



Designation: ~~A 299/A 299M-02~~ Designation: A 299/A 299M - 04

## Standard Specification for Pressure Vessel Plates, Carbon Steel, Manganese-Silicon<sup>1</sup>

This standard is issued under the fixed designation A 299/A 299M; 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 reappraisal. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reappraisal.

Note—Grades A and B were added editorially to the entry for Carbon in Table 1 and the year date changed on Feb. 2, 2004.

### 1. Scope\*

- 1.1 This specification<sup>2</sup> covers manganese-silicon carbon steel plates for use in welded boilers and other pressure vessels.
- 1.2 Plates under this specification are produced in two grades. The specified minimum yield strength decreases on thicknesses over 1 in. [25 mm].
- 1.3 The maximum thickness of plates is limited only by the capacity of the composition to meet the specified mechanical property requirements; however, current practice normally limits the maximum thickness of plates furnished under this specification to 8 in. [200 mm].
- ~~1.4 For plates produced from coil, the additional requirements, including additional testing requirements and the reporting of additional test results, of Specification A 20/A 20M~~
- 1.4 For plates produced from coil and furnished without heat treatment or with stress relieving only, the additional requirements, including additional testing requirements and the reporting of additional test results, of Specification A 20/A 20M apply.
- 1.5 The values stated in either inch-pound units or SI units are to be regarded separately as 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.

### 2. Referenced Documents

- 2.1 *ASTM Standards*:<sup>3</sup>  
A 20/A 20M Specification for General Requirements for Steel Plates for Pressure Vessels

### 3. General Requirements and Ordering Information

- ~~3.1 Material~~ 3.1 Plates supplied to this material product specification shall conform to Specification A 20/A 20M. ~~These requirements outline /A 20M, which outlines the testing and retesting methods and procedures, permissible variations in dimensions; and mass, quality and repair of defects, marking, loading, etc. and so forth.~~
- 3.2 Specification A 20/A 20M also establishes the rules for the basis of purchase ordering information that should be complied with when purchasing material plates to this specification.
- 3.3 In addition to the basic requirements of this specification, certain supplementary requirements are available ~~when~~ where additional control, testing, or examination is required to meet end use requirements. ~~These include:~~
  - ~~3.3.1 Vacuum treatment;~~
  - ~~3.3.2 Additional or special tension testing;~~
  - ~~3.3.3 Impact testing, and~~
  - ~~3.3.4 Nondestructive examination.~~
- 3.4 The purchaser is referred to the listed supplementary requirements in this specification and to the detailed requirements in Specification A 20/A 20M.
- ~~3.5 Coiled product is excluded from qualification to this specification until it is decoiled, leveled, and cut to length. Plate produced from coil means plate that has been cut to individual lengths from a coiled product and is furnished without heat treatment. The processor decoils, levels, cuts to length, and marks the product. Except as allowed by Section 6 in Specification A 20/A 20M, the processor is responsible for performing and certifying all tests, examinations, repairs, inspections, and operations not intended to affect the properties of the material. For plate produced from coils, the results of the tests performed shall be~~

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel, and Related Alloys and is the direct responsibility of Subcommittee A01.11 on Steel Plates for Boilers and Pressure Vessels.

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<sup>2</sup> For ASME Boiler and Pressure Vessel Code applications, see related Specification SA-299/SA-299M in Section II of that Code.

<sup>3</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards*, Vol 01-04, volume information, refer to the standard's Document Summary page on the ASTM website.

\*A Summary of Changes section appears at the end of this standard.