

ANSI/AWWA **C226-19**
(Revision of ANSI/AWWA C226-13)

AWWA Standard

Stainless-Steel Fittings for Waterworks Service, Sizes 1/2 In. Through 72 In. (13 mm Through 1,800 mm)

Effective date: Jan. 1, 2020.

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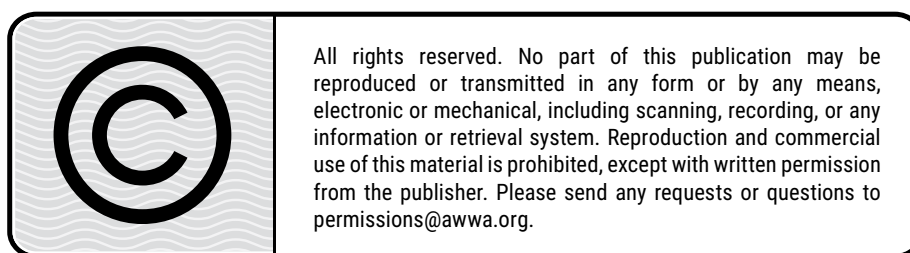
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Foreword

This foreword is for information only and is not a part of ANSI /AWWA C226.*

I. Introduction.

I.A. *Background.* Stainless steel is a standard material used to construct fittings. It offers very low corrosion rates, which makes it suitable for the handling of potable water while maintaining purity and quality.

I.B. *History.* In 1999, the AWWA Standards Council directed the Standards Committee on Steel Pipe to develop a standard for stainless-steel fittings used in water treatment and conveying facilities. The standard for steel pipe was subsequently split into two committees, one for steel pipe and the other for stainless-steel pipe. This standard was approved by the latter and is the first AWWA standard for stainless-steel fittings used in water treatment and conveying facilities. The first edition of the standard was approved by the AWWA Board of Directors on Feb. 12, 2006. The second edition was approved on Jan. 20, 2013. This edition was approved on Oct. 28, 2019.

I.C. *Acceptance.* In May 1985, the US Environmental Protection Agency (USEPA) entered into a cooperative agreement with the consortium led by NSF International (NSF) to develop voluntary third-party consensus standards and a certification program for direct and indirect drinking water additives. Other members of the original consortium included the Water Research Foundation (formerly AwwaRF) and the Conference of State Health and Environmental Managers (COSHEM). The American Water Works Association (AWWA) and the Association of State Drinking Water Administrators (ASDWA) joined later.

In the United States, the authority to regulate products for use in, or contact with, drinking water rests with individual states.[†] Local agencies may choose to impose requirements more stringent than those required by the state. To evaluate the health effects of products and drinking water additives from such products, state and local agencies may use various references, including

1. Specific policies of the state or local agency.
2. Two standards developed under the direction of NSF[‡]: NSF/ANSI 60, Drinking Water Treatment Chemicals—Health Effects, and NSF/ANSI 61, Drinking Water System Components—Health Effects.

* American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036.

[†] Persons outside the United States should contact the appropriate authority having jurisdiction.

[‡] NSF International, P.O. Box 130140, 789 N. Dixboro Road, Ann Arbor, MI 48105.

3. Other references, including AWWA standards, *Food Chemicals Codex*, *Water Chemicals Codex*,^{*} and other standards considered appropriate by the state or local agency.

Various certification organizations may be involved in certifying products in accordance with NSF/ANSI 61. Individual states or local agencies have authority to accept or accredit certification organizations within their jurisdiction. Accreditation of certification organizations may vary from jurisdiction to jurisdiction.

Annex A, “Toxicology Review and Evaluation Procedures,” to NSF/ANSI 61 does not stipulate a maximum allowable level (MAL) of a contaminant for substances not regulated by a USEPA final maximum contaminant level (MCL). The MALs of an unspecified list of “unregulated contaminants” are based on toxicity testing guidelines (noncarcinogens) and risk characterization methodology (carcinogens). Use of Annex A procedures may not always be identical, depending on the certifier.[†]

ANSI/AWWA C226 does not address additive requirements. Users of this standard should consult the appropriate state or local agency having jurisdiction in order to

1. Determine additive requirements, including applicable standards.
2. Determine the status of certifications by parties offering to certify products for contact with, or treatment of, drinking water.
3. Determine the current information on product certification.

II. Special Issues.

II.A. *Basis of Design.* The wall thickness of stainless-steel fittings is determined by (1) internal pressures; (2) external pressures; (3) special physical loading; and (4) practical considerations for handling, shipping, lining and coating, or similar operations.

II.A.1. Application. The provisions of this standard cover the requirements for stainless-steel fittings for use in water treatment plants, water transmission and distribution systems, and other water facilities. The purchaser is responsible for determining if any circumstance related to the project requires additional provisions that are not included in the standard. Such special conditions might affect design, manufacture, quality control, corrosion protection, or handling requirements.

II.A.2. Testing of special sections. Sec. 5.2.3 provides for nondestructive testing of special sections.

^{*} Both publications are available from National Academy of Sciences, 500 Fifth Street NW, Washington, DC 20001.

[†] Appendix C of NSF/ANSI 61 defines those materials that are “Mechanical Devices Acceptable Materials,” which conform to NSF/ANSI 61 requirements.