ASME B36.10-2026

(Revision of ASME B36.10-2022)

Welded and Seamless Wrought Steel Pipe

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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FOREWORD

In March 1927, the American Standards Association (ASA) authorized the organization of a Sectional Committee on Standardization of Dimensions and Material of Wrought Steel and Wrought Iron Pipe and Tubing for the purpose of unifying the standards of these commodities in force in this country. The American Society for Testing and Materials (ASTM) and The American Society of Mechanical Engineers (ASME) were designated as sponsors, and the first meeting of the Sectional Committee was held in Pittsburgh, Pennsylvania, on May 18, 1928.

The dimensions of commercial pipe in general use in the United States, at the time, conformed generally to those recommended by the ASME Committee on Standard Pipe and Pipe Threads published in 1886 (ASME Transactions, Vol. VIII, p. 29). On these standards, an enormous industry has been built and the satisfactory use of this product proves the soundness of the original design and specification.

Increasingly severe service demands, at the time of the Committee's organization, had been met by using the nearest available pipe or tubing for heavier sections such as casing and mechanical tubing, with resulting uneconomical multiplicity of wall thicknesses.

Subsequently, the Committee, with the cooperation of the industry, completed a survey of existing practice as the logical starting point for the development of an American Standard. From this survey, a table was designed to provide a selection of wall thicknesses of pipe to cover the power piping requirements of industry where strength to resist internal pressure governs selection and was later expanded to include pipe diameters and thicknesses used in other industries.

The original intent of the Committee was to establish a system of schedule numbers for pipe size/wall thickness combinations that would have an approximately uniform relationship equal to 1,000 times the *P/S* expression contained in the modified Barlow formula for pipe wall thickness that was defined in the Appendix to this Standard. The resulting Numbers departed so far from existing wall thicknesses in common use that the original intent could not be accomplished. The schedule numbers were then adopted strictly as a convenient designation system for use in ordering.

In all cases, the designer must base the selection on the rules and allowable stresses set by the code that governs the particular construction. The table is dimensionally complete for all sizes and wall thicknesses within its scope, but some of the larger, heavier wall sections are beyond the capability of seamless mill production and must be obtained from forged and bored billets or other sources.

The first issue of this Standard was designated American Standard "tentative" by ASA in November 1935. Subsequent slight revisions to the table and the footnotes of the dimensional tables were approved and the ASA changed the designation to American Standard; the date of ASA approval was April 28, 1939.

Further revisions were made by the Sectional Committee. The list of specifications in the table was revised where necessary and slight revisions in wall thicknesses of some of the large sizes of the heavy schedules were made where P/S values were out of line.

It was the hope in 1939 that the designation of pipe used commercially by all industry as Standard Weight, Extra-Strong, and Double Extra-Strong would gradually be replaced by schedule number designation. However, owing to customs of over 50 years' standing, demand and production of pipe to these traditional dimensions was undiminished. Consequently, in response to a demand from users, accepted practice for dimensions and weights of commercial wrought steel and welded wrought iron pipe were added. These changes were designated an American Standard on February 23, 1950.

Subcommittee No. 1 was reorganized in 1957. In addition to necessary editorial changes, a simplified format was selected for the tables of weights and dimensions to include and identify the sizes and weights of API Standards 5L and 5LX. These changes to the Standard were approved, and it was designated an American Standard on December 21, 1959.

The Standard was revised in 1969 to include a uniform method to calculate the plain end weight of steel pipe and minor adjustments were made in the tabulated weights of steel pipe to conform to this new method. Additional sizes and thicknesses of steel pipe that had come into common use were also added. Inasmuch as API Standard 5L no longer included wrought iron pipe, reference to that Standard was deleted. These changes to the Standard were approved and it was designated an American National Standard on February 3, 1970.

The Standard was revised in 1975 to include additional sizes and thicknesses of steel pipe that had been added to API specifications. The table with dimensions and weights of welded wrought iron pipe was deleted in its entirety since wrought iron pipe was no longer produced. These changes in the Standard were approved and it was designated an American National Standard on June 5, 1975.

The Standard was revised in 1978 to include SI (metric) dimensions. The outside diameter 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 millimeter, 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, in kilograms per meter, using SI diameters and thicknesses added. The SI plain end mass was calculated and added. These changes in the Standard were approved, and it was designated an American National Standard on July 18, 1979.

Further revisions were made in 1984. The American National Standards Institute (ANSI) designations, which were no longer in use, were deleted, and the list of specifications was revised to agree with current ASTM and API specifications. Additional sizes and thicknesses that had been added to API specifications were added. That edition was approved as an American National Standard on August 19, 1985.

The 1995 edition included additional wall thicknesses and was approved by ANSI on August 24, 1995.

The 1996 edition contained table revisions that included the addition of pipe sizes, changing some plain end weights and masses, identifying metric pipe by the dimensionless designator DN, and eliminating the API Specification column in one table. The 1996 edition was approved as an American National Standard on September 23, 1996.

The 2000 edition contained revisions to the density for steel that were incorporated previously. Other editorial changes to the sections were made. The 2000 edition was approved as an American National Standard on December 1, 2000.

The 2004 edition contained revisions that corrected the equation for nominal plain end weight and added the missing DN schedule numbers. The 2004 edition was approved as an American National Standard on June 23, 2004.

The 2015 edition contained revisions to table notes and references. The 2015 edition was approved as an American National Standard on June 16, 2015.

The 2018 edition expanded Table 2-1 (formerly Table 1) by adding Schedule 160 and Double Extra-Strong (XXS) rows for NPS $\frac{1}{8}$ (DN 6), NPS $\frac{1}{4}$ (DN 8), and NPS $\frac{3}{8}$ (DN 10); these data were adapted from ASME B16.11-2011. A plain end weight (mass) was changed in Table 2-1 and a number of editorial revisions were made to Table 2-1 and sections 1, 2, 5, 7, and 8. The 2018 edition was approved as an American National Standard on September 6, 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 nominal wall thicknesses for some standard sizes from NPS 8 to NPS 28 (DN 200 to DN 700). ASME B36.10-2022 was approved by ANSI on February 18, 2022.

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

This 2026 edition makes a number of technical and editorial changes to each of the Standard's sections (1 through 10), as well as to Table 2-1. Major changes include updating the Scope; in Table 2-1, adding new columns and revising the Notes, and adding new nominal pipe sizes with standard wall thicknesses from NPS 50 to NPS 78 (DN 1 250 to DN 1 950). ASME B36.10-2026 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.)

STANDARDS COMMITTEE OFFICERS

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

STANDARDS COMMITTEE PERSONNEL

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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.

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ASME B36.10-2026
SUMMARY OF CHANGES

Following approval by the ASME B36 Standards Committee and ASME, and after public review, ASME B36.10-2026 was approved by the American National Standards Institute on August 3, 2026.

ASME B36.10-2026 includes the following changes identified by a margin note, **(26)**.

Page	*Location*	*Change*
1	1	Revised
1	2	Revised
1	3	Updated
1	4	Title and text revised
1	5	Revised
1	6	Title and text revised
2	7	Title and text revised
2	8	Second paragraph revised
2	9	Revised
2	10	Revised
3	Table 2-1	Revised in its entirety

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WELDED AND SEAMLESS WROUGHT STEEL PIPE

(26) 1 SCOPE

This Standard provides standard dimensions for steel pipe. These dimensions may be used for pipe manufactured from other metallic materials or from nonmetallic 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 steel pipe having these standard dimensions.

(26) 2 SIZE

Sizes of pipe are given in Table 2-1. The size of all pipe in Table 2-1 is identified by the dimensionless designator nominal pipe size (NPS) [diamètre nominal (DN)]. Pipe NPS 12 (DN 300) and smaller have outside diamaters (O.D.s) numerically larger than their corresponding sizes. In contrast, the O.D.s 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 thickness — 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.

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 carbon and low-alloy steel pipe. The dimensions may be used for other metallic pipe materials such as stainless steels [ferritic, austenitic, duplex (ferritic/austenitic), martensitic, and precipitation-hardening], aluminum alloys, nickel alloys, or titanium alloys; or nonmetallic pipe materials such as polymers. 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.

6 WEIGHTS (MASSES) (26)

The nominal weights (masses) of steel pipe are calculated values and are given in Table 2-1.

(a) The nominal plain end weight, in pounds per linear foot, is calculated using the following equation:

$$W_{\text{pe}} = 10.69(D - t)t \tag{6-1}$$

where

D = outside diameter to the nearest 0.001 in. for NPS 8 and smaller, to the nearest 0.01 in. for NPS 10 to NPS 30, inclusive, and to the nearest 0.1 in. for NPS 32 and larger (the symbol D is to be used for O.D. only in mathematical equations or formulas)

t = specified wall thickness, rounded to the nearest 0.001 in.

W_{pe} = nominal plain end weight, rounded to the nearest 0.01 lb/ft

(b) The nominal plain end mass, in kilograms per linear meter, is calculated using the following equation:

$$M_{pe} = 0.0246615(D - t)t \tag{6-2}$$