

American Water Works Association

ANSI/AWWA C221-01

(Revision of ANSI/AWWA C221-97)



AWWA STANDARD
FOR
**FABRICATED STEEL MECHANICAL
SLIP-TYPE EXPANSION JOINTS**



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AMERICAN WATER WORKS ASSOCIATION

6666 West Quincy Avenue, Denver, Colorado 80235

www.awwa.org

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Committee Personnel

The Steel Water Pipe-Manufacturers Technical Advisory Committee (SWPMTAC) Task Group for C221, which developed this edition, had the following personnel at the time:

Thomas R. Brown, *Chair*
James H. Burton, *Vice-Chair*

D.Y. Bridges, Brico Industries Inc., Atlanta, Ga.	(AWWA)
T.R. Brown, Sensus Technologies Inc., Uniontown, Pa.	(AWWA)
J.H. Burton, Brico Industries, LaMirada, Calif.	(AWWA)
Ken Caldwell, Cascade Waterworks Manufacturing Company, Yorkville, Ill.	(AWWA)
R.R. Collins, JCM Industries Inc., Nash, Texas	(AWWA)
D. Creek, Ford Meter Box Company, Pell City, Ala.	(AWWA)
D.H. Eaton, Romac Industries Inc., Bothell, Wash.	(AWWA)
S.W. Eskew, Cascade Waterworks Manufacturing Company, Yorkville, Ill.	(AWWA)
S. Lamb, Nickle Development Institute, Huntington, W. Va.	(AWWA)
Marvin Mintz, M-Square Associates Inc., Elmont, N.Y.	(AWWA)
R.N. Satyarthi, Baker Coupling Company Inc., Los Angeles, Calif.	(AWWA)
Donny Seals, JCM Industries Inc., Nash, Texas	(AWWA)
K.L. Shaddix, Smith-Blair Inc., Texarkana, Texas	(AWWA)
J.C. Taylor, Piping Systems Inc., Saginaw, Texas	(AWWA)
M.J. Topps, Viking Johnson Ltd., Hixson, Tenn.	(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)
J.H. Bambei Jr., Denver Water, Denver, Colo.	(AWWA)

D.W. Coppes, Massachusetts Water Resources Authority, Charlestown, Mass.	(NEWWA)
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)
A.L. Linard, Los Angeles Department of Water & Power, Los Angeles, Calif.	(AWWA)
G.P. Stine, San Diego County Water Authority, Escondido, Calif.	(AWWA)
J.V. Young, EPCOR Water Services Inc., Richmond, B.C.	(AWWA)

General Interest Members

Ergun Bakall, AKM Consulting Engineers, Irvine, Calif.	(AWWA)
W.R. Brunzell, Brunzell Associates Ltd., Skokie, Ill.	(AWWA)
R.L. Coffey, Kirkham Michael Consulting Engineers, Omaha, Neb.	(AWWA)
H.E. Dunham,* Montgomery Watson, Bellevue, Wash.	(AWWA)
L.J. Farr, CH2M Hill Inc., Redding, Calif.	(AWWA)
K.G. Ferguson, Montgomery Watson, Las Vegas, Nev.	(AWWA)
S.N. Foellmi, Black & Veatch LLP, Irvine, Calif.	(AWWA)
J.W. Green, Alvord Burdick & Howson, Lisle, Ill.	(AWWA)
K.D. Henrichsen, HDR Engineering Inc., Denver, Colo.	(AWWA)
M.B. Horsley,* Black & Veatch LLP, Overland Park, Kan.	(AWWA)
J.K. Jeyapalan, Engineering Consultant, New Milford, Conn.	(AWWA)
Rafael Ortega, Lockwood Andrews & Newnam Inc., Houston, Texas	(AWWA)
A.E. Romer, Boyle Engineering Corp., Newport Beach, Calif.	(AWWA)
H.R. Stoner, Consultant, North Plainfield, N.J.	(AWWA)
C.C. Sundberg,* CH2M Hill, Bellevue, Wash.	(AWWA)
G.J. Tupac, G.J. Tupac and Associates Inc., Pittsburgh, Pa.	(AWWA)
J.S. Wailes,† Standards Engineer Liaison, AWWA, Denver, Colo.	(AWWA)
L.W. Warren, Tetra Tech Inc., Seattle, Wash.	(AWWA)
W.R. Whidden, Post Buckley Schuh & Jernigan, Winter Park, Fla.	(AWWA)

*Alternate

†Liaison, nonvoting

Producer Members

H.H. Bardakjian, Ameron Concrete & Steel Pipe, Rancho Cucamonga, Calif.	(AWWA)
T.R. Brown, Sensus Technologies Inc., Uniontown, Pa.	(AWWA)
R.J. Card, Brico Industries Inc., Atlanta, Ga.	(AWWA)
R.R. Carpenter, American Cast Iron Pipe Company, Birmingham, Ala.	(MSS)
Dennis Dechant, Northwest Pipe Company, Denver, Colo.	(AWWA)
J.E. Hagelskamp,* American Cast Iron Pipe Company, Birmingham, Ala.	(AWWA)
B.D. Keil, Continental Pipe Manufacturing Company, Pleasant Grove, Utah	(SPFA)
Bruce Vanderploeg,† Northwest Pipe Company, Portland, Ore.	(AWWA)
J.A. Wise, Canus Industries Inc., Port Coquitlam, B.C.	(AWWA)

*Liaison, nonvoting

†Alternate

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Foreword

This foreword is for information only and is not a part of AWWA C221.

I. Introduction.

I.A. *Background.* Fabricated steel mechanical slip-type expansion joints have been used for approximately 80 years to accommodate thermal movement in non-buried, aboveground pipelines, penstocks, and other conduits where expansion and contraction of more than $\frac{1}{2}$ in. (13 mm) needs to be addressed. Though details differ, all expansion joints of this type work in the same way and have similar components: a slip pipe, body, gland, packing chamber (with alternate rings of elastomeric material and lubricating rings), and follower ring. They may also have a limit ring and limit rods, and threaded fasteners (bolts and nuts) that, when tightened, compress the packing in the packing chamber to make a watertight seal while allowing the anticipated axial movement.

I.B. *History.* The first edition of ANSI/AWWA C221 was approved by the AWWA Board of Directors on Feb. 2, 1997. This second edition was approved by the AWWA Board of Directors on Jan. 21, 2001.

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

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