

The Authoritative Resource on Safe WaterSM

AWWA Standard

The Selection of Asbestos– Cement Transmission Pipe, Sizes 18 In. Through 42 In. (450 mm Through 1,050 mm), for Water Supply Service



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6666 West Quincy Avenue Denver, C0 80235-3098 **T** 800.926.7337 www.awwa.org Advocacy Communications Conferences Education and Training Science and Technology Sections

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Committee Personnel

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

Leo A. Kinney Jr., *Chair* Bobby J. Pigg, *Secretary*

General Interest Members

Marcel Cossette, Asbestos Expertise, Sherbrooke, Que.	
S.C. Danos, [*] Littleton Electric Light & Water Departments,	
Littleton, Mass.	(AWWA)
R.C. Graff, Poway, Calif.	(AWWA)
L.A. Kinney Jr., Lakewood, Colo.	(AWWA)
P.J. Olson, [*] Standards Engineer Liaison, AWWA, Denver, Colo.	(AWWA)
W.R. Perrell, Birmingham, Ala.	(AWWA)

Producer Members

I.F. Gonzalez de Aragon, Mexalit Industrial, Santa Clara, Mexico	(AWWA)
B.J. Pigg, AC Product Producers Association, Arlington, Va.	(AACPP)

^{*}Liaison, nonvoting

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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.

PAGE

SEC. *Foreword*

Ι	Introduction	ix
I.A	Background	ix
I.B	History	ix
I.C	Acceptance	xi
II	Special Issues	xii
III	Use of This Standard	ciii
III.A	Purchaser Options and	
	Alternatives	ciii
III.B	Modification to Standard	ciii
IV	Major Revisions	ciii
V	Comments	xiv

Standard

1	General
1.1	Scope 1
1.2	Purpose 2
1.3	Application 2
2	References
3	Definitions, Symbols, and
	Abbreviations
4	Requirements
4.1	Permeation 6
4.2	Pressure Classes 6
4.3	Installation 7
4.4	General Design 7
4.5	External Loads 11

SEC.	P	AGE
4.7	Design Criteria and Use of	
	Pipe Selection Charts	29
4.8	Type of Pipe	53
5	Verification	56
6	Delivery	56
Appe	ndixes	
A	Friction Loss of Head Chart—	
	Coefficient of Flow, C=140	.57
В	Surge Pressure Analysis	
B.1	Water Hammer or Surge	59
B.2	Water Hammer Analysis	60
B.3	Valve Closure	61
B.4	Pumped Systems	64
B.5	Methods of Control	65
B.6	Surge Calculation Example	67
B. 7	Air in Pipelines	68
С	Frictional Power Requirements	71
Figur	res	
1	Classes of Bedding for Conduits	
	in Trench	. 8
2	Load Pressure Curve	10
3	Assembly for Three-edge,	
	V-Shaped Crushing Strength	
	Test	.10
4	Classification of Construction	
	Techniques	12

v

SEC.	PA	AGE
5	Values of C_d for Trench	
	Conditions	13
6	Embankment Conditions	18
7	Value of C_c for Positive	
	Projecting Pipe	18
8	Values of B_d/B_c at Which the	
	Trench and Positive Projecting	
	Pipe Equations Give Equal	
	Loads	20
9	Values of C_n for Negative	
	Projecting Pipe and Imperfect	
	Ditch Conditions	21
10A	Positive Projecting Pipe Projection	
	Ratio $p = x/B_c$	21
10B	Negative Projecting Pipe Projection	
	Ratio $p' = x/B_d$	21
11	Projection Ratio p' for the	
	Imperfect Trench Embankment	
	Condition	22
12	Values of C_T for Tunnel	
	Conditions	24
13	Superimposed Loads	25
14A	Combined Loading Curves for	
	18-In. Transmission Pipe	30
14B	Combined Loading Curves for	
	20-In. Transmission Pipe	31
14C	Combined Loading Curves for	
	21-In. Transmission Pipe	32
14D	Combined Loading Curves for	
	24-In. Transmission Pipe	33
14E	Combined Loading Curves for	
	27-In. Transmission Pipe	34
14F	Combined Loading Curves for	
	30-In. Transmission Pipe	35

SEC.		PAGE
14G	Combined Loading Curves for	
	33-In. Transmission Pipe	36
14H	Combined Loading Curves for	
	36-In. Transmission Pipe	37
14I	Combined Loading Curves for	
	39-In. Transmission Pipe	38
14J	Combined Loading Curves for	
	42-In. Transmission Pipe	39
14A(m)	Combined Loading Curves	
	for 450-mm Transmission Pipe	40
14B(m)	Combined Loading Curves	
	for 500-mm Transmission Pipe	41
14C(m)	Combined Loading Curves	
	for 525-mm Transmission Pipe	42
14D(m)	Combined Loading Curves	
	for 600-mm Transmission Pipe	43
14E(m)	Combined Loading Curves	
	for 675-mm Transmission Pipe	44
14F(m)	Combined Loading Curves	
	for 750-mm Transmission Pipe	45
14G(m)	Combined Loading Curves	
	for 825-mm Transmission Pipe	46
14H(m)	Combined Loading Curves	
	for 900-mm Transmission Pipe	47
14I(m)	Combined Loading Curves	
	for 975-mm Transmission Pipe	48
14J(m)	Combined Loading Curves	
	for 1,050-mm Transmission Pipe	49
A.1	Friction Loss of Head Chart—	
	Coefficient of Flow, $C = 140$	57
B.1	Time (T_E) = Effective for Full	
	Cutoff Uniformly at Maximum	
	Rate	62
C.1	Yearly Power Cost to Compensate	
	for Friction Loss of Head	72

Table	s		7
1	Earth Loads (lb/lin ft)	14	
2	Recommended Safe Design		
	Values of <i>c</i> for Tunnel		8
	Conditions	23	
3	Concentrated Superimposed		
	Wheel Load W_{sc} (measured in		9
	lb/ft [kN/m]) on Asbestos–Cement		
	Transmission Pipe—Single		10
	Wheel = 16,000 lb (7,250 kg)	26	
4	Values of Load Coefficients C _s	27	
5	Impact Factors F	28	
6	Design Internal Pressure and		11
	Design External Load Intercepts		
	for Use With Selection Curves		C.1
	for Transmission Pipe	50	

PAGE

SEC.	PAGE
7	Minimum Safety Factors for
	Use With Asbestos–Cement
	Transmission Pipe Selection 51
8	Asbestos–Cement Pipe Type
	Recommended for Internal
	Water Aggressiveness 53
9	Aggressiveness of Nonsulfate Acidic
	Soils to Asbestos–Cement Pipe 54
10	Chemical Resistance of Asbestos-
	Cement Pipe to Nonacid
	$(pH \ge 7.0)$ Soluble Sulfates in
	Water and Soils 54
11	Sulfate Aggressiveness in Water
	and Soil 55
C.1	Present Worth of an Income of
	\$1.00 Per Year for the Next
	<i>N</i> Years 73

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SEC.

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Foreword

This foreword is for information only and is not a part of ANSI/AWWA C403.

I. Introduction.

I.A. *Background*. Asbestos-cement pipe was originally introduced into the North American market in 1931. At that time, asbestos cement (an intimate mixture of Portland cement and asbestos fibers) was a relatively new pipe material. Experience with asbestos-cement pipe was limited to only a few years at installations in several European countries, particularly Italy. During the years following its North American introduction, a record of successful experience was established in the United States and other North American countries. In 1949, AWWA established a standards committee to develop a standard for asbestos-cement pressure pipe.

I.B. *History.* The original AWWA committee developed a standard for asbestos-cement water pipe, designated AWWA C400-53T, Tentative Standard for Asbestos-Cement Water Pipe, which was approved by the AWWA Board of Directors as tentative on May 15, 1953. In 1958, the committee was reactivated as Committee 8340D on Asbestos-Cement Pipe. This committee produced a revised tentative standard adopted by AWWA as AWWA C400-64T, Tentative Standard for Asbestos-Cement Pipe, on Jan. 27, 1964. This edition was advanced to standard without revision under the designation AWWA C400-65, Standard for Asbestos-Cement Water Pipe, on July 2, 1965.

The committee concluded that an installation guide was desirable to advise pipe users of certain important requirements of the inspection, handling, installation, and field-testing of asbestos-cement pressure pipe. The committee submitted its final draft in 1963, and it received approval as tentative, AWWA C603-64T, on Jan. 27, 1964. It was advanced to standard without revision on Aug. 9, 1965, and designated as AWWA C603-65.

In 1968, the committee was reactivated as the Standards Committee on Asbestos–Cement Pipe to review and revise all AWWA standards on asbestos–cement pipe. The committee produced a revised standard designated as AWWA C400-72, Standard for Asbestos–Cement Pressure Pipe for Water and Other Liquids, which was approved on Jan. 31, 1972.

AWWA C401-64, Standard Practice for the Selection of Asbestos–Cement Water Pipe (originally designated AWWA Handbook H2), was first approved by the AWWA Board of Directors on Jan. 27, 1964. Although it described pipe sizes up to and including 36 in. (900 mm), the standard was primarily intended for use with asbestos-cement pipe in smaller distribution sizes (4 in. through 16 in. [100 mm through 400 mm]).

During 1972 and 1973, the committee was reorganized and enlarged to include representatives of national organizations interested in the scope of the committee and wanting to participate in the work. The reorganized committee reaffirmed AWWA C400-72 without revision so that it could be presented to the American National Standards Institute for designation as an American National Standard. The reaffirmed standard was published as AWWA C400-73 under the same title.

In 1975, the committee produced a revised standard designated AWWA C400-75, Standard for Asbestos–Cement Pressure Pipe, 4 In. Through 24 In., for Water and Other Liquids, which was approved on Jan. 26, 1975.

The asbestos-cement pipe manufacturers developed a new series of large pipe classifications designed to give greater freedom of selection to design engineers. This was of particular significance for large-diameter pipeline projects where the savings in material cost can exceed the increased cost resulting from more detailed design, better control of methods of installation, and provision of surge controls, when justified.

To provide the user with a ready reference and specification for this type of pipe, known as transmission pipe, the committee also produced the first edition of AWWA C402-75, Standard for Asbestos–Cement Transmission Pipe, 18 In. Through 42 In., for Water and Other Liquids, which was approved on Jan. 26, 1975.

The possibility of confusion between the two 1975 standards, AWWA C400 and AWWA C402, was carefully reviewed by the committee. The results were AWWA C402-77, which describes sizes 18 in. through 42 in. (450 mm through 1,050 mm), and AWWA C400-77, which describes sizes 4 in. through 16 in. (100 mm through 400 mm). There is now no overlap of sizes.

Consequently, it was desirable to revise AWWA C401-64 so that it would be compatible with AWWA C400-77 and to develop a new pipe selection standard to be compatible with AWWA C402-77. AWWA C401-77, Standard Practice for the Selection of Asbestos–Cement Distribution Pipe, 4 In. Through 16 In., for Water and Other Liquids, and ANSI/AWWA C403-78, Standard Practice for the Selection of Asbestos–Cement Transmission and Feeder Main Pipe, Sizes 18 In. Through 42 In., were approved in May 1977 and January 1978, respectively. The 1978 edition of ANSI/AWWA C403 was revised to include the three-edge, vee-shaped bearing method