

X N.N. "CAUTIOUS" X  
**COPY.**  
PORT OF

9th. January, 1941.

Dear Sir,

With reference to your telephone request, and your letter of the 2nd. instant respecting H.M. Tugs "PRUDENCE" and "ASSURANCE", I have to advise you of the following:-

These vessels were examined in Dry Dock at Birkenhead on the 7th. and 8th. instant. It was stated by officers on board that they had encountered very severe weather conditions when on service and that leakage of water had taken place at several parts of the structure.

An examination of the both vessels was made as far as practicable with the following results:-

Shell plating was found in good condition, with the exception of a number of rivets showing signs of leakage, also odd parts of shell caulking particularly at the forward ends. Peaks and other tanks were full or partly full at time of inspection. Shell plating was very bare of paint.

General:- Signs of leakage were observed in way of frame to shell rivets between the tank tops and deck, particularly in way of the accommodation, at rivets of rubber containing angle, at heel of deck stringer angles, and at several side scuttles.

Leakage was also observed from the steam heater pipes, also from sounding pipe caps in the accommodation spaces, the latter when tanks were under pressure.

Windlass holding down bolts and sheathing bolts showed evidence of leakage.

Odd small parts of deck caulking had been omitted, also odd parts of Shell caulking.

It should be noted that if mushroom vents and vents with screw down flaps are not closed in heavy weather considerable leakage will take place to spaces below deck. It was stated that during exceptionally heavy weather water came over the door sills of the accommodation, and in all probability would get down behind frames where cement chocks are fitted to crews' accommodation below the

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upper deck.

In no instance was the appearance of leakage of a serious nature but the finish of several details has the appearance that the completion of the vessels for service had been rushed through for the earliest possible date.

It is not known at the moment what pressure the tanks in way of the accommodation are constructed for. The air pipes extend to the deck, while the sounding pipes are in the accommodation about 30 inches above the tank top. When the tanks are being filled the screw caps of the sounding pipes are retained in position to avoid water overflowing into the accommodation, and when the water overflows from the top of the air pipes the tanks are considered full.

There are no means of freeing any water which may lodge on the deck in way of accommodation except by hand-mopping.

It was observed that prior to dry docking at this time, two partial web frames, about 21" Port and Starboard had been fitted between the fore peak tank top and deck forward of the collision bulkhead, and that no support was fitted below these webs. Repairers had been instructed to fit these webs by the Admiralty Repair Representatives at this Port.

It is considered that one additional web fitted in the crew space would be of considerable value.

Workmen are proceeding to caulk a number of Shell rivets which show signs of leakage, but as the rivet points are of a full nature extending over the edges of the holes, this method of repair, in my view, is not a permanent measure, as the point edges are merely caulked into the skin of the Shell plates, and the rivets are not "drawn up". Further minor leakages may be expected due to this method of repair.

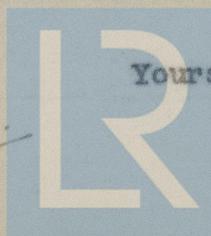
No signs of straining or malformation of the vessels structure was observed.

The quality of workmanship was discussed with Mr. Cole from Bath representing the Admiralty, who was in agreement that the vessels are well-constructed and workmanship generally good.

I should add that in my opinion the pocket design of the hawse pipes is of a nature that will draw-up the vessels suddenly during heavy weather, and transmit undue strain to the forward structure.

*P.S. The 2 plans are returned herewith.*

J.M. Murray Esq.,  
BATH.



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Yours faithfully,

*G. L. L.*  
Lloyd's Register  
Foundation