME codes and standards may correspond with the committees to propose revisions or cases, report errata, or request interpretations. Correspondence for this Standard should be sent to the staff secretary noted on the committee's web page, accessible at https://go.asme.org/B36committee.

Revisions and Errata. The committee processes revisions to this Standard on a continuous basis to incorporate changes that appear necessary or desirable as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published in the next edition of the Standard.

In addition, the committee may post errata on the committee web page. Errata become effective on the date posted. Users can register on the committee web page to receive email notifications of posted errata.

This Standard is always open for comment, and the committee welcomes proposals for revisions. Such proposals should be as specific as possible, citing the paragraph number, the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent background information and supporting documentation.

Cases

(a) The most common applications for cases are

(1) to permit early implementation of a revision based on an urgent need

(2) to provide alternative requirements

(3) to allow users to gain experience with alternative or potential additional requirements prior to incorporation directly into the Standard

(4) to permit the use of a new material or process

(b) Users are cautioned that not all jurisdictions or owners automatically accept cases. Cases are not to be considered as approving, recommending, certifying, or endorsing any proprietary or specific design, or as limiting in any way the freedom of manufacturers, constructors, or owners to choose any method of design or any form of construction that conforms to the Standard.

(c) A proposed case shall be written as a question and reply in the same format as existing cases. The proposal shall also include the following information:

(1) a statement of need and background information

(2) the urgency of the case (e.g., the case concerns a project that is underway or imminent)

(3) the Standard and the paragraph, figure, or table number

(4) the editions of the Standard to which the proposed case applies

(d) A case is effective for use when the public review process has been completed and it is approved by the cognizant supervisory board. Approved cases are posted on the committee web page.

Interpretations. Upon request, the committee will issue an interpretation of any requirement of this Standard. An interpretation can be issued only in response to a request submitted through the online Inquiry Submittal Form at https://go.asme.org/InterpretationRequest. Upon submitting the form, the inquirer will receive an automatic email confirming receipt.

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Interpretations are published in the ASME Interpretations Database at https://go.asme.org/Interpretations as they are issued.

Committee Meetings. The B36 Standards Committee regularly holds meetings that are open to the public. Persons wishing to attend any meeting should contact the secretary of the committee. Information on future committee meetings can be found on the committee web page at https://go.asme.org/B36committee.

ASME B36.19-2026
SUMMARY OF CHANGES

Following approval by the ASME B36 Standards Committee and ASME, and after public review, ASME B36.19-2026 was approved by the American National Standards Institute on August 3, 2026.

ASME B36.19-2026 includes the following changes identified by a margin note, **(26)**.

Page	*Location*	*Change*
1	1	Revised in its entirety
1	2	First paragraph added
1	3	Former section 9 updated and redesignated; subsequent sections redesignated
1	4	Former section 3 revised in its entirety
1	5	Former section 4 revised
1	6	Former section 5 revised
2	7	Former section 6 revised in its entirety
2	9	In former section 8, last sentence revised
3	Table 2-1	(1) Title and Plain End Weight (Mass) values revised (2) Schedule No. 160S deleted throughout (3) General and Numbered Notes revised in their entirety

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WELDED AND SEAMLESS WROUGHT STAINLESS STEEL PIPE

(26) 1 SCOPE

This Standard provides standard dimensions for stainless steel pipe. These dimensions may be used for pipe manufactured from other metallic materials. They may also be suitable for product forms other than pipe.

The word "pipe" is employed, as distinguished from "tube" or "tubing," to apply to tubular products of dimensions commonly used for pipelines and piping.

This Standard also tabulates the weights (masses) per unit length of stainless steel pipe having these standard dimensions.

(26) 2 SIZE

Sizes of pipe are given in Table 2-1. For sizes not given in Table 2-1, ASME B36.10 may be used instead of this Standard.

The size of all pipe in Table 2-1 is identified by the dimensionless designator nominal pipe size (NPS) [diamètre nominal (DN)]. Pipes NPS 12 (DN 300) and smaller have outside diameters (O.D.) numerically larger than their corresponding sizes. In contrast, the outside diameters of tubes are numerically identical to the size number for all sizes.

The manufacture of pipe NPS $\frac{1}{8}$ (DN 6) to NPS 12 (DN 300), inclusive, is based on a standardized O.D. This O.D. was originally selected so that pipe with a standard O.D. and having a wall thickness that was typical of the period would have an inside diameter (I.D.) approximately equal to the nominal size. Although there is no such relation between the existing standard thicknesses — O.D. and nominal size — these nominal sizes and standard O.D.s continue in use as "standard."

The manufacture of pipe NPS 14 (DN 350) and larger is based on the O.D. being the same as the nominal pipe size.

(26) 3 REFERENCES

The following publications are referenced in this Standard. Unless otherwise specified, the latest edition applies.

ASME B1.20.1. Pipe Threads, General Purpose (Inch). The American Society of Mechanical Engineers.

ASME B36.10. Welded and Seamless Wrought Steel Pipe. The American Society of Mechanical Engineers.

ASME Boiler and Pressure Vessel Code (BPVC), Section II. Materials — Part D, Properties. The American Society of Mechanical Engineers.

ASTM E29-22. Using Significant Digits in Test Data to Determine Conformance with Specifications. ASTM International.

4 MATERIALS AND PRODUCT FORMS (26)

This Standard provides standard dimensions for stainless steel [ferritic, austenitic, duplex (ferritic/austenitic), martensitic, and precipitation-hardening] pipe. The dimensions may be used for other metallic pipe materials such as nickel alloys, titanium alloys, or zirconium alloys. They may also be employed for other piping product forms that are joined to pipes such as buttwelding fittings and welding neck flanges.

5 WALL THICKNESS (26)

Nominal wall thicknesses of pipe are given in Table 2-1. Nominal wall thicknesses other than those shown in Table 2-1 may be specified. Alternatively, ASME B36.10 may be used instead of this Standard.

The wall thicknesses for NPS 14 (DN 350) to NPS 22 (DN 550), inclusive, of Schedule 10S; NPS 12 (DN 300) of Schedule 40S; and NPS 10 (DN 250) and NPS 12 (DN 300) of Schedule 80S are not the same as those of ASME B36.10. The suffix "S" in the schedule number is used to differentiate ASME B36.19 pipe from ASME B36.10 pipe.

6 WEIGHTS (MASSES) (26)

The nominal weight (mass) per unit length of a stainless steel pipe is calculated by eq. (6-1) or eq. (6-2) using the pipe's nominal dimensions and its density. Weight (mass) calculations for stainless steel pipe are given in Table 2-1. The density used in these calculations is 0.290 lb/in.^{3} (8 030 kg/m^3), which was taken from ASME BPVC, Section II, Part D, Table PRD for 300-Series austenitic stainless steel [e.g., Type 304 (UNS No. S30400)].

The density of wrought stainless steel pipe varies depending on its chemical composition. The 300-Series austenitic stainless steels generally exhibit a higher density than ferritic, martensitic, precipitation-hardening, and duplex (austenitic/ferritic) stainless steels. Within each category, density usually increases with an increasing level of alloying elements, particularly heavy elements such as molybdenum. The lowest density for stainless steel given in ASME BPVC, Section II, Part D, Table PRD is 0.275 lb/in.^{3} (7 600 kg/m^3) for high-Si