



Designation: A 29/A 29M – 99^{ε1}

Standard Specification for Steel Bars, Carbon and Alloy, Hot-Wrought and Cold- Finished, General Requirements for¹

This standard is issued under the fixed designation A 29/A 29M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

^{ε1} NOTE—The carbon range for Grade 8822 in Table 2 was editorially corrected in October 2000.

1. Scope

1.1 This specification² covers a group of common requirements which, unless otherwise specified in the purchase order or in an individual specification, shall apply to carbon and alloy steel bars under each of the following ASTM specifications (or under any other ASTM specification which invokes this specification or portions thereof):

Title of Specification	ASTM Designation ⁴
<i>Hot-Rolled Carbon Steel Bars:</i>	
Steel Bars, Carbon, Quenched and Tempered	A 321
Steel Bars and Shapes, Carbon Rolled from "T" Rails	A 499
Steel Bars, Carbon, Merchant Quality, M-Grades	A 575
Steel Bars, Carbon, Hot-Wrought, Special Quality	A 576
Steel Bars, Carbon, Merchant Quality, Mechanical Properties	A 663
Steel Bars, Carbon, Hot-Wrought, Special Quality, Mechanical Properties	A 675
Steel Bars for Springs, Carbon and Alloy	A 689
Steel Bars, Carbon, Hot-Wrought, Special Quality, for Fluid Power Applications	A 695
<i>Cold-Finished Carbon Steel Bars:</i>	
Steel Bars, Carbon, Cold-Finished, Standard Quality	A 108
Stress-Relieved Steel Bars Subject to Mechanical Property Requirements, Cold-Drawn Carbon	A 311/A 311M
<i>Hot-Rolled Alloy Steel Bars:</i>	
Steel Bars, Alloy, Standard Grades	A 322
Steel Bars, Alloy, Subject to End-Quench Hardenability Requirements	A 304
Steel Bars, Alloy, Hot-Wrought or Cold-Finished, Quenched and Tempered	A 434
Steel Bars, Alloy, Hot-Wrought, for Elevated Temperature or Pressure-Containing Parts, or Both	A 739
<i>Cold-Finished Alloy Steel Bars:</i>	
Steel Bars, Alloy, Cold-Finished	A 331
Steel Bars, Alloy, Hot-Rolled or Cold-Finished, Quenched and Tempered	A 434
Steel Bars, Carbon, Hot-Wrought or Cold-Finished, Special Quality, for Pressure Piping Components	A 696

⁴ These designations refer to the latest issue of the respective specifications.

which appear either in the *Annual Book of ASTM Standards*, Vol 01.05, or as reprints obtainable from ASTM.

1.2 In case of any conflict in requirements, the requirements of the purchase order, the individual material specification, and this general specification shall prevail in the sequence named.

1.3 The values stated in inch-pound units or SI units are to be regarded as the standard. Within the text, the SI units are shown in brackets. The values stated in each system are not exact equivalents; therefore, each system must be used independently of the other. Combining values from the two systems may result in nonconformance with the specification.

1.4 For purposes of determining conformance to this specification and the various material specifications referenced in 1.1, dimensional values shall be rounded to the nearest unit in the right-hand place of figures used in expressing the limiting values in accordance with the rounding method of Practice E 29.

2. Referenced Documents

2.1 ASTM Standards:

A 370 Test Methods and Definitions for Mechanical Testing of Steel Products³
A 700 Practices for Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipment⁴
A 751 Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products³
E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁵
E 112 Test Methods for Determining the Average Grain Size⁶

2.2 Federal Standards:

Fed. Std. No. 123 Marking for Shipment (Civil Agencies)⁷

³ *Annual Book of ASTM Standards*, Vol 01.03.

⁴ *Annual Book of ASTM Standards*, Vol 01.05.

⁵ *Annual Book of ASTM Standards*, Vol 14.02.

⁶ *Annual Book of ASTM Standards*, Vol 03.01.

⁷ Copies of military specifications, military standards, and federal standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer, or from the Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

¹ This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel and Related Alloys and is the direct responsibility of Subcommittee A01.15 on Bars.

Current edition approved Aug. 10, 1999. Published September 1999. Originally published as A 29–57T. Last previous edition A 29/A 29M–93a.

² For ASME Boiler and Pressure Vessel Code applications see related Specification SA-29/SA-29M in Section II of that Code.