

"Vacuum systems of heating can be tested for leaks in piping by application of soap-suds.

"No alteration in run of pipes, additions, or changes in size to be made without consent of Master Mechanic.

"All flanged joints on steam and air piping to be made up with sheet packing equal to H. J. M. Co.'s 'Permanite' or A. P. Co.'s H.P., style No. 425 make. All flanged joints on exhaust steam and water piping must be made up with sheet 'Rainbow' rubber.

"Any trouble with apparatus that cannot be handled by local men must be reported to General Master Mechanic.

"Locomotive Foreman is held responsible for the economical working of the plant and any abuse that it may receive."

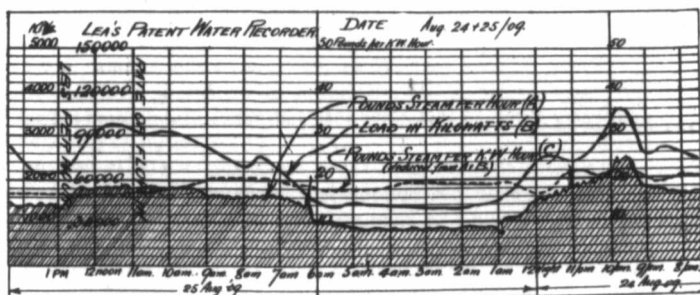


Fig. 7

The closed exhaust or blow-off system is now being tested in four of the Railway's roundhouses as an adjunct to improve power plant economy as well as reduce the time taken in locomotive roundhouse maintenance. It consists in having the roundhouse piped to admit of the heat in the steam and water from locomotive which is to be washed out being made use of for heating the fresh water supply used for washing out and filling. This blow-off piping is connected to a large closed tank placed at a convenient point in the house. Steam and water from the locomotive being blown off is passed through a set of tubes giving off their heat to the fresh water supply circulating in the body of the tank about the tubes. By this means it is possible to blow-off, wash out, fill up, and have a working head of steam on in about two hours without subjecting boiler plates, etc., to any detrimental changes of temperature. The heat saved in this way makes a considerable difference in the coal supplied to roundhouse boilers, as, without the system, a considerably larger quantity of live steam is required. The saving made for each locomotive