Designation: F1083 – 18 (Reapproved 2022)

Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures[1]

This standard is issued under the fixed designation F1083; 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 U.S. Department of Defense.

1. Scope

1.1 This specification covers hot-dipped galvanized welded steel pipe in sizes ranging from 1.315–8.625 in. (33.4–219.1 mm) outside diameter (OD) inclusive, with nominal (average) wall thickness as given in Table 1 and Table 2. Pipe having other dimensions (Note 2) may be furnished provided such pipe complies with all other requirements of this specification. Pipe ordered under this specification is intended for use as a structural support for fencing in accordance with Specification F1043, Group 1A.

NOTE 1—Outside diameter size is designated in that fence fittings are designed to securely fit on the outside of the pipe framework.

NOTE 2—A comprehensive listing of standardized pipe dimensions is contained in ANSI B 36.10.

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.

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]

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

A700 Guide for Packaging, Marking, and Loading Methods for Steel Products for Shipment

B6 Specification for Zinc

E8/E8M Test Methods for Tension Testing of Metallic Materials

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

F1043 Specification for Strength and Protective Coatings on Steel Industrial Fence Framework

2.2 *ANSI Standard:*[3]

B 36.10 Welded and Seamless Wrought Steel Pipe

3. Ordering Information

3.1 Orders for material under this specification shall include the following as required, to describe the desired material adequately:

3.1.1 Specification designation,

3.1.2 Quantity (feet, metres, or number of lengths),

3.1.3 Name of material (schedule 40 steel pipe or schedule 80 steel pipe),

3.1.4 Method of manufacture (electric-resistance welded or furnace welded),

3.1.5 Grade (Regular or High Strength) *High Strength Grade available in sizes 1.660 in. (42.2 mm) OD and larger. Regular Grade is available for all sizes.*

3.1.6 Type (Table 1 or Table 2),

3.1.7 Size (outside diameter and weight per foot),

3.1.8 Length (see Section 14),

3.1.9 Certification (see 18.1), and

3.1.10 Selection of applicable level of preservation and packaging required, if other than in accordance with Practices A700 (see 20.1).

[1] This specification is under the jurisdiction of Committee F14 on Fences and is the direct responsibility of Subcommittee F14.40 on Chain Link Fence and Wire Accessories.

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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 National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

requirements specified herein unless disapproved by the purchaser. The purchaser shall have the right to perform any of the inspections and tests set forth in this specification where such inspections are deemed necessary to ensure that material conforms to prescribed requirements.

17. Rejection

17.1 Each length of pipe received from the manufacturer may be inspected by the purchaser and, if it does not meet the requirements of this specification based on the inspection and test method as outlined in this specification, the length may be rejected and the manufacturer shall be notified. Disposition of rejected pipe shall be a matter of agreement between the manufacturer and the purchaser.

17.1.1 Pipe found in fabrication or installation to be unsuitable for the intended use, under the scope and requirements of this specification, may be set aside and the manufacturer notified. Such pipe shall be subject to mutual investigation as to the nature and severity of the deficiency and the forming or installation, or both, conditions involved. Disposition shall be a matter for agreement.

18. Certification

18.1 The producer or supplier shall, upon request, furnish to the purchaser a certificate of inspection stating that the material has been sampled, tested, and inspected in accordance with this specification, and has been found to meet the requirements.

19. Product Marking

19.1 Except as allowed by 19.5 and 19.6, each length of pipe shall be legibly marked in the following sequence by rolling, stamping, or stenciling to show:

19.1.1 Manufacturer's name or mark,

19.1.2 Country of origin,

19.1.3 Method of manufacture (electric-resistance welded or furnace welded),

19.1.4 Specification number (year of issue not required),

NOTE 5—Pipe that complies with multiple compatible specifications may be marked with the appropriate designation for each specification.

19.1.5 Size (specified outside diameter and weight class, schedule number, or nominal wall thickness; or specified outside diameter and nominal wall thickness),

19.1.6 Heat number, lot number, run number, or a combination thereof that will provide traceability for certification requirements.

19.2 Unless another marking format is specified in the purchase order, length shall be marked in feet and tenths of a foot, or metres to two decimal places, dependent upon the units to which the pipe was ordered. The location of such marking shall be at the option of the manufacturer.

19.3 *Grade Designation*—The letters "HS 50000" shall be used when product meets the High Strength grade of material. The location of such marking shall be at the option of the manufacturer.

19.4 Any additional information desired by the manufacturer or specified in the purchase order.

19.5 For pipe 1.900 in. (48.3 mm) OD (DN 40) and smaller that is bundled, it shall be permissible to mark this information on a tag securely attached to each bundle.

19.6 When pipe sections are cut into shorter lengths by a subsequent producer for resale as material, the processor shall transfer complete identification including the name or brand of the manufacturer, to each unmarked cut length, or to metal tags securely attached to unmarked pipe bundled in accordance with the requirements of 19.5. The same material designation shall be included with the information transferred, and the processor's name, trademark, or brand shall be added.

19.7 *Bar Coding*—In addition to the requirements in 19.1, 19.5, and 19.6, bar coding is acceptable as a supplementary identification method. It is recommended that bar coding be consistent with the Automotive Industry Action Group (AIAG) standard prepared by the Primary Metals Subcommittee of the AIAG Bar Code Project Team.

20. Packaging and Loading

20.1 When specified on the purchase order, packaging, marking, and loading for shipment shall be in accordance with Practices A700.

21. Keywords

21.1 fence; posts, fence; strength; strength, fence posts; toprails, fence

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