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Standard Specification for Flanged Steel U-Channel Posts[1]

This standard is issued under the fixed designation A1075; 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.

ε[1] NOTE—Table references in 8.2 and 8.3 were corrected editorially in September 2017.

1. Scope

1.1 This specification covers flanged U-channel carbon steel posts having a nominal weight ranging from 0.75 to 6.0 lb/ft and a nominal width ranging from 1.25 to 4.0 in. These posts are furnished in the as-wrought condition intended for applications requiring high tensile strength or crashworthiness and with a lower carbon (LC) designation for use where higher ductility or improved weldability are required. These materials are available in multiple yield strength levels of 50, 60, 70, and 80 ksi (345, 420, 485, and 550 MPa). The 50- and 60-ksi (345- and 420-MPa) yield strength grades are available as lower carbon posts, designated as Grades 50LC or 60LC.

NOTE 1—This specification does not cover high-strength low-alloy (HSLA) post. Refer to Specification A572/A572M for HSLA. For structural Grade 36, refer to Specification A36/A36M.

1.2 *Units*—The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *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]

A1 Specification for Carbon Steel Tee Rails

A6/A6M Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling

A29/A29M Specification for General Requirements for Steel Bars, Carbon and Alloy, Hot-Wrought

A36/A36M Specification for Carbon Structural Steel

A123/A123M Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

A370 Test Methods and Definitions for Mechanical Testing of Steel Products

A499 Specification for Steel Bars and Shapes, Carbon Rolled from "T" Rails

A572/A572M Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel

2.2 *AASHTO Standard:*

AASHTO Manual for Assessing Safety Hardware[3]

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *crashworthiness, n*—ability of signs, signals, and other safety hardware to fail in such a manner so as not to shatter or cause injury to passengers in vehicles involved in an impact or collision.

3.1.2 *lot, n*—for product produced from rolled "T" rails, a lot shall consist of material of the same size product produced in one shift in accordance with Specification A499.

3.1.3 *U-channel post, n*—bars with a "flanged U shape" to provide increased stiffness when loaded in the transverse

[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 A01.15 on Bars.

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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 American Association of State Highway and Transportation Officials (AASHTO), 444 N. Capitol St., NW, Suite 249, Washington, DC 20001, http://www.transportation.org.