

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index. No. **22593**  
(For London Office only.)

387

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Poop, Bridge and Forecastle

(Type of Superstructures.) None

Port of Survey London

Date of Survey 29<sup>th</sup> April 1932

Name of Surveyors G. Scantlebury  
A. E. Sowden

Particulars of Classification +100 A-1

Ship's Name <u>"Salacia"</u>	Nationality and Port of Registry <u>British Glasgow</u>	Official Number <u>129418</u>	Gross Tonnage <u>5201</u>	Date of Build <u>1912-10</u>
Moulded Dimensions: Length <u>407</u> Breadth <u>51.94</u> Depth <u>31.20</u>		Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>12354</u> tons		
Coefficient of fineness for use with Tables <u>.443</u>				

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... <u>31.16</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(31.20 - 27.13) 3 = + 12.21</u>	Moulded Breadth (B) <u>51.94</u>
Stringer plate <u>48</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{12.46}{50} = 12.46$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>16.00</u>
Depth for Freeboard (D) = <u>31.20</u>		Difference <u>3.54</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{3.54}{4} \times \left( 1 - \frac{50.24}{51.94} \right) = .44$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>34.25</u>	<u>34.25</u>	<u>4.9</u>		<u>34.25</u>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...	<u>124.50</u>	<u>124.50</u>	<u>7.11</u>		<u>124.50</u>
Bridge enclosed <u>House</u>	<u>117.60</u>	<u>124.50</u>	<u>7.11</u>		<u>124.50</u>
" overhang aft ...	<u>12.0</u>	<u>3.45</u>	<u>7.11</u>		<u>3.45</u>
" overhang forward	<u>40.70</u>	<u>40.70</u>	<u>4.9</u>		<u>40.70</u>
F'cle enclosed <u>House</u>	<u>40.70</u>	<u>40.70</u>	<u>4.9</u>		<u>40.70</u>
" overhang ...	<u>2.8</u>	<u>1.40</u>			<u>1.40</u>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	<u>204.25</u>	<u>204.60</u>			<u>204.60</u>

Standard Height of Superstructure <u>4.5</u>	R.Q.D. <u>-</u>
Deduction for complete superstructure <u>42.00</u>	
Percentage covered $\frac{S}{L} = \frac{50.92}{51.94} = 98.2\%$	
" $\frac{S_1}{L} = \frac{50.24}{51.94} = 96.7\%$	
" $\frac{E}{L} = \frac{50.24}{51.94} = 96.7\%$	
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	<u>36.24</u>
Interpolation for bridge less than 2L (if required)	
Deduction = <u>42.00</u> x <u>.3624</u> = <u>- 15.24</u>	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>50.40</u>	1		<u>50.40</u>	<u>68.00</u>	<u>68.00</u>	1		<u>68.00</u>
$\frac{1}{4}$ L from A.P. ...	<u>22.56</u>	4		<u>90.24</u>	<u>29.62</u>	<u>29.62</u>	4		<u>118.48</u>
$\frac{2}{4}$ L " ...	<u>5.58</u>	2		<u>11.16</u>	<u>7.39</u>	<u>7.39</u>	2		<u>14.78</u>
Amidships ...	-	4		-	-	-	4		-
$\frac{3}{4}$ L from F.P. ...	<u>11.16</u>	2		<u>22.32</u>	<u>14.44</u>	<u>14.44</u>	2		<u>29.54</u>
$\frac{4}{4}$ L " ...	<u>45.12</u>	4		<u>180.48</u>	<u>59.24</u>	<u>59.24</u>	4		<u>236.96</u>
F.P. ...	<u>101.40</u>	1		<u>101.40</u>	<u>136.00</u>	<u>136.00</u>	1		<u>136.00</u>
Total ...				<u>456.36</u>					<u>603.98</u>

Mean actual sheer aft = 68.00  
Mean standard sheer aft = 68.00

Mean actual sheer forward = 118.48  
Mean standard sheer forward = 118.48

Length of enclosed superstructure forward of amidships = .1529  
" " aft of " = .1640

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{144.46}{18} \left( .75 - \frac{2546}{20460} \right) = -4.06$

If limited on account of midship superstructure.

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = <u>31.20</u></p> <p>Summer freeboard = <u>5.94</u></p> <p>Moulded draught (d) = <u>25.26</u></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = <math>\frac{d}{4}</math> inches = <u>6.31</u> : <u>6.4</u></p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line <math>\Delta =</math> <u>11482</u></p> <p>Tons per inch immersion at summer load water line <math>T =</math> <u>42.14</u></p> <p>Deduction = <math>\frac{\Delta}{40T}</math> inches = <u>6.99</u></p> <p>= <u>4</u></p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient <math>\frac{.443 + .68}{1.36} \times \frac{1.453}{1.36} = 43.64</math></p> <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ...</td> <td><u>12.21</u></td> <td></td> </tr> <tr> <td>Deduction for superstructures ...</td> <td></td> <td><u>15.24</u></td> </tr> <tr> <td>Sheer correction ...</td> <td></td> <td><u>4.06</u></td> </tr> <tr> <td>Round of Beam correction ...</td> <td></td> <td><u>.44</u></td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>12.21</u></td> <td><u>19.44</u></td> </tr> <tr> <td>Summer Freeboard =</td> <td><u>41.14</u></td> <td></td> </tr> </table> <p>43.64 ✓ 78.40 ✓</p>		+	-	Depth Correction ...	<u>12.21</u>		Deduction for superstructures ...		<u>15.24</u>	Sheer correction ...		<u>4.06</u>	Round of Beam correction ...		<u>.44</u>	Correction for Thickness of Deck amidships ...			Other corrections, scantlings, etc. ...				<u>12.21</u>	<u>19.44</u>	Summer Freeboard =	<u>41.14</u>	
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## SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:

Tropical Fresh Water Line above Centre of Disc ...	
Fresh Water Line " " ...	
Tropical Line " " ...	
Winter Line below " " ...	<u>6.4</u>
Winter North Atlantic Line " " ...	

Tropical Fresh Water Freeboard ...	
Fresh Water " " ...	
Tropical " " ...	
Winter " " ...	
Winter North Atlantic " " ...	

FREEBOARDS RE-ASSIGNED  
UNDER 1906 REGULATIONS.Lloyd's Register  
Foundation



Salacio

Particulars of fiddley, funnel and ventilator coamings:—

Particulars of Flush Bunker Scuttles:—

None. ✓

Particulars of Companionways :—

None.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :—

On Forecastle deck: 2 @ 18" x 15" high to Hold  
2 @ 10" x 12" " to Ace  
2 @ 6" x 27" " MV's  
On Fore Well Deck: 6 @ 18" x 36" high to holds stween decks  
On Bridge Deck  
On Off Well Deck: 4 @ 18" x 36" to Holds  
2 @ 12" x 36" " Deep Tanks  
On Poop Deck: 1 @ 18" x 24" high to Hold  
2 @ 6" x 12" " " Tunnel  
1 @ 8" x 15" " " Poop  
All vents fitted with wood plugs and canvas covers.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—

On Yule 1-2" AP 13" high to h<sup>2</sup> DB.  
" Fore Well N<sup>2</sup> 2-2" A.P. - 36" high to h<sup>2</sup> DB.  
On Bridge R<sup>2</sup> ————  
On Aff. Well R<sup>2</sup> 4 2-2" AP<sup>s</sup> to 30" high to.  
On Poop 123" x 6" high to A.P.

Cannon runs to all  
air pipe openings

Particulars of Gangway Cargo and Coaling Ports:—

None. ✓

All discharge pipes fitted with storm valves. (These are all from spaces above the freeboard deck)

All strongly constructed with steel hinged deadlights.  
Those below freeboard deck are closed with bolted plates outside in addition.

Particulars of Guard Rails:—

On Forecastle.	34" high	with 2 rods, stanchions	4'-4" apart
Bridge	36" "	(Bulwarks)	"
" Poop	36" "	with 3 rods,	4'-4" "
" Lamp? Wood decks	36" -	with 3 wires.	"

None fitted ✓

Lifelines provided in forward after wells secured to bulkheads by eye bolts

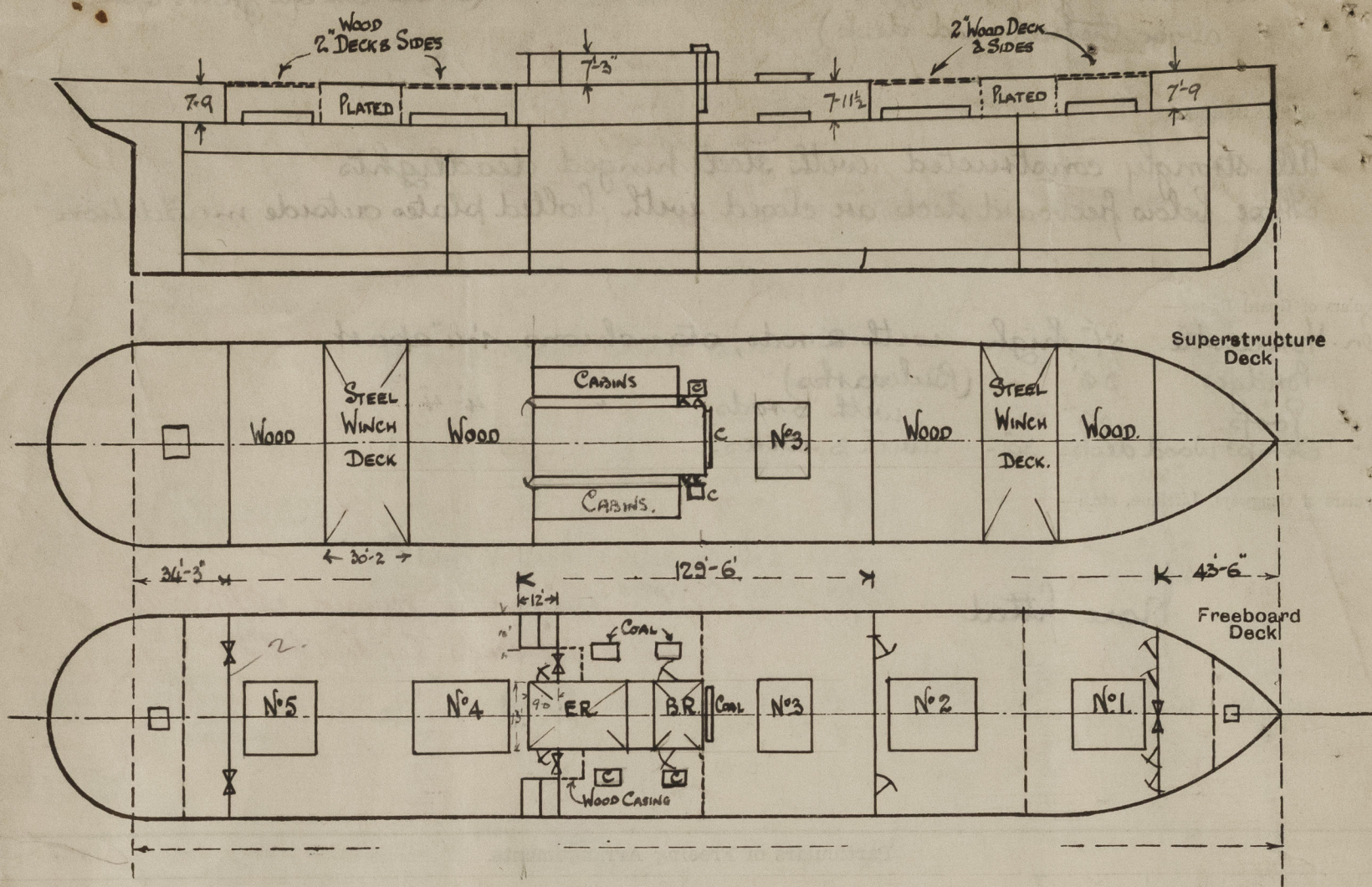
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..	44	40	6 x 3½ x 48	32"	none	226'-0" x 4'	18"	7'-8"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ... ..	42	40	3 x 3 x 42	39"	none	226' x 6'-10" 225' x 24"	2" 18"	7'-11½"
Bridge, Forward Bulkhead ... ..	50	36	9" x 3" AA	30"	brackets top & bottom	2260' x 45'	23"	9'-11½"
Forecastle Bulkhead ... ..	30	30	steel bulkheads of houses	-	-	126' x 4'-0" 425' x 2'	18"	7'-3"
Trunk, Aft ... ..								
Trunk, Forward ... ..								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	42	40	3 x 3 x 42	39"	none	225' x 2'-0" 225' x 2'-2"	18" 18"	7'-11½"
Exposed Machinery Casings on Super-structure Decks ... ..	30	30	3 x 3 x 25	-	"	126' x 5'-6" 124' x 4'-6"	18" 16"	7'-11½"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	30	30	4 x 3 x 30	36"	heads riveted to beams			
Deckhouses on Flush Deck Ships ...								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

[illegible]



Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



State any special features in the construction of the ship:—

Small Hatches:—  
U. Deck 1 @ 42" x 42" x 9" high to Fore Peak: } All fitted with  
 1 @ 5' x 3'-9" x 9" " " A. Peak: } cleats, battens, covers  
 4 @ 8'-6" x 5'-6" x 9" " " Bunkers: } &c as required  
Bridge Deck: 2 @ 11'-6" x 5'-6" x 9" " " "

This survey has been carried out afloat.

76 1/2  
 43.5  
 110.7  
 2.8  
 Bridge aft 42. 0/100  
 2 x 10.12 = 240 ✓  
 13.9 = 114 ✓  
 354 ✓  
 51 = 4.0 ✓  
 117.5 ✓  
 124.5 ✓ by air line  
 Bridge over hull 129.5 ✓  
 4.9 ✓  
 5.0 ✓  
 75  
 3.75 ✓ ON

Builder's name and yard number Chas Connell's Ltd h<sup>o</sup> 348

Names of sister ships —

Owners Donaldson Line Ltd

Fee £ 13 : 12 : 0 Received by me  
 2/5/32



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