



Standard Specification for Pressure Vessel Plates, Alloy Steel, Chromium- Molybdenum-Vanadium¹

This standard is issued under the fixed designation A 832/A 832M; 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 (€) indicates an editorial change since the last revision or reapproval.

€¹ NOTE—An editorial change was made in June 2001.

1. Scope

1.1 This specification² covers chromium-molybdenum-vanadium alloy steel plates intended primarily for the fabrication of welded pressure vessels.

1.2 The plates furnished under this specification are required to be normalized-and-tempered. Specification A 542/A 542M includes coverage of the material in the quenched-and-tempered condition.

1.3 The maximum thickness of plates furnished to this specification is limited only by the capacity of the composition to meet the specified property requirements. However, the maximum thickness of plates normally furnished under this specification is 6 in. [150 mm].

1.4 The material is intended to be suitable for fusion welding. Welding technique is of fundamental importance and it is presupposed that welding procedures will be in accordance with approved methods.

1.5 This specification is expressed in both inch-pound units and in SI units. However, unless the order specifies the applicable “M” specification designation (SI units), the material shall be furnished to inch-pound units.

1.6 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 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:

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 A01.11 on Steel Plates for Boilers and Pressure Vessels.

Current edition approved March 10, 1999. Published June 1999. Originally published as A 832/A 832M – 84. Last previous edition A 832/A 832M – 97.

² For ASME Boiler and Pressure Vessel Code applications, see related Specification SA-832/SA-832M in Section II of that Code.

A 20/A20M Specification for General Requirements for Steel Plates for Pressure Vessels³

A 370 Test Methods and Definitions for Mechanical Testing of Steel Products⁴

A 435/A435M Specification for Straight-Beam Ultrasonic Examination of Steel Plates³

A 542/A542M Specification for Pressure Vessel Plates, Alloy Steel, Quenched-and-Tempered, Chromium-Molybdenum and Chromium-Molybdenum-Vanadium³

A 577/A577M Specification for Ultrasonic Angle-Beam Examination of Steel Plates³

A 578/A578M Specification for Straight-Beam Ultrasonic Examination of Plain and Clad Steel Plates for Special Applications³

3. General Requirements and Ordering Information

3.1 Material supplied to this material specification shall conform to Specification A 20/A 20M. These requirements outline the testing and retesting methods and procedures, permissible variations in dimensions, quality and repair of defects, marking, loading, etc.

3.2 Specification A 20/A 20M establishes the rules for ordering information that should be complied with when purchasing material to this specification.

3.3 In addition to the basic requirements of this specification, certain supplementary requirements are available when additional control, testing, or examination is required to meet end use requirements. These include the following:

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. If the requirements of this

³ *Annual Book of ASTM Standards*, Vol 01.04.

⁴ *Annual Book of ASTM Standards*, Vol 01.01.