# Alloy and Carbon Steel Bolting for Use in the Petroleum and Natural Gas Industries

API SPECIFICATION 20E FIRST EDITION, AUGUST 2012

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#### **Upstream Segment**

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### Alloy and Carbon Steel Bolting for Use in the Petroleum and Natural Gas Industries

#### 1 Scope

#### 1.1 Purpose

This standard specifies requirements for the qualification, production and documentation of alloy and carbon steel bolting used in the petroleum and natural gas industries.

#### 1.2 Applicability

This standard applies when referenced by an applicable API equipment standard or otherwise specified as a requirement for compliance. An annex for supplemental requirements that may be invoked by the purchaser is included.

#### 1.3 Bolting Specification Levels (BSL)

This standard establishes requirements for three bolting specification levels (BSL). These three BSL designations define different levels of technical, quality and qualification requirements, BSL-1, BSL-2, and BSL-3. The BSLs are numbered in increasing levels of severity in order to reflect increasing technical, quality and qualification criteria.

#### 1.4 Bolting Types

This standard covers the following finished product forms, processes, and sizes:

- a) machined studs:
- b) machined bolts, screws and nuts;
- c) cold formed bolts, screws, and nuts (BSL-1 only);
- d) hot formed bolts and screws < 1.5 in. (38.1 mm) nominal diameter;
- e) hot formed bolts and screws ≥ 1.5 in. (38.1 mm) nominal diameter;
- f) roll threaded studs, bolts, and screws < 1.5 in. (38.1 mm) diameter;
- g) roll threaded studs, bolts, and screws ≥ 1.5 in. (38.1 mm) diameter;
- h) hot formed nuts < 1.5 in. (38.1 mm) nominal diameter;
- i) hot formed nuts ≥ 1.5 in. (38.1 mm) nominal diameter.

#### 2 Normative References

The following documents contain provisions which, through reference in this text, constitute provisions of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the reference document (including amendments) applies.

API 6A, 20<sup>th</sup> Edition, Specification for Wellhead and Christmas Tree Equipment