

24/10/04

Messrs. Swan, Hunter & Wigham-Richardson's S.S.No.735.

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It is noted that the Builders will revise the scantlings of the topside plating and upper decks, so that the estimated stress shall not exceed ten tons per square inch, with a bending moment of 1,011,400 foot tons.

It is submitted their proposal to treble chain rivet the edges of the side plating for about three-fourths the vessel's length amidships, and to adopt treble zig zag riveting at the ends, as indicated on the sketch of midship section, merits approval. It would, however, be desirable to definitely arrange the details of this riveting on the model and shell expansion drawing where the lines of the plate edges and of the frames would be indicated.

It should be pointed out to the Builders that when the stress is 5.3 tons per square inch of rivet area, as estimated by them, with three rows of rivets, it would be about 8 tons with two rows, which would be too high. It is not quite clear how the stresses indicated by the curves are calculated, but from the continuity of the curves it would appear that no allowance has been made for the change in the spacing of the rivets consequent upon the changes in the frame spacing towards the ends of the vessel. The curve shown on the sketch appears to indicate the distribution of stresses when the vessel is riding steadily on the waves. In reality these stresses would be considerably increased towards the ends of the vessel owing to the pitching motions. The shearing stresses on the edge riveting would therefore be relatively more important towards the ends of the vessel than indicated by the curves.

The sketch of the approved section of 8" channels has been received.

*Am. 20.10.04  
Amid. N.  
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*J.P.L.  
24/10/04*



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