Designation: A314 – 08

StandardSpecification for Stainless Steel Billets and Bars for Forging[1]

This standard is issued under the fixed designation A314; 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 (ε) 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 steel billets and bars intended only for forging.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A484/A484M Specification for General Requirements for Stainless Steel Bars, Billets, and Forgings

A751 Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products

E527 Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

2.2 *Other Document:*

SAE J1086 Recommended Practice for Numbering Metals and Alloys[3]

3. Ordering Information

3.1 It is the responsibility of the purchaser to specify all requirements that are necessary for material ordered under this specification. Such requirements may include but are not limited to the following:

3.1.1 Quantity (weight or number of pieces),

3.1.2 Name of material: type or UNS designation (Table 1),

3.1.3 Condition,

3.1.4 Cross section (round, round-cornered square, etc.),

3.1.5 Form: bar or forging billet,

3.1.6 Applicable dimensions, including size, thickness, width, and length,

3.1.7 ASTM designation and date of issue,

3.1.8 Preparation for delivery (see Specification A484/A484M),

3.1.9 Marking (see Specification A484/A484M), and

3.1.10 Exceptions to the specification or special requirements.

3.2 If possible, the intended use of the item should be given on the purchase order especially when the item is ordered for a specific end use or uses.

NOTE 1—A typical ordering description is as follows: 10 000 lb, Type 420, annealed, round-cornered square billets, ASTM A314 dated _____ for valve parts.

4. Manufacture

4.1 *Annealing*—Blooms and billets of the 400 series of stainless steel types which are highly hardenable, such as Types 414, 420, 431, 440A, 440B, and 440C, are commonly annealed prior to shipment and so specified in order to avoid the possibility of thermal cracking. Those grades are not normally furnished in the as-rolled or as-forged condition. Other hardenable grades, such as Types 403, 410, 416, and 416 Se, which may also require annealing, depending on their composition and size, are furnished suitable for cold cutting when so specified on the purchase order.

4.2 *Conditioning*—Material may be conditioned by chipping or grinding to remove injurious surface defects provided the depth of conditioning does not exceed that which will affect the surface condition or dimensions of the article to be forged from the bar or billet.

5. Chemical Composition

5.1 The steel shall conform to the chemical composition prescribed in Table 1 for the respective grades.

5.2 Methods and practices relating to chemical analysis required by this specification shall be in accordance with Test Methods, Practices, and Terminology A751.

6. Dimensions

6.1 Billets and bars shall conform to the shape and dimensions specified by the purchaser within a permissible variation of ±5 %.

7. General Requirements

7.1 In addition to the requirements of this specification, all requirements of the current edition of Specification A484/

[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 A01.17 on Flat-Rolled and Wrought Stainless Steel.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] Available from Society of Automotive Engineers (SAE), 400 Commonwealth Dr., Warrendale, PA 15096-0001, http://www.sae.org.

***A Summary of Changes section appears at the end of this standard**