Designation: A1076/A1076M – 20

Standard Specification for Cold Formed Carbon Structural Steel Tubing Made from Metallic Precoated Sheet Steel[1]

This standard is issued under the fixed designation A1076/A1076M; 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 round, square, rectangular, and special shape, electric-resistance-welded structural tubing produced from precoated sheet steel with the following coatings on both sides: zinc (galvanized) or 55% aluminum-zinc alloy or zinc-5 % aluminum alloy-coated. This product is intended for applications requiring minimum mechanical properties and corrosion resistance of both exterior and interior surfaces.

1.2 This specification covers:

1.2.1 Three grades of round tubing and three grades of shaped tubing, identified in Table 1 (Chemical Requirements), Table 2 (Mechanical Requirements of Round Structural Tubing), and Table 3 (Mechanical Requirements of Shaped Structural Tubing).

1.2.2 Three different types of coating composition/designations (Section 7).

1.3 This specification is applicable to orders in either inch-pound units (as A1076) or SI units (as A1076M). Within the text, SI units are shown in brackets. The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

1.4 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A90/A90M Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings

A370 Test Methods and Definitions for Mechanical Testing of Steel Products

A653/A653M Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

A792/A792M Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Process

A875/A875M Specification for Steel Sheet, Zinc-5 % Aluminum Alloy-Coated by the Hot-Dip Process

A902 Terminology Relating to Metallic Coated Steel Products

A500/A500M Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes

A924/A924M Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process

B750 Specification for GALFAN (Zinc-5 % Aluminum-Mischmetal) Alloy in Ingot Form for Hot-Dip Coatings

3. Terminology

3.1 *Definitions*—See Terminology A902 for definitions of general terminology relating to metallic-coated hot-dip products.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *de-dimpled, adj*—the condition of the end of tubing after removal of the protrusion or deformation created by the punch cut operation.

3.2.1.1 *Discussion*—The dimple is a protrusion that is displaced from the inside diameter and is unrelated to a shear burr.

3.2.2 *structural tubing, n*—tubing tension tested with reported test results.

[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 A01.09 on Carbon Steel Tubular Products.

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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.

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