ASME B29.10M-1997
(Revision of ASME B29.10M-1994)

REAFFIRMED 2019

HEAVY DUTY OFFSET SIDEBAR POWER TRANSMISSION ROLLER CHAINS AND SPROCKET TEETH

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

The American Society of Mechanical Engineers
345 East 47th Street, New York, NY 10017

FOREWORD

(This Foreword is not part of ASME B29.10M-1997.)

Chains of the type covered by this Standard were introduced in the United States late in the 19th Century. As their popularity increased, the number of chains and manufacturers grew. As one manufacturer developed a successful size chain, or family of chains, others soon duplicated it and a large number of chains came into being.

In spite of efforts at standardization, the Corps of Engineers, United States Army, found during the Korean incident of 1950-53 that lack of adequate standardization of power transmission chains still resulted in the incapacitation of many cranes and shovels. For this reason, the Corps of Engineers requested the Society of Automotive Engineers to expand the scope of ASA Sectional Committee B29 to cover this group of chains. On May 13, 1956, the Corps of Engineers request was approved by the ASA B29 Committee and the ASA B29.10 Subcommittee was formed. Upon approval by the American Standards Association in April 1962; the first standard for ASA B29.10 chains and sprockets was published. The Standard described the physical dimensions of the chain components and sprockets, and defined the minimum static properties for the chains.

In 1970, this Standard was revised to include Drive Selection information in a Supplementary Section and to convert fractions to decimal-inch, and include metric dimensions in SI Units.

In September 1962, the Engineering Steel Chain Division of the ACA began a research program to develop ratings for the ANSI B29.10 chains. Capacity information on the smaller B29.1 chains already developed in research programs sponsored by the Roller Chain Division of the ACA was made available to the Engineering Steel Chain Division. Member companies contributed information from their own research programs. Special dynamic test equipment was built to enable obtaining wear and capacity data on very large chains. The horsepower capacities published as supplementary information in this Standard resulted from this combined research effort; they are considerably higher than previously accepted by the industry. At all speeds and for all sprocket sizes, the capabilities of ANSI B29.10 chain drives exceeded those previously accepted by the industry.

This Standard was approved as an American National Standard on December 27, 1972.

The 1981 revision included updating to the current ANSI standards format covering chains and sprockets. In the process of updating, the supplemental information (Appendices A and B) was reviewed and found to be inadequate with respect to selection information. The information was incomplete and could result in an unsatisfactory selection. Chain standards generally contained only dimensional and strength information to allow chains to be intercoupled. Therefore, the horsepower capacity information was deleted.

The American National Standards Institute approved that revision on April 3, 1981.

The 1991 revision added definitions for minimum ultimate strength (para. 2.2), measuring load (para. 2.3), and strand length tolerance (para. 2.4). M.U.T.S. values for chains 4020, 4824, and 5628 were increased. Other clarifications were made without changing the basic content.

The 1994 revision was approved by the American National Standards Institute on November 17, 1994.

This 1997 revision of ASME B29.10M was approved by the American National Standards Institute on July 22, 1997.

ASME 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.)

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