



Designation: A 176 – 99

# Standard Specification for Stainless and Heat-Resisting Chromium Steel Plate, Sheet, and Strip<sup>1</sup>

This standard is issued under the fixed designation A 176; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

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

## 1. Scope

1.1 This specification covers stainless and heat-resisting chromium steel plate, sheet, and strip available in a wide variety of surface finishes.

1.2 The values stated in inch-pound units are to be regarded as the standard.

NOTE 1—Grades that were previously covered in both Specifications A 176 and A 240/A 240M have been removed from this specification and may now be supplied and purchased in compliance with Specification A 240/A 240M. The chemical and mechanical property requirements of these grades were identical in Specifications A 176 and A 240/A 240M at the time of removal from Specification A 176.

## 2. Referenced Documents

### 2.1 ASTM Standards:

A 240/A240M Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels<sup>2</sup>

A 370 Test Methods and Definitions for Mechanical Testing of Steel Products<sup>2</sup>

A 480/A480M Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip<sup>2</sup>

E 527 Practice for Numbering Metals and Alloys (UNS)<sup>3</sup>

### 2.2 SAE Standard:

J1086 Practice for Unified Numbering for Metals and Alloys (UNS)<sup>4</sup>

## 3. Chemical Composition

3.1 The steel shall conform to the requirements as to chemical composition specified in Table 1, and shall conform to applicable requirements specified in Specification A 480/A 480M.

## 4. Mechanical Properties

4.1 The material shall conform to the mechanical properties specified in Table 2.

## 5. General Requirements

5.1 The following requirements for orders for material furnished under this specification shall conform to the applicable requirements of the current edition of Specification A 480/A480M.

- 5.1.1 Definitions,
- 5.1.2 General requirements for delivery,
- 5.1.3 Ordering information,
- 5.1.4 Process,
- 5.1.5 Special tests,
- 5.1.6 Heat treatment,
- 5.1.7 Dimensions and permissible variations,
- 5.1.8 Workmanship, finish and appearance,
- 5.1.9 Number of tests/test methods,
- 5.1.10 Specimen preparation,
- 5.1.11 Retreatment,
- 5.1.12 Inspection,
- 5.1.13 Rejection and reheating,
- 5.1.14 Material test report, and
- 5.1.15 Certification.

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee A-1 on Steel, Stainless Steel and Related Alloys and is the direct responsibility of Subcommittee A01.17 on Flat Stainless Steel Products.

Current edition approved Sept. 10, 1999. Published November 1999. Originally published as A 176 – 35 T. Last previous edition A 176 – 97.

<sup>2</sup> Annual Book of ASTM Standards, Vol 01.03.

<sup>3</sup> Annual Book of ASTM Standards, Vol 01.01.

<sup>4</sup> Available from the Society for Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.