

S.S. "RAYO" No. 123 built by the New York Shipbuilding Co.  
for the Standard Oil Co. with a view to class with this  
Society.

Rule Dimensions ; 330.58 x 46 x 27 to Upper Deck

Scantling Numbers ; 73 & 24132

Proportions ; Length = 12.24 Depths

d = 17.58'

*See Special endorsement on Machinery*

The plans of this vessel were dealt with on the  
31st October last, <sup>year (1911)</sup> when the class <sup>proposed</sup> assigned was 100A 1  
"Shelter Deck with freeboard" "Carrying petroleum in bulk".

When Mr. French visited this country at the end  
of last year the case was discussed with him and he stated  
that the scantlings and arrangements then being embodied  
in the vessel were in excess in many respects of the  
Society's requirements, and he suggested that the class  
100A could be assigned on completion. The plans and first  
entry report have now been received, and the case has again  
received careful consideration, a comparison having been  
made with the provisions of the Rules for the 100A class  
for an oil carrying steamer.

It is found that while the average thickness of the  
outside plating is 1/50th less than would be required by the  
Rules, yet the frames are spaced  $\frac{1}{2}$ " closer than would be  
required by the Rules, and in addition three side stringers  
are fitted on each side, and three side keelsons on the  
bottom instead of two stringers and keelsons respectively  
as required by the Rules. Further, the side keelsons are  
attached by double angles to the shell plating throughout  
and are intercostally attached to the floors, and in these  
respects the Rules would only require double attachment of  
the side keelsons to the shell for three frame spaces each

Spacing .....  
BEAMS. Poop Deck, Angle, Bulb Angle, etc.

Deck. Material and thickness *Steel*  
Bridge Deck Stringer Plate



side of each bulkhead, while no intercostal attachment of the side keelsons to the floors would be required.

It is thought that the additional support afforded to the shell plating by the extra stringer and keelson together with the frame spacing and the arrangements detailed immediately above, more than compensate for the deficiency of thickness in the shell plating referred to.

In other respects the scantlings and arrangements worked into the vessel are equivalent to the requirements of the Rules for the full 100A class, and it is therefore submitted that the class 100A 1 "Carrying petroleum in bulk" be assigned, as recommended by the Surveyor.

+ 100A 1 (Stub) Carrying petroleum in bulk  
2 1/2" (Std) x 1 1/2" frames  
B. Bulb DB under 8" B Bunsur 106 2106 R FPT 826 APT 026  
FK 13 BH 9 to 11 1/2" 44 to 210 1/2"  
Bun. 4460. P116 B30 F43 12.11.12. Jm.

It may be added that the Philadelphia Surveyors were requested to state whether they were correct in reporting the thickness of the bulb angles to the bilge and side keelsons as .45 in view of these having been approved of a weight of 20 lbs per foot equivalent to .51, and also whether the bulb angle frames were correctly reported as .43 in thickness.

A letter has now been received from the Surveyors stating that the thickness of the Bulbangles for the bilge and side keelsons <sup>is</sup> .50, and not .45 as reported, and that ordinary bulb angle frames are .43 in thickness as reported. These thicknesses are in accordance with those originally approved.

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