TITLE:
INSTALLATION INSTRUCTIONS FOR ANVIL FRICTION ANCHORS
FIG. EL109N, EL110LN, EL110N, AND EL110HN

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ANVIL FRICTION ANCHORS
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TABLE OF CONTENTS

TITLE:

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1.0 SCOPE

1.1 This procedure details the method for installing Anvil's Fig. EL109N, EL110LN, EL110N, and EL110HN Friction Anchors. It is intended for use at nuclear power stations constructed to the rules of the ASME Boiler and Pressure Vessel Code, Section III-NF; ANSI B31.1 Power Piping; and USAS B31.7 Nuclear Power Piping.

1.2 All welding must be performed by qualified welders using appropriate qualified welding procedures. See Paragraph 1.3 for applicable material specifications to determine proper procedures.

1.3 Material Specifications:

Carbon Steel: SA-36
SA-515 GR 65-70 (.3 Carbon Max)
SA-516 GR 65-70 (.3 Carbon Max)

Stainless Steel: SA-240 Type 304

2.0 MATERIAL CHECK

2.1 Insure that each assembly includes -

2.1.1 For Fig. EL109N:

- Top half
- Bottom half with welded "tee"
- Studs (4)
- Nuts (8)
- Washers (8)

TITLE:

INSTALLATION INSTRUCTIONS FOR ANVIL FRICTION ANCHORS FIG. EL109N, EL110LN, EL110N, AND EL110HN

2.1.2 For Fig. EL110LN:

- Top half with unthreaded holes
- Bottom half with tapped holes
- Studs (2)
- Nuts (2)
- Washers (2)

2.1.3 For Fig. EL110N:

- Top half with unthreaded holes
- Bottom half with tapped holes
- Studs (4)
- Nuts (4)
- Washers (4)

2.1.4 For Fig. EL110HN:

- Top half with unthreaded holes
- Bottom half with tapped holes
- Studs (6)
- Nuts (6)
- Washers (6)

2.2 The bottom half of each assembly is marked on one face with Figure Number, Size, and Material (carbon steel [C.S.] or stainless steel [S.S.]).

2.3 Top halves of the same size and material are interchangeable and do not have a matched orientation.

2.4 Friction Anchors should be stored and handled in accordance with ANSI N45.2.2 Level C.

TITLE:

INSTALLATION INSTRUCTIONS FOR ANVIL FRICTION ANCHORS FIG. EL109N, EL110LN, EL110N, AND EL110HN

3.0 INSTALLATION

3.1 Place bottom half of anchor at support point.

3.2 Weld bottom half to support structure using appropriate weld size and procedure. If supporting structure is not flat, sequence weld to minimize distortion. Allow bottom half to cool after welding.

3.3 Align top half with bottom half. Insure that the top and bottom are the same size and material type.

3.4 Install studs.

3.4.1 Fig. EL109N studs go through the top half and bottom half.

3.4.2 Fig. EL110N and EL110HN studs go through the top half and are threaded into the bottom half (1" min. engagement).

3.4.3 Fig. EL110LN studs go through the top half and are fully threaded into the bottom half.

3.5 Install washers and nuts. Do not lubricate threads.

3.6 Insure nuts are uniformly snug tight and are completely engaged. Insure that there is a uniform gap between the top half and bottom half of the anchor.

3.7 Tighten nuts (top nuts for Fig. EL109N) in 1/3 increments using torquing sequence outlined in Figure 1.

3.7.1 Field installation tolerances plus calibration tolerance should not exceed +/-25%.

3.7.2 Lock wire is not required as torque values will insure a preload adequate for a locking device.

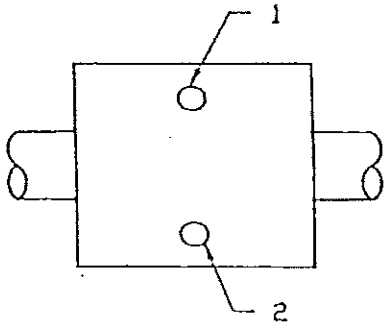
TITLE:

INSTALLATION INSTRUCTIONS FOR ANVIL FRICTION ANCHORS FIG. EL109N, EL110LN, EL110N, AND EL110HN

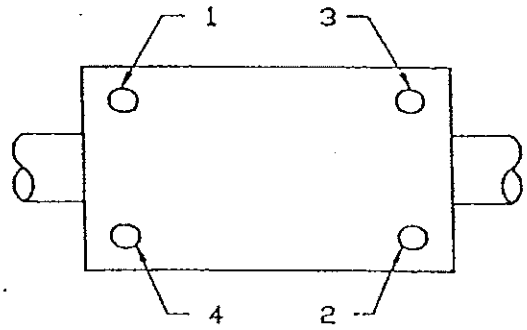
FIGURE 1

PIPE SIZE	TUBE SIZE	STUD SIZE	NUT TORQUE (IN-LBS)
1/2 & 3/4	1/4 - 1/2	3/8	300
1 - 2	3/4 - 1 1/2	1/2	750

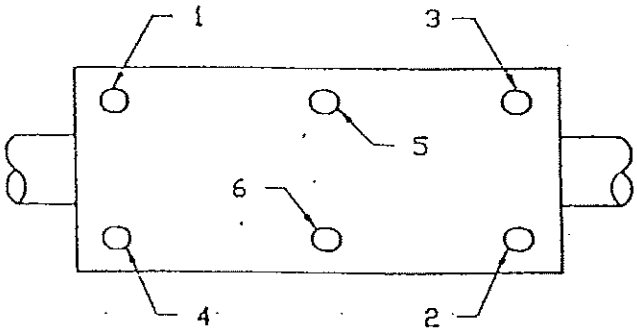
TORQUE SEQUENCE



EL110LN



EL109N & EL110N



EL110HN