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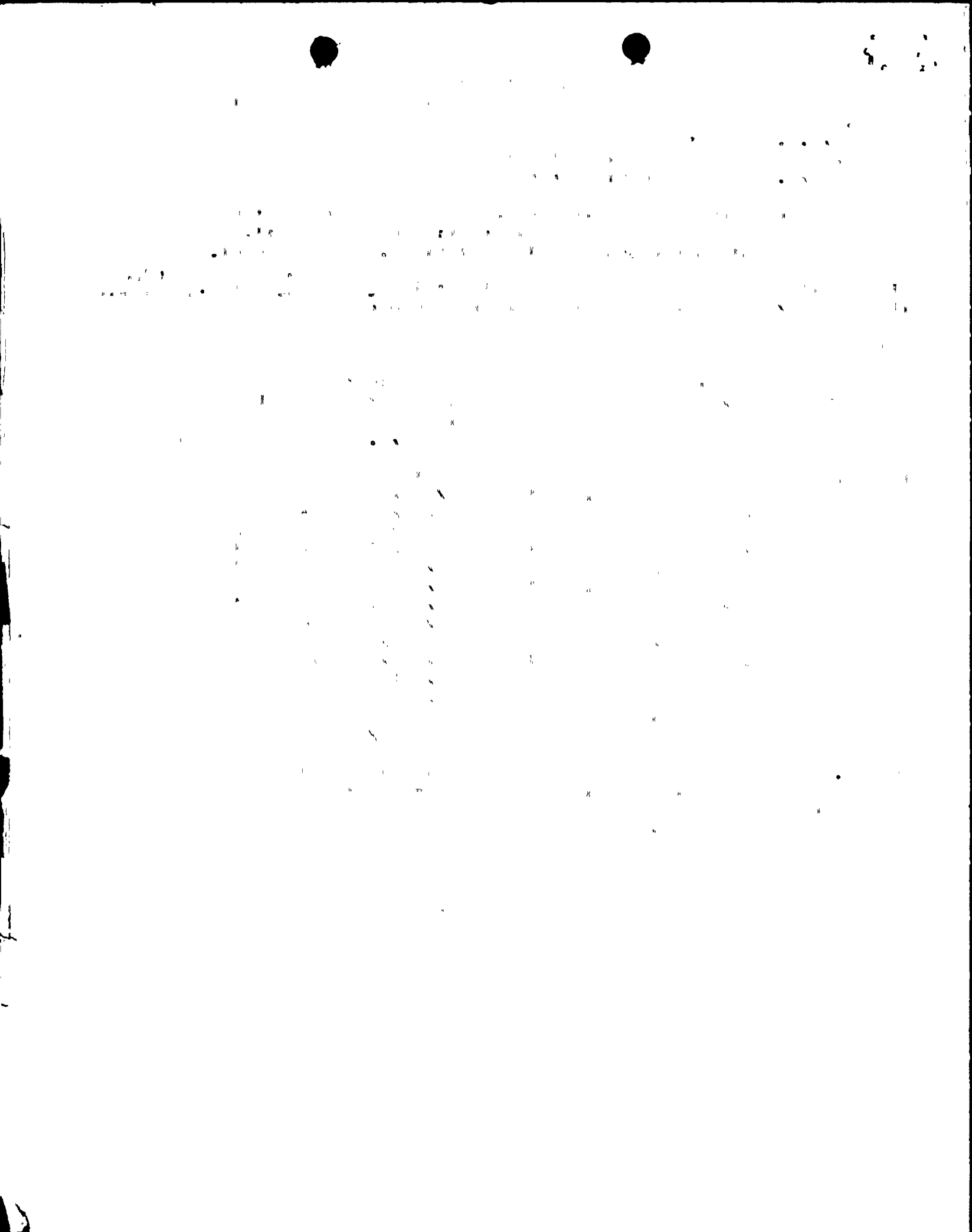
ACCESSION NBR: 8208020238 DOC. DATE: 82/07/08 NOTARIZED: NO DOCKET #  
 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397  
 AUTH. NAME AUTHOR AFFILIATION  
 BOUCHEY, G.D. Washington Public Power Supply System  
 RECIP. NAME RECIPIENT AFFILIATION  
 SCHWENCER, A. Licensing Branch 2

SUBJECT: Documents 820625 telcon concerning NRC approval for use of  
 ASME Code Case N-316 re alternative rules for fillet weld  
 dimensions for socket welded fittings. Case rept encl.

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NRR/DSI/CSB	09	1	1	NRR/DSI/ETSB	12	1	1
NRR/DSI/ICSB	16	1	1	NRR/DSI/PSB	19	1	1
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NRR/DST/LGB	33	1	1	REG FILE	04	1	1
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DMB/DSS (AMDTS)		1	1	FEMA-REP DIV	39	1	1
LPDR	03	1	1	NRC PDR	02	1	1
NSIC	05	1	1	NTIS		1	1



## Washington Public Power Supply System

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

July 8, 1982

G02-82-583

SS-L-02-PLP-82-047

Docket No. 50-397

Mr. A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

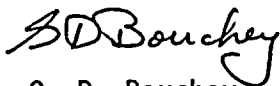
Dear Mr. Schwencer:

Subject: NUCLEAR PROJECT NO. 2  
USE OF ASME CODE CASE N-316, ALTERNATIVE  
RULES FOR FILLET WELD DIMENSIONS FOR  
SOCKET WELDED FITTINGS (ATTACHED)

This letter documents NRC approval of the subject code case as related by a phone conversation between Messrs. O. Smith (NRC) and T.A. Stanley (Supply System) on June 25, 1982. As discussed, the subject code case has been accepted by the NRC as written with no additional requirements other than those shown on the attached case report.

Per this understanding of approval, the Supply System will implement the code case on Nuclear Project No. 2.

Very truly yours,



G. D. Bouchey  
Deputy Director, Safety and Security

TAS/jca  
Attachment

cc: R Auluck - NRC  
WS Chin - BPA  
R Feil - NRC Site  
O Smith - NRC

*Boo!*



CASES OF ASME BOILER AND PRESSURE VESSEL CODE

*Meeting of September 4, 1981  
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*This Case shall expire on December 11, 1984  
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Case N-316

Alternative Rules for Fillet Weld Dimensions for Socket  
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Section III, Division 1, Class 1, 2, and 3

*Inquiry:* What alternative rules may be used for fillet  
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*Reply:* It is the opinion of the Committee that the  
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- (1)  $C_x \text{ min.} = 0.75 t_1$ ,  
but shall be a minimum of 1/8 in. for nominal pipe sizes  
greater than 1/2 in., where:  
 $t_1$  = minimum thickness of the socket wall as specified  
in ANSI B16.11.
- (2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  
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CASES OF ASME BOILER AND PRESSURE VESSEL CODE

*Meeting of September 4, 1981  
Approved by Council, December 11, 1981*

*This Case shall expire on December 11, 1981  
unless previously annulled or reaffirmed.*

Case N-316  
Alternative Rules for Fillet Weld Dimensions for Socket  
Welded Fittings  
Section III, Division I, Class 1, 2, and 3

*Inquiry:* What alternative rules may be used for fillet  
weld dimensions for Section III, Division 1, Class 1, 2,  
and 3 socket welded fittings?

*Reply:* It is the opinion of the Committee that the  
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imum welding dimensions for socket welded fittings  
shown in Fig. NB/NC/ND 4427-1 for Section III, Divi-  
sion 1, Class 1, 2, and 3 socket welded fittings:

(1)  $C_x \text{ min.} = 0.75 t_1$ ,  
but shall be a minimum of 1/8 in. for nominal pipe sizes  
greater than 1/2 in., where:

$t_1$  = minimum thickness of the socket wall as specified  
in ANSI B16.11.

(2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  
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but shall be a minimum of 1/8 in. for nominal pipe sizes  
greater than 1/2 in., where:

$t_1$  = minimum thickness of the socket wall as specified  
in ANSI B16.11.

(2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  
 $C'_3$  stress indices shall be taken as the larger of  $t/(C_x \text{ min.})$   
or 1.00 times the indices given in Table NB-3681(a).  
1. For Class 2 or 3 piping, the  $i$ -factor shall be taken as  
 $2.1t/(C_x \text{ min.})$ , but not less than 2.1.

(3) All other requirements of Section III, Division 1,  
for the applicable Class of construction shall be met.

(4) The Case number and the revision shall be indi-  
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CASES OF ASME BOILER AND PRESSURE VESSEL CODE

*Meeting of September 4, 1981  
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Case N-316

Alternative Rules for Fillet Weld Dimensions for Socket  
Welded Fittings

Section III, Division 1, Class 1, 2, and 3

*Inquiry:* What alternative rules may be used for fillet  
weld dimensions for Section III, Division 1, Class 1, 2,  
and 3 socket welded fittings?

*Reply:* It is the opinion of the Committee that the  
following rules may be used as an alternative to the min-  
imum welding dimensions for socket welded fittings  
shown in Fig. NB/NC/ND 4427-1 for Section III, Divi-  
sion 1, Class 1, 2, and 3 socket welded fittings:

(1)  $C_x \text{ min.} = 0.75 t_1$ ,  
but shall be a minimum of 1/8 in. for nominal pipe sizes  
greater than 1/2 in., where:

$t_1$  = minimum thickness of the socket wall as specified  
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(2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  
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Case N-316

Alternative Rules for Fillet Weld Dimensions for Socket  
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Section III, Division I, Class 1, 2, and 3

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Section III, Division 1, Class 1, 2, and 3

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Alternative Rules for Fillet Weld Dimensions for Socket  
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Section III, Division 1, Class 1, 2, and 3

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but shall be a minimum of 1/8 in. for nominal pipe sizes  
greater than 1/2 in., where:

$t_1$  = minimum thickness of the socket wall as specified  
in ANSI B16.11.

(2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  
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Case N-316

Alternative Rules for Fillet Weld Dimensions for Socket  
Welded Fittings

Section III, Division 1, Class 1, 2, and 3

*Inquiry:* What alternative rules may be used for fillet  
weld dimensions for Section III, Division 1, Class 1, 2,  
and 3 socket welded fittings?

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imum welding dimensions for socket welded fittings  
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sion 1, Class 1, 2, and 3 socket welded fittings:

(1)  $C_x \text{ min.} = 0.75 t_1$ ,  
but shall be a minimum of 1/8 in. for nominal pipe sizes  
greater than 1/2 in., where:

$t_1$  = minimum thickness of the socket wall as specified  
in ANSI B16.11.

(2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  
 $C'_3$  stress indices shall be taken as the larger of  $t/(C_x \text{ min.})$   
or 1.00 times the indices given in Table NB-3681(a).  
1. For Class 2 or 3 piping, the  $i$ -factor shall be taken as  
 $2.1t/(C_x \text{ min.})$ , but not less than 2.1.

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Case N-316  
Alternative Rules for Fillet Weld Dimensions for Socket  
Welded Fittings  
Section III, Division 1, Class 1, 2, and 3

*Inquiry:* What alternative rules may be used for fillet weld dimensions for Section III, Division 1, Class 1, 2, and 3 socket welded fittings?

*Reply:* It is the opinion of the Committee that the following rules may be used as an alternative to the minimum welding dimensions for socket welded fittings shown in Fig. NB/NC/ND 4427-1 for Section III, Division 1, Class 1, 2, and 3 socket welded fittings:

- (1)  $C_x \text{ min.} = 0.75 t_1$ ,  
but shall be a minimum of 1/8 in. for nominal pipe sizes greater than 1/2 in., where:  
 $t_1$  = minimum thickness of the socket wall as specified in ANSI B16.11.
- (2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  $C'_3$  stress indices shall be taken as the larger of  $t/(C_x \text{ min.})$  or 1.00 times the indices given in Table NB-3681(a)-1. For Class 2 or 3 piping, the  $i$ -factor shall be taken as  $2.1t/C_x \text{ min.}$ , but not less than 2.1.
- (3) All other requirements of Section III, Division 1, for the applicable Class of construction shall be met.
- (4) The Case number and the revision shall be indicated on the appropriate Data Report Form.

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Case N-316  
Alternative Rules for Fillet Weld Dimensions for Socket  
Welded Fittings  
Section III, Division I, Class 1, 2, and 3

*Inquiry:* What alternative rules may be used for fillet  
weld dimensions for Section III, Division I, Class 1, 2,  
and 3 socket welded fittings?

*Reply:* It is the opinion of the Committee that the  
following rules may be used as an alternative to the min-  
imum welding dimensions for socket welded fittings  
shown in Fig. NB/NC/ND 4427-1 for Section III, Divi-  
sion I, Class 1, 2, and 3 socket welded fittings:

(1)  $C_x \text{ min.} = 0.75 t_1$ ,  
but shall be a minimum of 1/8 in. for nominal pipe sizes  
greater than 1/2 in., where:

$t_1$  = minimum thickness of the socket wall as specified  
in ANSI B16.11.

(2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  
 $C'_3$  stress indices shall be taken as the larger of  $t/(C_x \text{ min.})$  or 1.00 times the indices given in Table NB-3681(a)-  
1. For Class 2 or 3 piping, the  $i$ -factor shall be taken as  
 $2.1t/(C_x \text{ min.})$ , but not less than 2.1.

(3) All other requirements of Section III, Division I,  
for the applicable Class of construction shall be met.

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Case N-316

Alternative Rules for Fillet Weld Dimensions for Socket  
Welded Fittings

Section III, Division 1, Class 1, 2, and 3

*Inquiry:* What alternative rules may be used for fillet  
weld dimensions for Section III, Division 1, Class 1, 2,  
and 3 socket welded fittings?

*Reply:* It is the opinion of the Committee that the  
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(1)  $C_x \text{ min.} = 0.75 t_1$ ,  
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greater than 1/2 in., where:

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(2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  
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or 1.00 times the indices given in Table NB-3681(a)-  
1. For Class 2 or 3 piping, the  $i$ -factor shall be taken as  
 $2.1t/C_x \text{ min.}$ , but not less than 2.1.

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Case N-316

Alternative Rules for Fillet Weld Dimensions for Socket  
Welded Fittings

Section III, Division I, Class 1, 2, and 3

*Inquiry:* What alternative rules may be used for fillet  
weld dimensions for Section III, Division 1, Class 1, 2,  
and 3 socket welded fittings?

*Reply:* It is the opinion of the Committee that the  
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(2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  
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Alternative Rules for Fillet Weld Dimensions for Socket  
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Section III, Division 1, Class 1, 2, and 3

*Inquiry:* What alternative rules may be used for fillet  
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Section III, Division I, Class 1, 2, and 3

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Case N-316

Alternative Rules for Fillet Weld Dimensions for Socket  
Welded Fittings

Section III, Division I, Class 1, 2, and 3

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- (2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  
 $C'_3$  stress indices shall be taken as the larger of  $t_i(C_x$   
min.) or 1.00 times the indices given in Table NB-3681(a).  
1. For Class 2 or 3 piping, the  $i$ -factor shall be taken as  
 $2.1t/C_x \text{ min.}$ , but not less than 2.1.
- (3) All other requirements of Section III, Division 1,  
for the applicable Class of construction shall be met.
- (4) The Case number and the revision shall be indi-  
cated on the appropriate Data Report Form.

2000  
1000  
500  
250  
125  
62.5  
31.25  
15.625  
7.8125  
3.90625  
1.953125  
0.9765625  
0.48828125  
0.244140625  
0.1220703125  
0.06103515625  
0.030517578125  
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0.000476837158203125  
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0.

CASES OF ASME BOILER AND PRESSURE VESSEL CODE

*Meeting of September 4, 1981  
Approved by Council, December 11, 1981*

*This Case shall expire on December 11, 1984  
unless previously annulled or reaffirmed.*

Case N-316

Alternative Rules for Fillet Weld Dimensions for Socket  
Welded Fittings

Section III, Division 1, Class 1, 2, and 3

*Inquiry:* What alternative rules may be used for fillet  
weld dimensions for Section III, Division 1, Class 1, 2,  
and 3 socket welded fittings?

*Reply:* It is the opinion of the Committee that the  
following rules may be used as an alternative to the min-  
imum welding dimensions for socket welded fittings  
shown in Fig. NB/NC/ND 4427-1 for Section III, Divi-  
sion 1, Class 1, 2, and 3 socket welded fittings:

(1)  $C_x \text{ min.} = 0.75 t_1$ ,  
but shall be a minimum of 1/8 in. for nominal pipe sizes  
greater than 1/2 in., where:

$t_1$  = minimum thickness of the socket wall as specified  
in ANSI B16.11.

(2) For Class 1 piping, the  $B_1$ ,  $B_2$ ,  $C_1$ ,  $C_2$ ,  $C_3$ , and  
 $C'_3$  stress indices shall be taken as the larger of  $t/(C_x \text{ min.})$  or 1.00 times the indices given in Table NB-3681(a).  
1. For Class 2 or 3 piping, the  $i$ -factor shall be taken as  
 $2.1t/(C_x \text{ min.})$ , but not less than 2.1.

(3) All other requirements of Section III, Division 1,  
for the applicable Class of construction shall be met.

(4) The Case number and the revision shall be indi-  
cated on the appropriate Data Report Form.

