
Standard Specification for

Bronze Castings for Bridges and Turntables

AASHTO Designation: M 107-09

ASTM Designation: B 22-08



AASHTO M 107-09 is identical to ASTM B 22-08.



Designation: B 22 – 08

Standard Specification for Bronze Castings for Bridges and Turntables¹

This standard is issued under the fixed designation B 22; 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 establishes requirements for bronze castings for turntables, movable bridges and bridge parts, and bronze castings suitable for use in bridges and other structures for fixed and expansion bearings in which motion is slow and intermittent. The following Copper Alloys are specified: UNS No. C86300, C90500, C91100, C91300, and C93700.

NOTE 1—Historically, the alloys in this specification have been used in the applications listed in Appendix X1. Actual practice may vary.²

1.2 The values stated in either SI units or inch-pound units are to be regarded separately as standard. 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 standard.

1.3 *This standard 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 The following documents form a part of this specification to the extent referenced herein:

2.2 *ASTM Standards*:³

¹ This specification is under the jurisdiction of ASTM Committee B05 on Copper and Copper Alloys and is the direct responsibility of Subcommittee B05.05 on Castings and Ingots for Remelting.

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This specification was prepared in cooperation with representatives of the American Association of State Highway Officials and the American Railway Engineering Association.

² The UNS system for copper and copper alloys (see Practice E 527) is a simple expansion of the former standard designation system accomplished by the addition of a prefix “C” and a suffix “00.” The suffix can be used to accommodate composition variations of the base alloy.

³ 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.

B 208 Practice for Preparing Tension Test Specimens for Copper Alloy Sand, Permanent Mold, Centrifugal, and Continuous Castings

B 824 Specification for General Requirements for Copper Alloy Castings

B 846 Terminology for Copper and Copper Alloys

E 8/E 8M Test Methods for Tension Testing of Metallic Materials

E 10 Test Method for Brinell Hardness of Metallic Materials

E 255 Practice for Sampling Copper and Copper Alloys for the Determination of Chemical Composition

E 527 Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

3. Terminology

3.1 For definitions of terms related to copper alloys, refer to Terminology B 846.

4. General Requirements

4.1 The following sections of Specification B 824 form a part of this specification. In the event of a conflict between this specification and Specification B 824, the requirements of this specification shall take precedence.

4.1.1 Terminology (Section 3),

4.1.2 Other Requirements (Section 7),

4.1.3 Dimensions, Mass, and Permissible Variations (Section 8),

4.1.4 Workmanship, Finish, and Appearance (Section 9),

4.1.5 Sampling (Section 10),

4.1.6 Number of Tests and Retests (Section 11),

4.1.7 Specimen Preparation (Section 12),

4.1.8 Test Methods (Section 13),

4.1.9 Significance of Numerical Limits (Section 14),

4.1.10 Inspection (Section 15),

4.1.11 Rejection and Rehearing (Section 16),

4.1.12 Certification (Section 17),

4.1.13 Test Report (Section 18),

4.1.14 Product Marking (Section 19),

4.1.15 Packaging and Package Marking (Section 20),

4.1.16 Keywords (Section 21), and

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

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