ANSI/AWWA C223-07
(Revision of ANSI/AWWA C223-02)

American Water Works Association

The Authoritative Resource on Safe Water®

AWWA Standard

Fabricated Steel and Stainless Steel Tapping Sleeves

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AWWA Standard

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Committee Personnel

The Steel Water Pipe Manufacturers Technical Advisory Committee (SWPMTAC) Task Group for AWWA C223, which developed this standard, had the following personnel at the time:

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Contents

All AWWA standards follow the general format indicated subsequently. Some variations from this format may be found in a particular standard.

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Foreword

This foreword is for information only and is not a part of ANSI/AWWA C223.

I. Introduction

I.A. *Background.* Fabricated tapping sleeves are used to provide outlets on piping systems. They are made by several producers, and though details differ, all tapping sleeves provide similar features. They provide a means of attaching a tapping valve and tapping machine and a means of sealing onto or around the existing pipe.

I.B. *History.* The first edition was approved by the Board of Directors on June 16, 2002. This edition was approved on June 24, 2007.

I.C. *Acceptance.* In May 1985, the US Environmental Protection Agency (USEPA) entered into a cooperative agreement with a 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 American Water Works Association Research Foundation (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, authority to regulate products for use in, or in 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. An advisory program formerly administered by USEPA, Office of Drinking Water, discontinued on Apr. 7, 1990.
2. Specific policies of the state or local agency.
3. 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.

* Persons outside the United States should contact the appropriate authority having jurisdiction.
† NSF International, 789 N. Dixboro Road, Ann Arbor, MI 48105.
‡ American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036.

4. 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/ANSI C223 does not address additives requirements. Thus, users of this standard should consult the appropriate state or local agency having jurisdiction in order to

1. Determine additives 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 current information on product certification.

II. Special Issues. This standard has no applicable information for this section.

III. Use of This Standard. It is the responsibility of the user of an AWWA standard to determine that the products described in that standard are suitable for use in the particular application being considered.

III.A. *Purchaser Options and Alternatives.* The following items should be provided by the purchaser:

1. Standard used—that is, ANSI/AWWA C223, Fabricated Steel and Stainless Steel Tapping Sleeves, of latest revision.
2. Quantity.
3. Type of pipe(s), including specification to which it is made, or specification and tolerance of outside diameter.
4. Nominal pipe size(s).

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

5. Wall thickness or class of pipe.
6. Type of service (i.e., line content; aboveground or belowground, etc.)
7. Rated pressure, transient pressure, and test pressure.
8. Operating temperature range.
9. Special requirements, such as coatings, gasket material, and bolting.
10. Flange specification, including dimensions for accommodating tapping valve fit-up.
11. Tapping sleeve and tapping sleeve flange material.
12. Documentation requirements.
13. Requirements for test connections and postinstallation pressure testing.
14. Maximum outlet size.
15. Whether compliance with NSF/ANSI 61 Drinking Water System Components—Health Effects, is required.
16. Actual outside diameter (OD) of pipe, including any coatings and pipe length available for installation of tapping sleeve. (Section 3)
17. Details of other federal, state or provincial, and local requirements (Sec. 4.2.1).
18. Inspection by the purchaser. (Sec. 5.1.2.)

III.B. *Purchaser's Proof Test.* The purchaser may specify individual hydrostatic proof testing. If individual hydrostatic proof testing is required, the assembled fabricated tapping sleeve shall be shop tested at a maximum of 1.5 times the rated pressure. The test shall be considered successful if no leakage is detected during one hour of sustained pressure at this level.

III.C. *Modification to Standard.* Any modification to the provisions, definitions, or terminology in this standard must be provided by the purchaser.

IV. Major Revisions. Major changes made to the standard in this revision include the following:

1. Added additional information requesting available installation length in Item 16 in Sec. III.A of the foreword.
2. Coatings discussed in Sec. 4.5.2 were changed to be optional.

V. Comments. If you have any comments or questions about this standard, please call the AWWA Volunteer & Technical Support Group at 303.794.7711, FAX at 303.795.7603, write to the group at 6666 West Quincy Avenue, Denver, CO 80235-3098, or e-mail at standards@awwa.org.

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AWWA Standard

Fabricated Steel and Stainless Steel Tapping Sleeves

SECTION 1: GENERAL

Sec. 1.1 Scope

This standard describes fabricated steel and stainless steel tapping sleeves used to provide outlets on pipe. They are intended for pipe sizes 4 in. (100 mm) through 48 in. (1,200 mm) with branch outlets through 36 in. (900 mm). This standard includes requirements for materials, dimensions, tolerances, finishes, and testing. This standard is not intended to apply to tapping sleeves welded to pipe. Fabricated tapping sleeves shall be manufactured from steel or stainless steel and are intended for use in systems conveying water. For outlets and main sizes greater than those specified, consult the manufacturer.

Sec. 1.2 Purpose

The purpose of this standard is to provide the minimum requirements for fabricated tapping sleeves for various pipe materials, including system components, testing, and marking requirements.

Sec. 1.3 Application

This standard can be referenced in specifications for fabricated tapping sleeves. The stipulations of this standard apply when this document has been referenced and only to fabricated tapping sleeves.