

"JANKO"

The after part of the above ship, which has been surveyed by Messrs. Silley Cox & Co., Falmouth, was examined 14th March by the undersigned.

The fracture is situated forward of the bulkhead at fore end of No. 3 centre tank (counting from aft); the line of fracture ran from about 7 ft. forward of the bulkhead to the bottom to about 5 ft. from the bulkhead at the top. The fracture was irregular and due to the accumulation of oil rust on the bottom of the ship it was difficult to identify pronounced characteristics other than that it was generally parallel to rivet holes and that in certain places the characteristics of a cleavage fracture were evident and in others, those of a purely tensile fracture. It was impossible to examine the fracture at the deck as the plating there was considerably distorted. There is sufficient evidence to show that the bottom broke under a tensile stress due to a sagging moment. A sketch showing the line of fracture at the bottom is appended; stated above, the line of fracture at the deck could not be surveyed, but it was noted that throughout its length it appeared to avoid lines of rivet holes. The fracture of the side shell was similar to that of the deck.

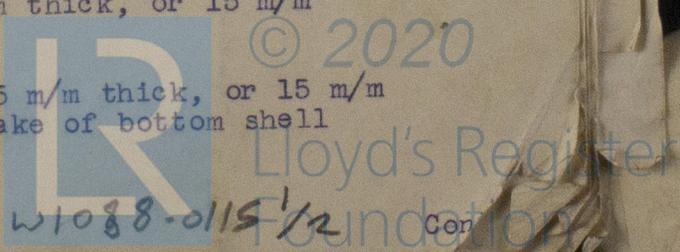
The bottom longitudinal girders were considerably distorted and torn and from their appearance the conclusion could be drawn that it is doubtful if they contributed greatly towards the main longitudinal strength of the ship.

It was only possible to examine the insides of the after ends of No. 2 wing tanks (counting from aft) and it was noted that the distortion of members in these tanks was almost the same on both sides of the ship. The damage consisted of buckling of the upper and middle longitudinal stringers on the ship's side and the ~~central~~ bulkhead, shear wrinkles at the ends of the stringers, and a slight displacement outwards of the side shell and framing, and a more pronounced displacement inboard of the longitudinal bulkheads between the upper and middle stringers. The bottom stringers were unaffected. The following observations may be made about this damage:-

- (1) The distortion of the stringers was consistent with the ship having broken under a sagging moment.
- (2) The symmetry of the distortions indicated that there was little torsion on the hull. (A sketch showing the damage to the stringers is appended).

The following recommendations for the repair of the ship were made to Mr. Christensen, representing the Owners, Mr. Sedgwick, representing the Salvage Association, and other interested parties, and Mr. Wickborg, Vice President of Veritas, representing the mortgagees:

- (1) The structure to be renewed forward of Frame ~~20~~ 69.
- (2) Hatch strakes on upper deck to be renewed 21.5 m/m thick with circular hatches.
- (3) Stringer to be renewed 27 m/m thick, or 15 m/m doubling to be fitted.
- (4) Bilge strake to be renewed 25 m/m thick, or 15 m/m doubling to be fitted to strake of bottom shell next to bilge strake.



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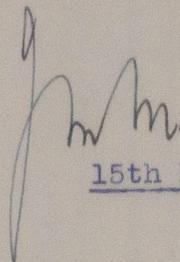
- (5) These recommendations are subject to internal examination of Nos. 1 and 2 centre tanks, and No. 1 wing tanks, *and the remainder of the after structure*

Mr. Sedgwick and Mr. Christensen asked that they could be informed of these recommendations in writing, and it is submitted that this be done.

From the general point of view an outstanding feature of the damage was its localised nature; ~~as has been stated above~~, there was little distortion of the hull aft of the damage.

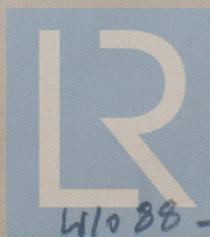
Samples of the damaged plating are being obtained, and the Falmouth Surveyors have been asked to forward these direct to Mr. Lewis for his attention.

It is submitted he be informed of the general circumstances of the case and asked to comment on the steel.



15th March, 1951

Noted RAS



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