

American Water Works Association

ANSI/AWWA C219-97

(Revision of ANSI/AWWA C219-91)



AWWA STANDARD
FOR
BOLTED, SLEEVE-TYPE COUPLINGS
FOR PLAIN-END PIPE



Effective date: Feb. 1, 1998.

First edition approved by AWWA Board of Directors June 23, 1991.

This edition approved June 15, 1997.

Approved by American National Standards Institute Oct. 31, 1997.

AMERICAN WATER WORKS ASSOCIATION

6666 West Quincy Avenue, Denver, Colorado 80235

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Committee Personnel

The AWWA C219 Task Group, which developed this standard, had the following personnel at the time:

Thomas R. Brown, *Chair*

C.J. Anderson, Douglas Brothers, Portland, Maine	(AWWA)
D.Y. Bridges, Brico Inc., Atlanta, Ga.	(AWWA)
T.R. Brown, Sensus Technologies Inc., Uniontown, Pa.	(AWWA)
J.H. Burton, Baker Coupling Company Inc., Los Angeles, Calif.	(AWWA)
Bob Card, Brico Industries Inc., Atlanta, Ga.	(AWWA)
D.H. Eaton, Romac Industries Inc., Seattle, Wash.	(AWWA)
Bill Kane, Cascade Waterworks Manufacturing Company, Yorkville, Ill.	(AWWA)
Marvin Mintz, M-Square Associates Inc., Elmont, N.Y.	(AWWA)
R.G. Myers, Ford Meter Box Company, Wabash, Ind.	(AWWA)
R.N. Satyarthi, Baker Coupling Company Inc., Los Angeles, Calif.	(AWWA)
K.L. Shaddix, Smith-Blair Inc., Texarkana, Texas	(AWWA)
J.C. Taylor, North American Pipe Inc., Saginaw, Texas	(AWWA)
M.J. Topps, Viking Johnson Ltd., Herts, England	(AWWA)
D.R. Wagner, Wagner Consultants, St. Louis, Mo.	(AWWA)

The AWWA Standards Committee on Steel Pipe, which reviewed and approved this standard, had the following personnel at the time of approval:

George J. Tupac, *Chair*
John H. Bambei Jr., *Vice-Chair*
Dennis A. Dechant, *Secretary*

Consumer Members

G.A. Andersen, New York City Bureau of Water Supply, Corona, N.Y.	(AWWA)
Ergun Bakall, AKM Consulting Engineers, Irvine, Calif.	(AWWA)
J.H. Bambei Jr., Denver Water Department, Denver, Colo.	(AWWA)
J.L. Doane, Portland Water Bureau, Portland, Ore.	(AWWA)
R.V. Frisz, US Bureau of Reclamation, Denver, Colo.	(USBR)
T.J. Jordan,* Metropolitan Water District of Southern California, La Verne, Calif.	(AWWA)
W.M. Kremkau, Washington Suburban Sanitary Commission, Laurel, Md.	(AWWA)
T.A. Larson, Tacoma Water Division, Tacoma, Wash.	(AWWA)
P.W. Reynolds, Los Angeles Department of Water & Power, Los Angeles, Calif.	(AWWA)
G.M. Snyder, Metropolitan Water District of Southern California, Los Angeles, Calif.	(AWWA)
M.L. Young, East Bay Municipal Utility District, Stockton, Calif.	(AWWA)

*Alternate

General Interest Members

G.E. Block Jr., Rizzo Associates Inc., Natick, Mass.	(NEWWA)
W.R. Brunzell, Brunzell Associates Ltd., Skokie, Ill.	(AWWA)
B.R. Bullert,* Council Liaison, City of St. Paul Water Utility, St. Paul, Minn.	(AWWA)
R.L. Coffey, R.W. Beck Inc., Seattle, Wash.	(AWWA)
B.R. Elms,* Standards Engineer Liaison, AWWA, Denver, Colo.	(AWWA)
L.J. Farr, CH2M Hill Inc., Redding, Calif.	(AWWA)
K.G. Ferguson, Montgomery Watson, Las Vegas, Nev.	(AWWA)
S.N. Foellmi, Black & Veatch Engineers, Irvine, Calif.	(AWWA)
J.W. Green, Alvord Burdick & Howson, Chicago, Ill.	(AWWA)
K.D. Henrichsen, HDR Engineering Inc., Denver, Colo.	(AWWA)
G.K. Hickox, Engineering Consultant, Houston, Texas	(AWS)
M.B. Horsley,† Black & Veatch Engineers, Overland Park, Kan.	(AWWA)
J.K. Jeyapalan, American Ventures Inc., Bellevue, Wash.	(AWWA)
R.Y. Konyalian, Engineering Consultant, Huntington Beach, Calif.	(AWWA)
G.M. Kralik, Naval Facilities Engineering Command, Port Hueneme, Calif.	(AWWA)
H.R. Stoner, Henry R. Stoner Associates, North Plainfield, N.J.	(AWWA)
Chris Sundberg,† CH2M Hill Consulting Engineers, Bellevue, Wash.	(AWWA)
G.J. Tupac, G.J. Tupac and Associates Inc., Pittsburgh, Pa.	(AWWA)
L.W. Warren, KCM Inc., Seattle, Wash.	(AWWA)
W.R. Whidden, Post, Buckley, Schuh & Jernigan, Winter Park, Fla.	(AWWA)

Producer Members

H.H. Bardakjian, Ameron Concrete & Steel Pipe, Rancho Cucamonga, Calif.	(AWWA)
T.R. Brown, Sensus Technologies Inc., Uniontown, Pa.	(AWWA)
J.H. Burton, Baker Coupling Company Inc., Los Angeles, Calif.	(SPFA)
R.J. Card, Brico Industries Inc., Atlanta, Ga.	(AWWA)
J.R. Davenport, California Steel Pressure Pipe, Riverside, Calif.	(AWWA)
Dennis Dechant, Thompson Pipe and Steel Company, Denver, Colo.	(AWWA)
G.M. Harris, Harris Corrosion Specialists, Longboat Key, Fla.	(AWWA)
J.R. Pegues, American Cast Iron Pipe Company, Birmingham, Ala.	(MSS)
Bruce Vanderploeg,† Northwest Pipe and Casing Company, Portland, Ore.	(AWWA)
J.A. Wise, Canus Industries Inc., Vancouver, B.C.	(AWWA)

*Liaison, nonvoting

†Alternate

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Foreword

This foreword is for information only and is not a part of AWWA C219.

I. Introduction.

I.A. *Background.* This standard covers bolted sleeve-type couplings, reducing or transition couplings, and flanged coupling adapters used to join plain end pipe. It also includes materials of construction, inspection, and testing.

I.B. *History.* The first edition of AWWA C219 was approved by the AWWA Board of Directors on June 23, 1991. The effective date was March 1, 1992. This edition of ANSI/AWWA C219 was approved by the AWWA Board of Directors on June 15, 1997. It includes minor revisions and incorporates the latest AWWA standard format.

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 all 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, ANSI[†]/NSF[‡] 60, Drinking Water Treatment Chemicals—Health Effects, and ANSI/NSF 61, Drinking Water System Components—Health Effects.
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 ANSI/NSF 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.

Appendix A, "Toxicology Review and Evaluation Procedures," to ANSI/NSF 61 does not stipulate a maximum allowable level (MAL) of a contaminant for substances

*Persons in Canada, Mexico, and non-North American countries should contact the appropriate authority having jurisdiction.

[†]American National Standards Institute, 11 W. 42nd St., New York, NY 10036.

[‡]NSF International, 3475 Plymouth Rd., Ann Arbor, MI 48106.

[§]Both publications available from National Academy of Sciences, 2102 Constitution Ave. N.W., Washington, DC 20418.

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 Appendix A procedures may not always be identical, depending on the certifier.

AWWA C219-97 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 all parties offering to certify products for contact with, or treatment of, drinking water.
3. Determine current information on product certification.

II. Special Issues.

II.A. Advisory Information on Product Application. Bolted, sleeve-type couplings have been used for joining plain-end pipe since the latter part of the nineteenth century. Currently, there are several manufacturers who produce these couplings. Though details differ, all couplings of this type work the same way and have similar components: a center sleeve (sometimes called a “middle ring”), end rings (sometimes called “followers”), and threaded fasteners (bolts and nuts) that, when tightened, pull the end rings together. These components compress elastomeric gaskets in the space formed between the end rings, center sleeve, and pipes being joined, thereby sealing the coupling/pipe combination.

III. Use of This Standard. AWWA has no responsibility for the suitability or compatibility of the provisions of this standard to any intended application by any user. Accordingly, each user of this standard is responsible for determining that the standard’s provisions are suitable for and compatible with that user’s intended application.

III.A. Purchaser Options and Alternatives. The following items should be included in the purchaser’s specifications:

1. Standard used—that is, ANSI/AWWA C219, Standard for Bolted, Sleeve-Type Couplings for Plain-End Pipe, of latest revision.
2. Quantity.
3. Type of pipe(s), including specification to which it is made, or specification and tolerance of pipe ends (Sec. 4.7.2 and Table 4).
4. Nominal pipe size(s) (Sec. 3[11] and Table 4).
5. Actual outside diameter(s) (OD) of pipe ends, including any coatings (Sec. 3[1]).
6. Wall thickness, schedule, or class.
7. Type of service (Sec. 4.2.2.2 and 4.2.2.3).
8. Rated working pressure, including surges, and the test pressure (Sec. 3[13] and 4.3.1).
9. Operating temperature range (Sec. 4.2.2.1 and 4.2.2.2).
10. Anticipated angular deflection of pipes (Sec. 4.5 and Table 3).
11. Length and thickness of center sleeve where special performance or installation requirements exist (Sec. 4.3.2 and Table 2).
12. Special requirements, such as coatings (Sec. 4.6.2), gasket material (Sec. 4.2.2 and 4.2.2.2), gaskets for electrical insulation (Sec. 4.2.2.3), and special type of bolting (Sec. 4.2.4).
13. Flange specification for flanged coupling adapters.
14. Hydrostatic test data report (Sec. 5.2.2.2).
15. Additional nondestructive weld evaluation (Sec. 5.1.1.1.1).

16. Material certifications (Sec. 5.1.1.3).
17. Purchaser's inspection requirements (Sec. 5.1.2).
18. Purchaser's proof test requirements (Sec. 5.2.4).
19. Marking of rated working pressure (Sec. 6.1, item 4).
20. Purchaser's pipe-end preparation requirements (Sec. 4.6.2).
21. Certificate of compliance (Sec. 6.3).

III.B. *Modification to Standard.* Any modification to the provisions, definitions, or terminology in this standard must be provided in the purchaser's specifications.

IV. Major Revisions. Major revisions made to the standard in this edition include the following:

1. The format has been changed to AWWA standard style.
2. The acceptance clause (Sec. I.C) has been changed to approved wording.

V. Comments. If you have any comments or questions about this standard, please call the AWWA Standards and Materials Development Department, (303) 794-7711 ext. 6283, FAX (303) 795-1440, or write to the department at 6666 W. Quincy Ave., Denver, CO 80235.