



# Standard Specification for Headed Steel Bars for Concrete Reinforcement<sup>1</sup>

This standard is issued under the fixed designation A970/A970M; 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.

## 1. Scope\*

1.1 This specification covers deformed steel reinforcing bars in cut lengths, with a head attached to one or both ends, for concrete reinforcement. Heads are forge-formed, machined from bar stock, or cut from plate. Attachment can be accomplished through:

1.1.1 Welding;

1.1.2 Integrally hot forging of a head from the reinforcing bar end;

1.1.3 Internal threads in the head mating to threads on the bar end;

1.1.4 Cold-swaging an externally threaded coupling sleeve onto the reinforcing bar;

1.1.5 Cold-extruding an external coupling sleeve onto the reinforcing bar;

1.1.6 Cold-swaging an external coupling sleeve or headed sleeve onto the reinforcing bar;

1.1.7 Attaching a coupling sleeve to the end of the reinforcing bar by means of the means of a ferrous-filler medium; or

1.1.8 Separate threaded nut to secure the head to the bar.

NOTE 1—The requirements of this specification are only applicable to headed bars where the attachment of the head is accomplished by one of the methods listed in 1.1.

1.2 Limitations on head dimensions and on obstructions and interruptions of bar deformations on the non-planar features on the bearing face of the head are presented in [Annex A1](#). The requirements in [Annex A1](#) only apply when specified by the purchaser (see 4.2.3).

1.3 This specification is applicable for orders in either inch-pound units as Specification A970 or SI units as Specification A970M.

1.4 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 may not be exact equivalents; therefore, each system

shall be used independently of the other. Combining values from the two systems may result in non-conformance with the specification.

1.5 *This specification does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

[A370 Test Methods and Definitions for Mechanical Testing of Steel Products](#)

[A615/A615M Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement](#)

[A700 Guide for Packaging, Marking, and Loading Methods for Steel Products for Shipment](#)

[A706/A706M Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement](#)

2.2 *AWS Standards:*<sup>3</sup>

[AWS C6.1 Recommended Practices for Friction Welding](#)

[AWS D1.4/D1.4M Structural Welding Code - Reinforcing Steel](#)

2.3 *U.S. Military Standard:*<sup>4</sup>

[MIL-STD-129 Marking for Shipment and Storage](#)

2.4 *U.S. Federal Standard:*<sup>4</sup>

[Fed. Std. No. 123 Marking for Shipment \(Civil Agencies\)](#)

2.5 *ACI Standard:*<sup>5</sup>

[ACI 318 Building Code Requirements for Structural Concrete](#)

## 3. Terminology

3.1 *Definitions of Terms Specific to This Specification:*

<sup>2</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* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from American Welding Society (AWS), 550 NW LeJeune Rd., Miami, FL 33126, <http://www.aws.org>.

<sup>4</sup> Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS. Or visit: <http://assist.daps.dla.mil/online>.

<sup>5</sup> Available from American Concrete Institute (ACI), P.O. Box 9094, Farmington Hills, MI 48333-9094, <http://www.concrete.org>.

<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 A01.05 on Steel Reinforcement.

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