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Lloyd's Register of Shipping,

71, Fenchurch Street, E.C. 3.

4th November, 1932.

Dear Sirs,

I beg to acknowledge the receipt of your letter of the 29th ultimo relative to the report which was recently received from the Society's Surveyors at Melbourne of the examination made in drydock of your motorship "ASTORIA", and to say that your remarks regarding their recommendation, that the double bottom tanks of this vessel should be again examined internally on the vessel's arrival at a home port or before the end of August 1933, on account of the pitting found in the No.2 tank, have been carefully noted.

In view of your request that this examination might be postponed until the Special Survey No.2 became due, the case has again received the consideration of the Committee at their Meeting today, and I have the pleasure to say that after carefully looking into the matter they have seen their way to meet your wishes in the matter, and have continued the vessel's class on this understanding.

As regards your request to be furnished with an expression of the Committee's opinion as to the cause of the pitting, it may be of interest to you to learn that

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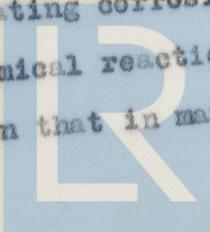
M.S. "ASTORIA"

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For some considerable time past, special note has been taken here of all cases of corrosion which have come before the Committee, both in the case of vessels carrying oil in bulk, and in the case of vessels which carry fuel oil or diesel oil in deep tanks or double bottom tanks.

Enquiries have also been addressed to the Society's Staff at home and abroad, with a view to obtaining information in regard to the corrosion which they may have observed in double bottom tanks or deep tanks carrying oil fuel, and I may say that the general effect of their replies is to establish the fact that oil fuel carried continuously in a tank does not lead to corrosion. On the other hand, when oil fuel has been carried alternately with water in these tanks, some corrosive action, varying in extent with the circumstances of each case, has taken place, and this action, it would appear, is more pronounced in tanks Nos. 1 and 2 than elsewhere in the vessel.

It has frequently been suggested that the cause of such pitting and corrosion is the presence of sulphur in the oil, but investigation seems to show that sulphur, although certainly stimulating corrosion, if present, is not essential for the chemical reaction which produces corrosion, and it is known that in many cases crude oil



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containing a large percentage of sulphur has been carried without sensible damage.

Recent investigation seems to point ~~out that~~ <sup>to the fact that</sup> the corrosion produced in a tank carrying alternately fuel oil and salt water, is principally due to the presence of salt water, or some species of acid liquid, suspended in the oil or settling from the oil, which ultimately collects in bubbles on the bottom of the tank, and that at these points pitting takes place.

I may perhaps add, for your information, that it has been suggested that in tanks which carry alternately oil and water, a suitable method of preventing pitting would be to introduce and alkaline solution of caustic soda into the double bottom tanks, and this measure has been adopted by the Owners of some vessels which are classed with this Society.

I am, Dear Sirs,

Yoursfaithfully,

Secretary.

Messrs. Dampskibsselskabet Orient,  
Ved Stranded 14,  
COPENHAGEN.



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