



FIGURE 8

3. FIGURE (8) ILLUSTRATES THE USE OF A CONDENSATION PUMP AS A MECHANICAL LIFT IN ANY TYPE OF VACUUM HEATING SYSTEM. IT MEETS CONDITIONS THAT ARE ENCOUNTERED WHERE THE RETURN LINES FROM A SECTION OF THE SYSTEM ARE BELOW THE VACUUM HEATING PUMP RECEIVER INLET. NOTE THAT THE SOLE FUNCTION OF THE CONDENSATION PUMP IS TO RAISE THE CONDENSATE FROM THE LOW SECTION AND THAT THIS IS DONE WITHOUT IN ANY WAY REDUCING THE CAPACITY OF THE VACUUM HEATING PUMP. THE LOW SECTION OF THE SYSTEM IS STILL UNDER THE SAME VACUUM RETURN CONDITION AS THE REST OF THE SYSTEM. THIS IS ACCOMPLISHED BY CONNECTING THE VENT OUTLET OF THE CONDENSATION PUMP TO A RETURN LINE LOCATED ABOVE THE VACUUM HEATING PUMP. THIS SAME RETURN LINE ALSO RECEIVES THE WATER DELIVERED BY THE CONDENSATION PUMP. SHOULD THE CONDENSATION PUMP BE CONVENIENTLY LOCATED WITH RESPECT TO THE BOILER, IT IS PREFERABLE TO DISCHARGE THE WATER DIRECTLY TO THE BOILER. THIS AVOIDS HANDLING THE CONDENSATE BY BOTH PUMPS.

PROPOSED LIFT PUMP ARRANGEMENT

