

# AAA TECHNOLOGY & SPECIALTIES CO., INC.

## FIG. 320 THREADED SWAY STRUT ASSEMBLY WITH FIELD WELDED EXTENSION PIECE (ALTERNATE DESIGN) (continued)

**APPLICATION:** Threaded Sway Strut Assemblies are used in power plant and process plants of all types to restrain movement of piping in one direction while allowing for movement lateral to the axis of the sway strut. A Threaded Sway Strut with a Field Welded Extension Piece allows for maximum adjustment of the length in the field at the time of installation. The Extension Piece can be shipped without one threaded end piece welded to the pipe. The "W" length can be determined in the field, the pipe cut to the desired length and the threaded end piece welded to the pipe. See the installation instructions below for assistance in determining the required sway strut fit-up length.

**APPLICABLE CODES AND STANDARDS:** Threaded Sway Struts are manufactured in accordance with the requirements of the U.S. Government and the power and process industries. These include the Federal Specification WW-H-171E, Manufacturers Standardization Society MSS-SP-58, ASME B31.1, B31.3 and B31.5 piping codes.

### FEATURES:

- Handles both compressive and tensile loads
- Requires minimal maintenance
- Provides maximum field adjustment (plus or minus)
- Provides for + or - 5 ° combined angular rotation and misalignment
- Field adjustment accomplished by rotating the extension piece in one direction to shorten the assembly and in the other direction to lengthen the assembly. Once the desired length is achieved, the lock nut is to be locked to eliminate further length changes resulting from vibration, etc.

### SELECTING THE CORRECT SIZE SWAY STRUT

1. Given the tension load, go to the load and dimension table on the threaded sway strut assembly data sheet. Select the sway strut that has a load rating equal to or slightly larger than the design tension and compression load.
2. Determine the required C - C dimension. If the unit being specified is option 1, subtract the "A" dimension from the total length to determine the C - C length. If the unit being specified is option 2, subtract two times the "A" dimension from the total length to determine the C - C length. If the unit being specified is option 3, subtract the "A" dimension for the rear bracket and the "K" dimension for the clamp from the total length to determine the C - C length.
3. Given the desired C - C dimension, verify that the C - C dimension for the selected sway strut is equal to or greater than the minimum C - C and less than or equal to the maximum C - C shown in the tables.

**CONSTRUCTION:** A-36 Carbon Steel, Special materials available on request.

**FINISHES AVAILABLE:** Carbon Steel - Black, Painted or Hot Dip Galvanized. Stainless Steel - Plain (Special)

**ORDERING:** Specify figure number (Fig. 320), name (Threaded Sway Strut with Field Welded Extension Piece), sway strut size (A, B, C and 1 thru 8), desired "C-C" dimension, design compression and tension loads, option number (1, 2 or 3), pipe diameter, if applicable, material, if other than carbon steel, and finish.

**EXAMPLE:** Fig. 320 Threaded Sway Strut with Field Welded Extension Piece, Size 2, C-C = 6'-0", Design Compression and Tension Load = 9,000 lbs, Option #3, 6" Pipe Dia., HDG.

### INSTALLATION:

1. Weld rear bracket to the structure,
2. Install strut clamp around pipe for option 3 or weld rear bracket to other member for option 2,
3. Insert rod ends into the extension piece on one end and turn the rod end until half of the threads have gone into the extension piece. Then insert the other rod end into the loose threaded piece and turn the rod end until half of the threads have gone into the threaded piece.
4. Attach one rod end to the rear bracket and the other to the strut clamp or rear bracket, as applicable,
5. Align the strut so that the components between the pinned connections form a near straight line. Then mark the length at which the extension piece is to be cut. Once it is cut, then weld the threaded piece to the extension piece.
6. Then align the strut so that the components between the pinned connections form a straight line and rotate the extension piece until the components of the strut are snug.
7. Tighten the lock nut.