

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD-STEAMERS.

Index No. 31499
(For London Office only.)
Port of Survey Newcastle
Date of Survey 13th Apr. '26
Name of Surveyor -

Ship's Name.	Port of Registry and Nationality.	Official Number.	Gross Tonnage.	Date of Build.	Particulars of Classification.
<u>BRITISH INVENTOR</u>	<u>British</u>	<u>148485</u>	<u>-</u>	<u>1926</u>	<u>+ 100 A1 Carrying Petroleum in Bulk.</u>
Number in Register Book					

Moulded dimensions 430 x 54.64 x 34.25
Moulded displacement at a moulded draught of 85 per cent. of moulded depth 16620
Coefficient of fineness for use with tables .806

RETAIN

DEPTH FOR FREEBOARD.

Moulded depth	...	...	...	...	...	<u>34.25</u>
Stringer plate	...	...	...	...	...	<u>.06</u>
Sheathing in wells $T \left(\frac{L-S}{L} \right) =$	...	...	...	...	...	<u>-</u>
Depth <u>D</u> =	...	...	...	...	...	<u>34.31</u>

CORRECTION FOR LENGTH.

(a) When <u>D</u> is greater than $\frac{L}{15}$	$\frac{34.31}{15}$	$\frac{28.64}{15}$	$\frac{5.64}{15} \times 3$	<u>+ 16.92</u>
(b) When <u>D</u> is less than $\frac{L}{15}$ (if allowed).				
$\left(\frac{L}{15} - D \right) \times R =$	...	...	...	...
If restricted by height of superstructures	...	...	...	...

SUPERSTRUCTURES.

	Mean Covered Length S.	Equivalent Enclosed Length S ₁ .	Height.	Correction for Height.	Effective Length.
Poop enclosed	<u>102.40</u>	<u>102.40</u>	<u>4'-6"</u>		<u>102.40</u>
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	<u>28.00</u>	<u>28.00</u>	<u>4'-9"</u>		
" overhang aft	<u>2.00</u>	<u>1.50</u>			<u>30.62</u>
" overhang forward	<u>2.25</u>	<u>1.12</u>			
Fore enclosed	<u>44.20</u>	<u>46.15</u>	<u>4'-6"</u>		<u>46.15</u>
" overhang					
Trunks forward					
" aft					
Tonnage opening					

TOTAL = 182.15 179.44 179.44
Length of ship (L) = 430 430 430
% Covered ... = 42.35 41.43 41.43

Corresponding % corrected for absence of forecastle if required } A = 32.43 Correction for Bridge less than 2L if required } Linker
Allowance ... = 42 x 32.43 = - 13.75

SHEER.

Station.	Actual Sheer.	Standard Sheer.	Allowed Sheer.	S. M.	Products.
A.P. 1	<u>50.5</u>	<u>53.0</u>	<u>50.5</u>	<u>1</u>	<u>50.5</u>
2	<u>24.5</u>		<u>24.5</u>	<u>4</u>	<u>110.0</u>
3			<u>12.22</u>	<u>2</u>	<u>24.44</u>
4			<u>3.06</u>	<u>4</u>	<u>12.24</u>
5			<u>6.39</u>	<u>4</u>	<u>25.56</u>
6			<u>25.56</u>	<u>2</u>	<u>51.12</u>
F.P. 7	<u>54.5</u>	<u>106.0</u>	<u>54.5</u>	<u>4</u>	<u>230.0</u>
	<u>108.0</u>		<u>108.0</u>	<u>1</u>	<u>108.0</u>

If excess sheer forward and deficient sheer aft :-

Actual sheer aft = Deficient $\frac{24.65}{26.50} = 93\%$
Standard sheer aft
Actual sheer forward = ✓
Standard sheer forward

Length of enclosed superstructure L

Forward of amidships = } Linker
Aft of amidships = }

Mean effective sheer ... = 25.49
Standard sheer .05L + 5 = 26.50
Difference (Df) ... = 1.01
Allowance = $Df \times \left(.75 - \frac{S}{L} \right) = 1.01 \times .5383 = + .54$
If limited on account of amidship superstructure ... =
If limited on account of excess sheer (1½ in. per 100 ft.) ... =

ROUND OF BEAM.

Standard	...	...	...	...	<u>13.84</u>
Ship	...	...	...	...	<u>14.40</u>
Difference	...	...	...	...	<u>.56</u>
Restricted to	...	...	...	...
Allowance = $\frac{\text{Difference}}{4} \times \left(1 - \frac{S_1}{L} \right) =$					$\frac{.56}{4} \times .5824 = -.08$

TABULAR FREEBOARD (corrected for flush deck if required) =

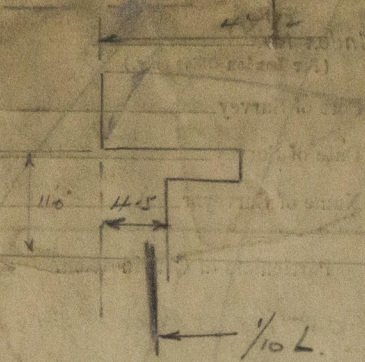
Corrected for Coefficient	$\frac{.806 + .68}{1.36} = 1.093$	
Correction for Length	<u>16.92</u>	
" Superstructures	<u>13.45</u>	
" Sheer	<u>.54</u>	
" Round of beam	<u>.08</u>	
" Thickness of deck		
" Scantlings, etc.		
" Statutory deck line		
	<u>14.46</u>	<u>13.83</u> + <u>3.63</u>

Summer Freeboard = 80.01

FREEBOARD recommended amidships from centre of Disc to top of Statutory Deck Line, Wood (Steel) Deck :-

Fresh Water Line above centre of Disc ...
Indian Summer Line " " " ...
Winter Line below " " " ...
Winter North Atlantic Line " " " ...

1906 4'-9" 8'-34" Diff S - 13" W - 12 1/4"



Overhang

$$\frac{11 \times 4.2}{22 \times 2}$$

$$= \frac{4.2}{4} = 1.05$$

$$44.20$$

$$1.05$$

$$46.15$$

$$43.00$$

$$37.86$$

$$43.19$$

$$37.86$$



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