ASME B36.10M-2018

(Revision of ASME B36.10M-2015)

Welded and Seamless Wrought Steel Pipe

AN AMERICAN NATIONAL STANDARD

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The American Society of Mechanical Engineers
Two Park Avenue, New York, NY 10016-5990

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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 rather 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 his selection on the rules and allowable stresses set by the code that governs his 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 is no longer produced. These changes in the Standard were approved and it was designated an American National Standard on June 5, 1975.