

## CORRESPONDENCE

SIR,

### Internal Combustion Piston Engine Training

In his timely article on the new courses run at H.M.S. *Sultan*, the author implies that in the past there have been deficiencies in the syllabi of the diesel training courses. He also showed some adjustment. I wonder if the corrective action is complete.

One of the important tasks of most of the ratings in the ME department is to carry out rounds of running machinery. What training do we give in this vital aspect? In the two weeks' JBD—nil; in the MEA/A training alongside the top overhaul—4½ days; in the GEC and MQC, again nothing is given. In the senior basic diesel course one day is allocated and a similar time in Adqual 2. From a long way from the coal-face, it would appear to me that the JBD needs to have some fault-recognition training so that, when the young ratings who are our first line of defence in preventing expensive failures reach a running diesel engine, they have a very clear idea of when to call for support from more experienced men and also when to take emergency action.

Perhaps sea-going officers and senior ratings might care to comment on my opinions.

(Sgd.) J. G. FERRIE,  
Commander, R.N.

SIR,

### Preservation of Machinery Space Bilges

In his article in Volume 23, No. 1, the author's description of the work of the Ship Department on the development of effective protective schemes for bilges will be heartening to marine engineering personnel who live in them. Less heartening will be his review of bilge maintenance which does nothing to assure the reader that much more can and will be done at the design stage to help the sailor in his chore.

The engine rooms of the Type 42 destroyers provide three important examples of design inadequacy in this field:

- (a) *Access*. Much of the after engine-room bilge plating is inaccessible because of pipe and machinery congestion. Although the author states, 'there is little likelihood of any great improvement in this area', there is no doubt that firmer design discipline in the drawing office would have produced a tidier arrangement.
- (b) *Bilge Clearance*. A large quantity of water remains swilling around the engine-room bilges after the bilge eductors have lost suction, yet there is exhortation from the author to keep the bilges dry. Sumps should be provided in the bilges to allow for this.
- (c) *Bilge Usage*. Further exhortation from the author to stop dumping liquids in the bilge is not heeded by the designer who uses the bottom of each machinery space as a giant sullage tank to receive all vent and drain discharges and a miscellany of other fluids. Such discharges should be piped to tanks or savealls.

May we hope for better things in future design?

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Commander, R.N.

SIR,

**Seeking after the Truth**

I was most interested in Mr. Dunford's enthralling article 'The Blackening of White Metal Bearings' (*Journal of Naval Engineering*, Vol. 23, No. 1) and I sincerely wish him well in the solution of this worrying problem.

Mention of the change of formulation of OEP 69 (pp. 65-6 and the Ship Department Note on p. 69) recalled to mind the mystery of the lacquering of the combustion spaces and exhaust systems of the R.A.F. *Seal* Class Paxman Ventura propulsion engines, which occurred during my time as head of the diesel engine section; eventually it was deduced that it was a fuel lacquer caused by excessive idling under no-load conditions.

However, among the myriad of factors which were included in the investigation (almost to the extent of establishing the colour of the watchkeeper's hair!) was, of course, the lubricating oil—in this case OMD 113. And it soon became evident that the internationally accepted diesel engine lubricating oil qualification tests carried out by the Admiralty Oil Laboratory, although confirming certain physical characteristics (e.g. viscosity, TBN, oxidation, sludging, etc.), did not include a chemical analysis. Thus, two apparently identical drums of OMD 113 can well be different in their content.

The significance of this difference can only be determined under realistic engine operating conditions and may well be negligible; nevertheless, when disaster strikes, it is my experience that there are few constants and none which can be taken for granted.

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R.C.N.C.

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