Designation: B251M – 10

Standard Specification for General Requirements for Wrought Seamless Copper and Copper-Alloy Tube (Metric)[1]

This standard is issued under the fixed designation B251M; 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 a group of general requirements common to several wrought product specifications. Unless otherwise specified in the purchase order, or in an individual specification, these general requirements shall apply to copper and copper-alloy tube supplied under Specifications B68, B75, B135, and B466/B466M.

NOTE 1—This specification is the SI companion to B251.

2. Referenced Documents

2.1 The following documents of the issue in effect on date of material purchase form a part of this specification to the extent referenced herein:

2.2 *ASTM Standards:*[2]

B68 Specification for Seamless Copper Tube, Bright Annealed
B75 Specification for Seamless Copper Tube
B135 Specification for Seamless Brass Tube
B153 Test Method for Expansion (Pin Test) of Copper and Copper-Alloy Pipe and Tubing
B154 Test Method for Mercurous Nitrate Test for Copper Alloys
B170 Specification for Oxygen-Free Electrolytic Copper—Refinery Shapes
B193 Test Method for Resistivity of Electrical Conductor Materials
B428 Test Method for Angle of Twist in Rectangular and Square Copper and Copper Alloy Tube
B466/B466M Specification for Seamless Copper-Nickel Pipe and Tube
B643 Specification for Copper-Beryllium Alloy Seamless Tube
E3 Guide for Preparation of Metallographic Specimens
E8 Test Methods for Tension Testing of Metallic Materials
E18 Test Methods for Rockwell Hardness of Metallic Materials
E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
E53 Test Method for Determination of Copper in Unalloyed Copper by Gravimetry
E62 Test Methods for Chemical Analysis of Copper and Copper Alloys (Photometric Methods) (Withdrawn 2010)[3]
E112 Test Methods for Determining Average Grain Size
E255 Practice for Sampling Copper and Copper Alloys for the Determination of Chemical Composition
E478 Test Methods for Chemical Analysis of Copper Alloys

3. Terminology

3.1 *Definitions:*

3.1.1 *average diameter (for round tubes only)*—the average of the maximum and minimum outside diameters, or maximum and minimum inside diameters, whichever is applicable, as determined at any one cross section of the tube.

3.1.2 *coil*—a length of the product wound into a series of connected turns. The unqualified term "coil" as applied to tube usually refers to a bunched coil.

3.1.2.1 *bunched*—a coil in which the turns are bunched and held together such that the cross section of the bunched turns is approximately circular.

3.1.2.2 *double layer flat*—a coil in which the product is spirally wound into two connected disk-like layers such that one layer is on top of the other. (Sometimes called "double layer pancake coil" or "double layer spirally wound coil.")

3.1.2.3 *level or traverse wound*—a coil in which the turns are wound into layers parallel to the axis of the coil such that successive turns in a given layer are next to one another. (Sometimes called "helical coil.")

3.1.2.4 *level or traverse wound on a reel or spool*—a coil in which the turns are positioned into layers on a reel or spool

[1] This specification is under the jurisdiction of ASTM Committee B05 on Copper and Copper Alloysand is the direct responsibility of Subcommittee B05.04 on Pipe and Tube.

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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] The last approved version of this historical standard is referenced on www.astm.org.

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

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