ASME B29.200-2001

REAFFIRMED 2017

WELDED-STEEL-TYPE MILL CHAINS, WELDED-STEEL-TYPE DRAG CHAINS, ATTACHMENTS, AND SPROCKET TEETH

Incorporating ASME B29.18M and ASME B29.18M

AN AMERICAN NATIONAL STANDARD

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Incorporating ASME B29.16M and ASME B29.18M

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This Standard will be revised when the Society approves the issuance of a new edition. There will be no addenda issued to this Edition.

ASME will issue written replies to inquiries concerning interpretation of technical aspects of this Standard.

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

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FOREWORD

This Standard is a consolidation of two ASME standards, ASME B29.16M-1995 (Welded-Steel-Type Mill Chains, Attachments, and Sprocket Teeth) and ASME B29.18M-1993 (Welded-Steel-Type Drag Chains, Attachments, and Sprocket Teeth). These two standards were combined into one because of the similarity of construction and the usual applications for the two types of chains.

The welded-steel-type mill chains (B29.16M) were developed to provide a series of steel chains similar to cast chains of the detachable, mill, and combination types. Although the welded-steel-type mill chains were introduced many years ago for the forest products industries, their expanded usage in a variety of materials handling and drive applications in recent years stimulated standardization of the basic types.

In September 1967, a subcommittee of ANSI Sectional Committee B29 under the sponsorship of ASME and SAE, was appointed to develop a standard for welded-steel-type mill chains, attachments, and sprocket teeth.

The 1981 revision included updating to the current ASME Standards format and symbols covering chains and sprockets. In addition, chain number W1000 was added to the Standard.

The 1995 revision included the addition of chain number W855 and the removal of attachments H1, H2, R1, and RR from the Standard due to inactivity. Also added was the minimum bolt hole diameter required for the bolt diameter given for a particular attachment. The minimum ultimate tensile strength (M.U.T.S.) definition was also modified

The welded-steel-type drag chains (B29.18M) were developed to provide a series of steel chains similar to cast drag chains in the offset and combination types. Welded steel drag chains were originally introduced for the forest products industries and their expanded usage in recent years called for standardization of basic sizes.

In September 1967, a subcommittee of ANSI Sectional Committee B29 was appointed with American Chain Association members from the engineering steel chain industry to develop a standard for welded steel chains, attachments, and sprockets including the drag type.

The American National Standards Institute approved the first edition of ASME B29.18M in 1974.

The 1981 revision included updating to the current ANSI Standards format and symbols covering chains and sprockets. Minimum ultimate strengths were reviewed and updated, where necessary.

The 1993 revision included a modified definition of minimum ultimate tensile strength (M.U.T.S.). An optional barrel configuration was added to Table 1 and an optional wing configuration was added to Table 9.

In the 2001 revision of ASME B29.18M a correction has been made to Table 2 for M.U.T.S. kN values shown in the metric values. Also, the nomenclature for the sprocket tooth form in section 4 has been corrected and the pitch line ($C\rho$) clearance changed to more closely conform with industry standard.

Both ASME B29.16M and ASME B29.18M were developed by their respective committees to involve only those dimensions which influence interchangeability. To promote the use of each in the international market, the metric equivalents of all dimensions are given.

The 2001 revisions of both ASME B29.16M and ASME B29.18M have been incorporated to form the ASME B29.200-2001 standard. This Standard was approved as an American National Standard on December 11, 2001.

CORRESPONDENCE WITH B29 COMMITTEE

General. ASME standards are developed and maintained with the intent to represent the consensus of concerned interests. As such, users of this Standard may interact with the Committee by requesting interpretations, proposing revisions, and attending Committee meetings. Correspondence should be addressed to:

Secretary, B29 Main Committee
The American Society of Mechanical Engineers
Three Park Avenue
New York, NY 10016-5990

Proposing Revisions. Revisions are made periodically to the Standard 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 periodically.

The Committee welcomes proposals for revisions to this Standard. Such proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent documentation.

Interpretations. Upon request, the B29 Committee will render an interpretation of any requirement of the Standard. Interpretations can only be rendered in response to a written request sent to the Secretary of the B29 Main Committee.

The request for interpretation should be clear and unambiguous. It is further recommended that the inquirer submit his/her request in the following format:

Subject:	Cite the applicable paragraph number(s) and the topic of the inquiry.
Edition:	Cite the applicable edition of the Standard for which the interpretation is being requested.
Question:	Phrase the question as a request for an interpretation of a specific requirement suitable for general understanding and use, not as a request for an approval of a proprietary design or situation. The inquirer may also include any plans or drawings, which are necessary to explain the question; however, they should not contain proprietary names or information.

Requests that are not in this format will be rewritten in this format by the Committee prior to being answered, which may inadvertently change the intent of the original request.

ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME Committee or Subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

Attending Committee Meetings. The B29 Main Committee regularly holds meetings, which are open to the public. Persons wishing to attend any meeting should contact the Secretary of the B29 Main Committee.

ASME STANDARDS COMMITTEE B29
Chains, Attachments, and Sprockets for Power Transmission and Conveying

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

OFFICERS

J. L. Wright, *Chair*
C. G. Springman, *Vice Chair*
M. Lo, *Secretary*

COMMITTEE PERSONNEL

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L. E. Hampel, Allied-Locke Ind. Inc.
M. Lo, *Secretary,* American Society of Mechanical Engineers
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D. Moore, Jeffrey Chain Co.
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WELDED-STEEL-TYPE MILL CHAINS, ATTACHMENTS, AND SPROCKET TEETH

1 DEFINITION

welded-steel-type mill chains: a series of identical welded offset links having barrels to contact the sprocket teeth, and pins which articulate in the barrels of the links. Pins are fixe in the sidebar pitch holes by either press fit and/or mechanical locks, such as flats to prevent rotation of the pins in the sidebar pitch holes.

2 GENERAL CHAIN PROPORTIONS AND DESIGNATIONS

2.1 Minimum Ultimate Tensile Strength

The *minimum ultimate tensile strength* (M.U.T.S.) for chain covered by this Standard, is the minimum force at which an unused, undamaged, chain could fail when subjected to a single tensile loading test.

(a) WARNING: The minimum ultimate tensile strength is NOT a "working load." The M.U.T.S. greatly exceeds the maximum force that may be applied to the chain.

(b) Test procedure. A tensile force is slowly applied, in uniaxial direction, to the ends of the chain sample.

(c) The tensile test is a destructive test. Even though the chain may not visibly fail when subjected to the *minimum ultimate tensile force,* it will have been damaged and will be unfi for service.

2.2 Measuring Load

Measuring load should be 5 times the weight of 10 ft of chain, rounded to the nearest 100 lbs.

2.3 Dimensions for Chain Links

To assure interchangeability of links as produced by different makers of chain, standard maximum and minimum dimensions are adopted. They are not actual dimensions used in manufacturing, but limiting dimensions, maximum or minimum, required to assure the desired interchangeability. However, due to minor variations in barrel configurations coupling chains of different manufacture should be held to a minimum.