



INTER-OFFICE LETTER

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MR. L. STURZENBERGER	NEW YORK	(B)		19R CONDENSER PURGE BAFFLE	
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Background - From approximately 9/62 until 1/68 the purge baffle sealing strip used on 19R condensers was constructed as in Figure 1 below. Experience has shown that it is possible for the purge baffle to flex and warp enough to shear the 1/4" bolts holding the assembly together. These sheared bolts usually end up in the condenser float valve chamber. Several problems may result from the broken bolts:

- 1) The bolts may jam the float valve open leading to machine hunting and other problems.
- 2) Vibration of a loose back up bar may cause noise in the condenser.
- 3) Sheared bolts and nuts may lodge between tubes leading to tube leaks.

*Modified*  
 Condensers serial number 11141 and higher have an improved sealing strip arrangement. The neoprene strip is now bolted with 3/8 high strength bolts to a perpendicular support bar that stiffens the purge baffle. This arrangement is shown in Figure 2.

Field procedure - on condensers with purge baffle as in Figure 1.

- Planned maintenance machines
- Other machines suspected of having jammed float valves.

Remove the float box cover. If bolts are found in the float box remove them and operate the machine.

Condenser with tube leak on outside of tube due to mechanical wear.

Condenser with noise problem

If the noise level is no longer acceptable or there is a tube leak in the area where a sheared bolt or nut might fall, the sealing strip assembly must be repaired.

Repair procedure - Cut a narrow circumferential slot from the top of the shell down around the shell toward the discharge side to locate the purge baffle. Then cut out two horizontal sections extending approximately 6" above and below the baffle. See Figure 3. Leave one circumferential strip intact to prevent the shell from going out of round. NOTE: Condenser water must be flowing while the shell is being cut to prevent tube damage.

Slot a 2" angle iron so that it will fit around the support sheets then tack weld it to the support sheet and to the purge baffle, Figure 4. The angle iron running the full length of the purge baffle dampens the vibration of the baffle. It is this vibration that leads to the fatigue failures of Figure 1 sealing arrangement.

Use 3/8" high strength bolts rather than the standard 1/4" bolts to hold the cloth inserted neoprene sealing strip to the baffle. The nut must be locked to the bolts. Several methods have been used including Loctite, double nuts, oval nuts and disturbing the threads. Loctite and disturbing the threads are suggested. Repair the shell using ASME techniques.

*Alan Johnson*

AJ/lue

Attachments

FILE INSTRUCTIONS: COOLER-CONDENSER-ECONOMIZER

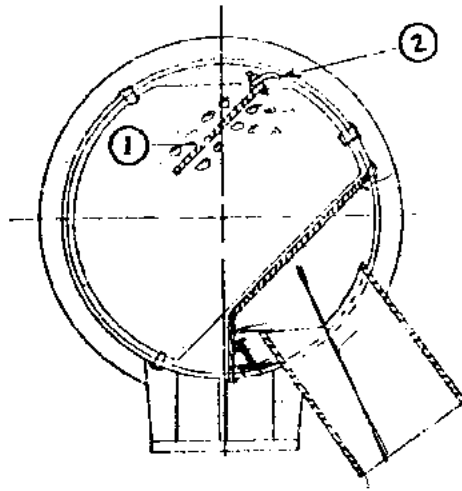


FIGURE 1

*Splitts trace  
wheel book  
Leaving Machine  
Component Solving.*

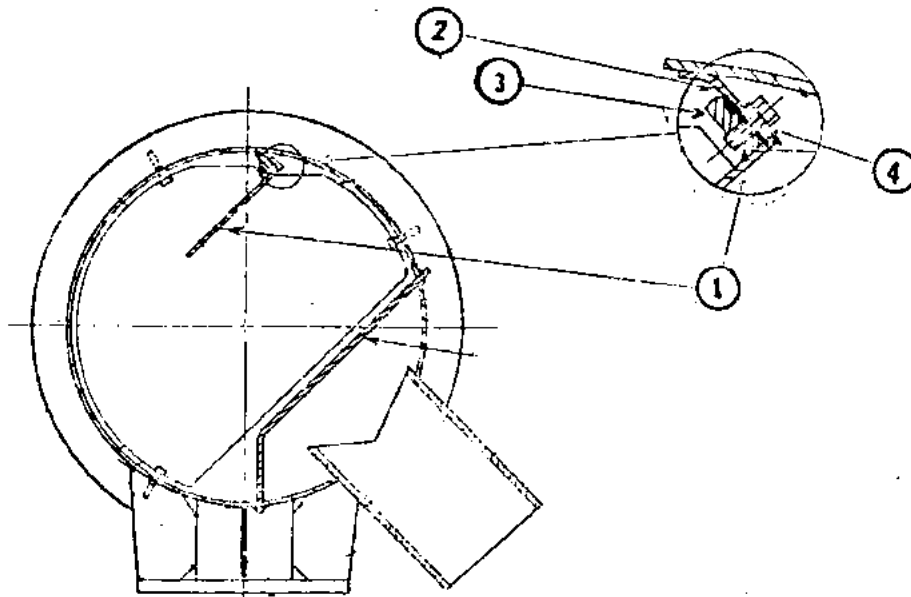


FIGURE 2

1. Purge baffle 12GA (.105") HRS
2. Cloth inserted neoprene sealing strip
3. Purge baffle support bar - 1/2" HRS
4. Clamping strip 3/16" HRS

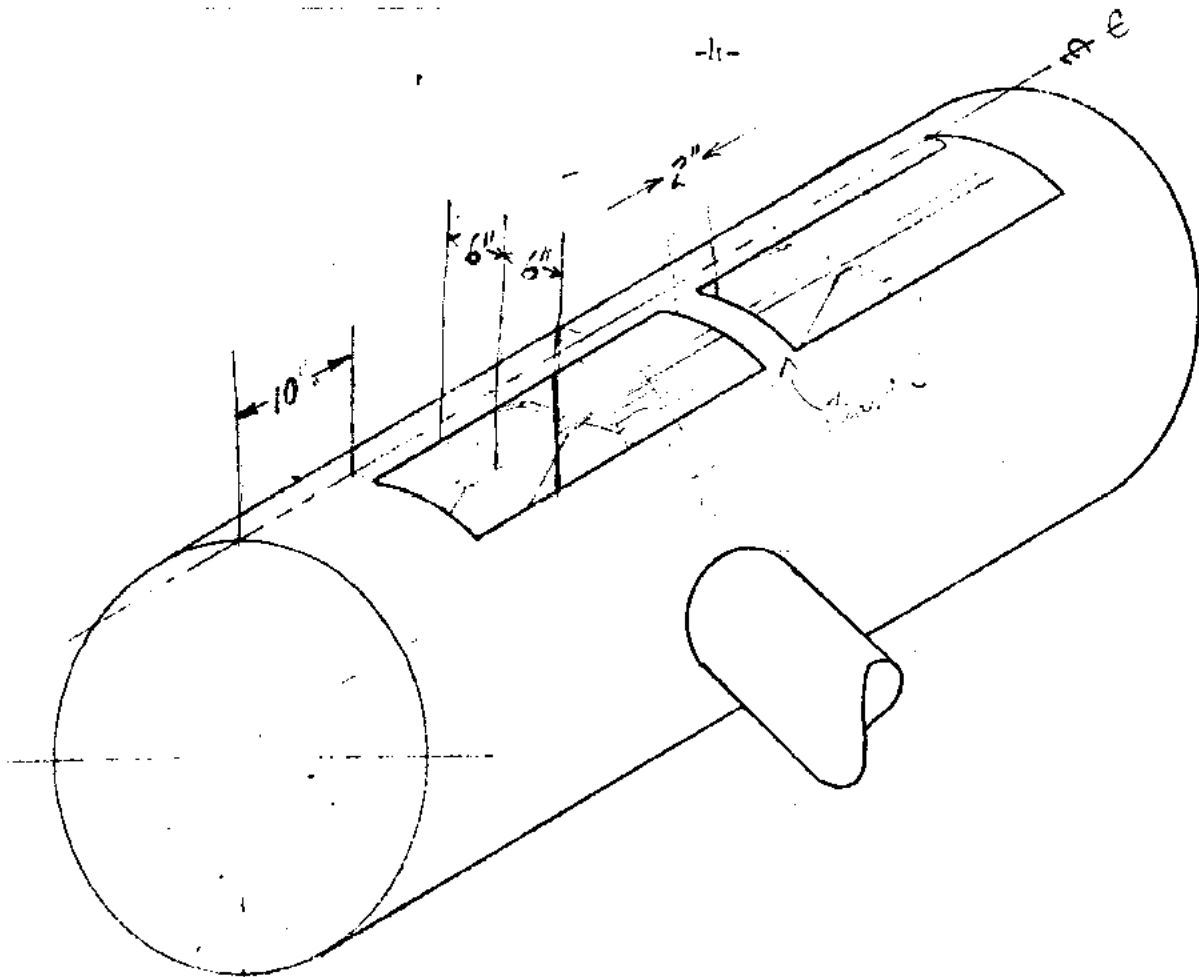


FIGURE 3  
SHELL CUTTING DETAILS

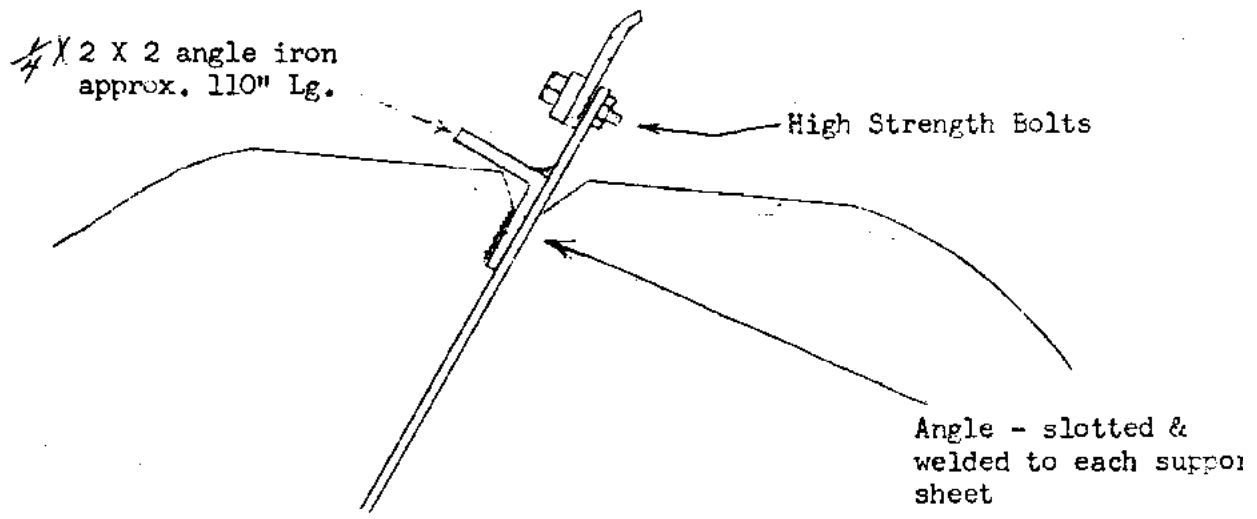


FIGURE 4  
MODIFIED BAFFLE ASSEMBLY