

# Carbon Steel, Alloy Steel, Stainless Steel, and Nickel Base Alloy Castings for Use in the Petroleum and Natural Gas Industry

API SPECIFICATION 20A  
FIRST EDITION, MARCH 2012

ADDENDUM 1, OCTOBER 2013  
ADDENDUM 2, APRIL 2015  
ERRATA 1, AUGUST 2015



AMERICAN PETROLEUM INSTITUTE

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Upstream Segment

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# Carbon Steel, Alloy Steel, Stainless Steel, and Nickel Base Alloy Castings for Use in the Petroleum and Natural Gas Industry

## 1 Scope

### 1.1 Purpose

This standard specifies requirements for the design, foundry qualification, production, marking and documentation of carbon steel, alloy steel, stainless steel and nickel base alloy castings used in the petroleum and natural gas industries when referenced by an applicable API equipment standard or otherwise specified as a requirement for compliance.

### 1.2 Applicability

This standard applies to castings used in the manufacture of pressure containing, pressure controlling and primary load bearing components. Castings manufactured in accordance with this API Standard may be produced using any industry standard casting method.

### 1.3 Casting Specification Levels (CSL)

This standard establishes requirements for four casting specification levels (CSL). These four CSL designations define different levels of cast product technical, quality and qualification requirements. See Annex A for additional information on purchasing API 20A castings.

## 2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ASME Boiler and Pressure Vessel Code (BPVC), Section VIII, Division 1, *Pressure Vessels*

ASME Boiler and Pressure Vessel Code (BPVC), Section IX, *Welding and Brazing Qualifications*

ASME B31.3, *Process Piping*

ASTM A370<sup>2</sup>, *Standard Test Methods and Definitions for Mechanical Testing of Steel Products*

ASTM A488/A488M, *Standard Practice for Steel Castings, Welding, Qualifications of Procedures and Personnel*

ASTM A609, *Standard Practice for Castings, Carbon, Low-Alloy, and Martensitic Stainless Steel, Ultrasonic Examination Thereof*

ASTM E10, *Standard Test Method for Brinell Hardness Test of Metallic Materials*

ASTM E18, *Standard Test Method for Rockwell Hardness Test of Metallic Materials*

ASTM E45, *Standard Test Method for Determining the Inclusion Content of Steel*

ASTM E94, *Standard Guide for Radiographic Examination*

<sup>1</sup> ASME International, 3 Park Avenue, New York, NY 10016-5990, USA, [www.asme.org](http://www.asme.org).

<sup>2</sup> ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428, [www.astm.org](http://www.astm.org).