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AV
Lloyd's Register of Shipping,

71, Fenchurch Street, E.C. 3.

ENCLOSURE

13th December, 1934.

Dear Sirs,

I beg to acknowledge the receipt of your letter of the 10th instant respecting alterations proposed to be carried out to vessels of the "Mangalore" and "Magdapur" classes owned by Messrs. T. & J. Brocklebank, and to acquaint you that your remarks have been very carefully noted.

With regard thereto I am directed to inform you that, so far as the hull is concerned, the proposal to shorten the length of the vessel by the amount indicated in your letter would mean that, other things being equal, the structural strength of the vessel would be increased. The proportions of Length to Depth in that case would be more moderate, and the scantlings of the principal parts of the structure would be in excess of that required by the Rules for a length of 470 feet.

With reference to the alterations proposed to be made at the after end, I have to inform you that experimental research, so far as it has gone, seems to show that the fitting of a fin in front of the rudder will result in an increased propulsive efficiency, and that the fitting of this fin or any form of stream line rudder would not, of itself, impose any sensible increase of stress on the rudder post and stern frame or the

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Vessels owned by Messrs. T. & J. Brocklebank Ltd.

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attachments at the top and bottom. It is to be noted, however, that the fitting of a fin will increase the area of the rudder post which is exposed to shock, and it is assumed that proper arrangements will be made for the attachment of this fin to the rudder post and to the structure generally.

So far as the machinery is concerned the shortening of the vessels and re-arrangement of stern gear, new propellers etc. should have no adverse effect on the reliability of turbines and gearing.

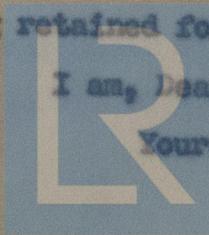
With regard to the possibility of the alterations to the shafting system giving rise to torsional vibration, this is a matter which could only be answered after a complete mathematical investigation has been made, and for this purpose it would be necessary to have detailed particulars of the machinery, including weights and disposition of all rotating masses in the system.

Investigations of this nature have previously been carried out in this Office, but it will be appreciated that, in view of the highly specialised character of the work involved, it will be necessary to charge a suitable fee for these services.

One copy of the plan forwarded by you is returned herewith, the duplicate being retained for reference.

I am, Dear Sirs,
Yours faithfully,

A. Goodwin-Hamilton & Adamson Ltd.,
Marine Building, (2nd Floor),
LIVERPOOL, 3.



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