



NOTES FROM SEA

The following are extracts from letters received from Engineer Officers of sea-going ships, together with remarks by the Engineer-in-Chief's Department where appropriate.

Bilges—H.M.S. "Gambia." "The bilge paintwork (and the inner bottom) would be much easier to preserve and maintain if the old idea of a 'dirty bilge' were re-introduced.

This consists of a separate open tank built into the bilge (which can easily be renewed) and into which all bilge drains run.

Examples of these are :—

Evaporating coil drain ; carbon gland drains (auxiliary machinery), rain catchment drains ; leaks from pump glands ; gauge glass drains ; evaporator brine (when de-scaling) ; condenser drains from surface side ; air escapes.

Some of these, especially those from carbon glands and evaporator brine, are damaging to the paintwork."

Remarks. This major housekeeping problem is appreciated and the Engineer-in-Chief's Department has been pressing for some time for some form of "dirty bilge."

It has now been approved to fit bilge tanks when ships come in hand for large repairs and to provide small sump pumps for dealing with sea water.

Domestic Refrigerators and Water Coolers—Maintenance Difficulties. Several ships report the difficulty experienced in maintaining their machines because of the many different types fitted and because the commercial models fitted are insufficiently robust for use in H.M. ships.

This difficulty is well understood and it is intended to standardize on the absorption type for domestic refrigerators and the sealed unit type for other small refrigerating machinery. This will make mechanical maintenance unnecessary. An A.F.O. will be issued when the policy has been settled.

Air Compressors for Laundries. Reports have been received of the overburdening of the ship's L.P. air compressor in supplying air to the laundry and of the need for a separate compressor for this duty.

This need has been appreciated for some time. New construction laundries will be fitted with their own compressors. For existing ships, the requirement will be considered on its merits and the supply of a compressor will depend on availability, space, weight, etc.

Turbo Feed Pumps. Troubles have been experienced in some ships with this type of pump due to such causes as vibration, excessive gland leakage and unsatisfactory axial clearances.

It is hoped to publish in the *Journal* shortly some notes on Refitting Instructions for these pumps, based on the experience gained at H.M. Dockyard, Rosyth.

Feed Regulator Floats—H.M.S. "Devonshire." "A fairly severe case of priming was traced to a feed regulator float containing 5 lb 11 oz of water." This was the result of a welding failure.

It is recommended that these floats should be checked periodically when boxes are open, particularly in the older ships.

Analysis of Departmental Work—H.M.S. "Glory." "Since completion of Dockyard refit, 19th October, 1949, until 30th June, 1950, the Artificers and Mechanics have worked a total of 31,806 man-hours. This work broken down into sub-departments and expressed as a percentage as follows:—

Watchkeeping at sea	...	...	...	...	...	...	19
Main Engines, chiefly keeping feed water in its place, <i>i.e.</i> , leaks and refitting pumps	...	...	...	...	...	...	14
Boiler Rooms. Includes complete refit of two feed pumps and one fire and bilge pump	...	...	...	...	...	...	12
Boats...	...	...	...	...	...	...	11
D.Bs. and Damage Control	...	...	...	...	...	...	7
Barrier and Arrester Gear	...	...	...	...	...	...	5.5
Catapult	...	...	...	...	...	...	5
Evaporators	...	...	...	...	...	...	4
H.P. Air Compressors. Includes complete refit of one machine	...	...	...	...	...	...	3.5
Air Conditioning Plants	...	...	...	...	...	...	3
Water Coolers	...	...	...	...	...	...	2.5
Miscellaneous. Water Meter Trial, Telegraphs stabilisers, etc.	...	...	...	...	...	...	1.8
Sirens	...	...	...	...	...	...	1.6
L.P. Air Compressors and System	...	...	...	...	...	...	1.4
Domestic Automatic Refrigerators	...	...	...	...	...	...	1.3
Steering Gear	...	...	...	...	...	...	1.3
Main Refrigerating Machinery	...	...	...	...	...	...	1.2
Diesel Driven Generators	...	...	...	...	...	...	1.2
Galleys	...	...	...	...	...	...	1.1
Laundry	...	...	...	...	...	...	1.0
Heating Steam, F.W. Pumps and Systems	...	...	...	...	...	...	0.8
Turbo-Driven Generators	...	...	...	...	...	...	0.8

This averages out to about 5 hours' work per day for all Artificers and Mechanics, taking no account of Sundays, holidays, etc. It can be seen

that, despite using L.S.Ms. and S.Ms. on the throttles at sea, watchkeeping is the greatest factor to be considered. In fact, the less ships do at sea the more they can be maintained, not because of wear and tear of machinery but the number of man-hours lost by the skilled ratings. Another point that is considered important is that, when ships are not at sea, they should be alongside as much as possible rather than at buoys or anchored. The reason for this is that there are so few boats—one per 300 men—that few go ashore. This means more electrical power for the galleys, lighting, fans, more water consumed, and a snowball builds up which means more work for the Engine Room Department—apart from this wear and tear on boats—ratings do not take their proper recreation and become stale.

The 10.5% attributed to the Flight Deck includes the time spent on deck during flying and is no reflection on the efficiency of the simple effective machinery.”

Remarks. The analysis given in this Report is most interesting and forms a good guide as to the time spent on maintenance. Similar reports will be welcomed at Headquarters.

Evaporators, Use of Belloid—H.M.S. “Kenya.” “We should be interested to know if there is any further news of Belloid T.D. (*Journal of Naval Engineering* Vol. 3, pp. 232-234). Starch injection helps but we need something better.”

Remarks. A.F.O. 3264/50 gives details of the new type Compound and instructions for its use.