SYPRIS®
TECHNOLOGIES
Tube Turns Division
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PROCEDURE FOR FIELD INSTALLATION REPLACEMENT OF PRESSURE WARNING DEVICE LUGS

1.0 SCOPE - This procedure describes the steps necessary to install replacement PWD lugs on the face of the yoke on a yoke type closure.

It is a procedure which involves "hot work" processes (defined as producing an open flame, sparks and heat) in the immediate area of the closure and include welding and, possibility grinding. Therefore, all safety practices appropriate to the specific location should be followed rigorously. The components to be welded are P1 carbon steel. The SMAW or FCAW welding processes are recommended.

If the closure has had the ASME Section VIII, Division 1 Code Stamp applied, and it is desired to maintain the Stamp, all of the activities described must be reviewed and witnessed by an ASME Authorized Inspector. Depending on the jurisdiction involved, the Inspector may also be required to be certified by the National Board of Boiler and Pressure Vessel Inspectors.

2.0 PROCEDURE

2.1 Close the closure and tighten yoke bolts to recommended torque (See Table 1). The gaps between the yoke ends, top and bottom, should be equal (within 1/16"). Remove the bleeder plugs.

2.2 Grind off any existing welds remaining from the broken lugs. The face of yoke should be smooth and flat.

2.2 Align the PWD lugs as shown in Figure 1 with the beveled ends on the yoke. Weld the lugs to the yokes with a fillet weld as shown below.

CLOSURE SIZE	FILLET WELD SIZE
6" THRU 18"	3/16"
20" THRU 42"	1/4"

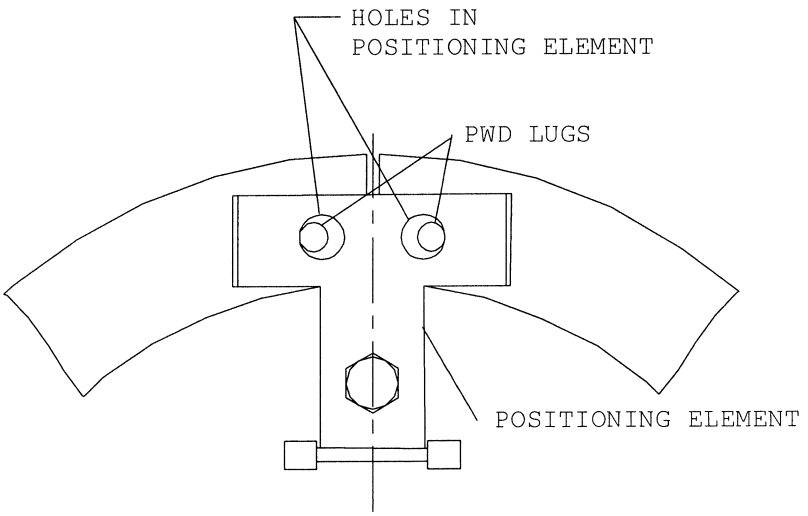

FIGURE 1

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2.3 Check the condition of the gasket in the Bleeder Plug. Replace if required.

2.4 Install the Bleeder Plug on the Nipple and tighten as shown below. DO NOT OVERTIGHTEN!

MAJOR DIAMETER OF NIPPLE THREAD (IN.)	MAXIMUM TORQUE (FT-POUNDS)
5/8	10-15
7/8	20-25

The Pressure Warning Device should be ready for service.

Table 1

RECOMMENDED MINIMUM BOLT TORQUE FOR OPERATING CONDITIONS

	Class 150		Class 300		Class 600		Class 900		Class 1500	
Closure Nominal Diameter	Bolt Dia.	Torque (ft-lbs)	Bolt Dia.	Torque (ft-lbs)	Bolt Dia.	Torque (ft-lbs)	Bolt Dia.	Torque (ft-lbs)	Bolt Dia.	Torque (ft-lbs)
8"	5/8"	30	5/8"	30	5/8"	30	3/4"	40	1"	50
10"	3/4"	40	3/4"	40	3/4"	40	1"	50	1 1/8"	90
12"	3/4"	40	3/4"	40	1"	50	1 1/8"	55	1 1/4"	110
14"	3/4"	40	3/4"	40	1"	50	1 1/4"	60	1 1/2"	120
16"	7/8"	45	7/8"	45	1 1/8"	55	1 1/2"	70	1 1/2"	160
18"	7/8"	45	7/8"	45	1 1/4"	60	1 1/2"	80	1 3/4"	250
20"	7/8"	45	1"	50	1 1/2"	80	1 3/4"	100	2"	340
22"	7/8"	45	1 1/8"	55	1 1/2"	80	1 3/4"	120	2"	410
24"	7/8"	45	1 1/4"	60	1 3/4"	100	2"	150	2 1/4"	550
26"	1"	50	1 1/4"	60	1 3/4"	100	2"	170	2 1/2"	700
28"	1"	50	1 1/2"	80	1 3/4"	100	2 1/4"	220	2 1/2"	810
30"	1"	50	1 1/2"	80	2"	140	2 1/4"	260		
32"	1 1/8"	55	1 1/2"	80	2"	140	2 1/2"	320		
34"	1 1/8"	55	1 3/4"	125	2 1/4"	160	2 3/4"	400		
36"	1 1/8"	55	1 3/4"	125	2 1/4"	160	3"	510		
38"	1 1/4"	60	1 3/4"	125	2 1/2"	200	3"	530		
40"	1 1/4"	60	2"	150	2 1/2"	200	3 1/4"	630		
42"	1 1/4"	60	2"	150	2 3/4"	270	3 1/4"	670		

WRITTEN BY E C [signature] DATE 1/31/08

REVIEWED BY E K [signature] DATE 1/31/08