

THE OPERATION OF DISTILLING PLANTS

The quantity of fresh water used for domestic purposes has been steadily increasing during recent years and when ships are at sea for long periods the amount of fresh water used for make up feed also increases. During the war it has generally not been possible to obtain shore water for domestic use and it has therefore been necessary for the whole of the distilling plant in H.M. ships to be almost constantly in use. Particular attention has therefore been given to the best way of operating the plant so that the intervals between laying up, etc., could be extended without the output falling below that necessary to meet the above requirements. The addition of starch and boiler compound to the evaporator feed have proved beneficial in retarding the formation of scale and rendering it more easily removable by the daily blowing down. Investigations are in hand as to whether a more effective compound can be found for this purpose.

With the distilling plants fitted in H.M. ships it has rarely been possible to accept the reduced output obtained when working compound effect and the slight increase in fuel consumption when working single effect has had to be accepted. A procedure for operating evaporators on single effect with a uniform output of about two-thirds of the maximum output has been adapted in some ships. For a steady output of fresh water made, provided the density of the brine remains constant, the weight of steam condensed in the coils will be constant. The amount of opening of the coil steam valve to pass this quantity of steam will always be the same if the boiler pressure remains constant and also the correct setting of the coil drain valve will always be the same for this steady output. The pressure of the steam in the coils will increase as the coils become dirty until it reaches the maximum working pressure when it will become necessary to clean the coils or accept a lower output. By always operating the plant at a uniform output the likelihood of priming is reduced and the correct opening of all valves can be found by trial and adhered to. This method of operating is discussed in B.R. 1333 which is shortly to be issued to all ships.