



Designation: B 472 – 00

Standard Specification for UNS N06030, UNS N06022, UNS N06200, UNS N08020, UNS N08026, UNS N08024, UNS N08926, UNS N08367, UNS N10276, UNS N10665, UNS N10675, and UNS R20033 Nickel Alloy Billets and Bars for Reforging¹

This standard is issued under the fixed designation B 472; 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.

1. Scope

1.1 This specification covers UNS N06030, UNS N06022, UNS N06200, UNS N08020, UNS N08026, UNS N08024, UNS N08926, and UNS N08367, UNS N10276, UNS N10665, UNS N10675, and UNS R20033* billets and bars for reforging.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 ASTM Standards:

A 262 Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels²

B 880 Specification for General Requirements for Chemical Check Analysis Limits for Nickel, Nickel Alloys and Cobalt Alloys³

E 1473 Test Methods for Chemical Analysis of Nickel, Cobalt, and High-Temperature Alloys⁴

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *billets and bars, n*—terms billets and bars as used in this specification shall be understood as billets and bars for reforging.

4. Ordering Information

4.1 It is the responsibility of the purchaser to specify all requirements that are necessary for the safe and satisfactory

performance of material ordered under this specification. Examples of such requirements include, but are not limited to, the following:

4.1.1 Quantity (weight or number of pieces),

4.1.2 Name of material or UNS number,

4.1.3 Form (bar or billet),

4.1.4 Dimensions,

4.1.5 ASTM designation and year of issue,

4.1.6 Inspection 12.1),

4.1.7 Certification—State if certification or a report of test results is required (Section 14),

4.1.8 Supplementary requirements, if any, and

4.1.9 If possible, the intended end use.

NOTE 1—A typical ordering description is as follows: 10 000 lb (4536 kg), UNS N08020, forging bar, 4¼ in. (107.95 mm) round, Specification B 472.

5. Materials and Manufacture

5.1 The products shall be hot worked from ingots by rolling, forging, extruding, hammering, or pressing.

5.2 The products may be conditioned by chipping, grinding, or machining 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.

6. Chemical Composition

6.1 The material shall conform to the requirements as to chemical composition prescribed in Table 1.

6.2 If a product (check) analysis is performed by the purchaser, the material shall conform to the requirements specified in Table 1 subject to the permissible tolerances in B 880.

7. Dimensions and Permissible Variations

7.1 Billets shall conform to the shapes and dimensions specified by the purchaser within a permissible variation of $\pm 5\%$.

¹ This specification is under the jurisdiction of ASTM Committee B02 on Nonferrous Metals and Alloys and is the direct responsibility of Subcommittee B02.07 on Refined Nickel and Cobalt, and Alloys Containing Nickel or Cobalt or Both as Principal Constituents.

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* New designation established in accordance with ASTM E527 and SAE J1086, Practice for Numbering Metals and Alloys (UNS).

² *Annual Book of ASTM Standards*, Vol 01.03.

³ *Annual Book of ASTM Standards*, Vol 02.04.

⁴ *Annual Book of ASTM Standards*, Vol 03.06.