

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

11 JUL 1932
Index. No. 8810
(For London Office only.)

Computation of Freeboard for ~~Steamer~~, Sailing Ship, Tanker
having Pop. Bridge & Vele.

Port of Survey Gothenburg.

Date of Survey 7th July 1932.

Name of Surveyor H. Jeth Lyderum.

Particulars of Classification 100. A. 1.
S.S. 5.7.3rd No. 3-12, 29

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>4 Mast. Bk. "ABRAHAM RYDBERG"</u> (N ^o 00021 in Register Book.)	<u>Swedish.</u> <u>Stockholm.</u>	<u>7765.</u>	<u>2345.</u>	<u>1892-2.</u>

Moulded Dimensions: Length 257.5 Breadth 43 Depth 25.3

Moulded displacement at moulded draught = 85 per cent. of moulded depth 5073 tons

Coefficient of fineness for use with Tables 747 72 highest allowed.

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>25.25</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(25.39 - 21.46) x 2.03 = 7.98</u>	Moulded Breadth (B) <u>43.0</u>
Stringer plate <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>10.32</u>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <u>25 x 4111</u> <u>.10</u>	If restricted by superstructures	Ship's Round of Beam = <u>10.5</u>
Depth for Freeboard (D) = <u>25.39</u>		Difference <u>.18</u>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>$\frac{.18}{4} \times .4181 =$</u>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>70.0</u>	<u>70.00</u>	<u>7'0" + 3" w.d.k.</u>		<u>70.00</u>
" overhang	<u>.46</u>	<u>.23</u>			<u>.23</u>
R.Q.D. enclosed	<u>✓</u>				
" overhang	<u>✓</u>				
Bridge enclosed	<u>52.0</u>	<u>52.00</u>	<u>7'4" + 3" w.d.k.</u>		<u>52.00</u>
" overhang aft	<u>.63</u>	<u>.47</u>			<u>.47</u>
" overhang forward	<u>.54</u>	<u>.29</u>			<u>.29</u>
Fore enclosed	<u>25.7</u>	<u>26.87</u>	<u>7'0" + 3" w.d.k.</u>		<u>26.87</u>
" overhang	<u>.13</u>				
Trunk aft	<u>✓</u>				
" forward	<u>✓</u>				
Tonnage opening aft	<u>✓</u>				
" forward	<u>✓</u>				
Total	<u>151.63</u>	<u>149.84</u>			<u>149.84</u>

Standard Height of Superstructure 6.07

 " " R.Q.D. 20.75

Deduction for complete superstructure 20.75

Percentage covered $\frac{S}{L} =$ 58.89

 " " $\frac{S_1}{L} =$ 58.19

 " " $\frac{E}{L} =$ 58.19

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. 53.47
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) ✓

Deduction = 20.75 x 53.47 = 11.10

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>35.75</u>	1		<u>35.75</u>	<u>36"</u>	<u>37.00</u>	1		<u>37.00</u>
$\frac{1}{6}$ L from A.P.	<u>15.91</u>	4		<u>63.64</u>	<u>13.43"</u>	<u>15.01</u>	4		<u>60.04</u>
$\frac{2}{6}$ L "	<u>3.93</u>	2		<u>7.86</u>	<u>3.35"</u>	<u>3.75</u>	2		<u>7.50</u>
Amidships		4		<u>0</u>			4		
$\frac{2}{6}$ L from F.P.	<u>7.86</u>	2		<u>15.72</u>	<u>14.77"</u>	<u>8.98</u>	2		<u>17.96</u>
$\frac{1}{6}$ L "	<u>31.82</u>	4		<u>127.28</u>	<u>59.25"</u>	<u>35.94</u>	4		<u>143.76</u>
F.P.	<u>71.50</u>	1		<u>71.50</u>	<u>75"</u>	<u>70.00</u>	1		<u>70.00</u>
Total				<u>321.75</u>					<u>336.26</u>

Mean actual sheer aft = Deficient > 75% standard

Mean standard sheer aft

Mean actual sheer forward = Excess

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = .110

 " " aft of " = .092

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - S}{2L} \right) =$ $\frac{14.51}{18} (75 - 2944) = -.37$

If limited on account of midship superstructure. $.192 \times .37 = -.35$ If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
<p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = <u>25.54</u></p> <p>Summer freeboard = <u>4.37</u></p> <p>Moulded draught (d) = <u>21.17</u></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>NIL</u></p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p>Displacement in salt water at summer load water line</p> <p>$\Delta =$</p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = $\frac{\Delta}{40 T}$ inches</p>	<p>Correction for coefficient <u>$\frac{72 + .62}{1.24} = 1.34$</u></p> <p>Depth Correction <u>7.98</u></p> <p>Deduction for superstructures <u>11.10</u></p> <p>Sheer correction <u>.35</u></p> <p>Round of Beam correction <u>.02</u></p> <p>Correction for Thickness of Deck amidships <u>1.80</u></p> <p>Other corrections, scantlings, etc.</p> <p>Summer Freeboard = <u>52.47</u></p>

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:

Tropical Fresh Water Line above Centre of Disc	Tropical Fresh Water Freeboard
Fresh Water Line " " " " " " " " " " " "	Fresh Water " " " " " " " " " " " "
Tropical Line " " " " " " " " " " " "	Tropical " " " " " " " " " " " "
Winter Line below " " " " " " " " " " " "	Winter " " " " " " " " " " " "
Winter North Atlantic Line " " " " " " " " " " " "	Winter North Atlantic " " " " " " " " " " " "

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	No. 1.	No. 2.	No. 3.	Under Fiddle.					
Dimensions of Hatchway	6' x 6'	10' x 12'	12' x 10'	2'10" x 2'6"					
COAMINGS	Height above Deck	24" wood dk.	25" ab w dk.	25" ab w dk.	15" ab w dk.				
	Thickness	38"	38"	38"	38"				
	Stiffeners	None	None	None	None				
	Brackets, Stays	filled	filled	filled	filled				
HATCH BEAMS	Number	1	1	1	None				
	Spacing	10'	10'	6'	None				
	Scantling and Sketch	None	10" x 3" x 36"	10" x 3" x 36"	filled				
	Bearing Surface	3"	3"	3"	filled				
WOOD FORE AND AFTERS	Number	1	3	1	None				
	Spacing	Centre	3'	Centre	None				
	Unsupported Lengths	5' 7 1/2"	ab. 9' 7"	ab. 5' 7"	None				
	Scantling and Sketch	7" x 5 3/4"	7" x 7 3/4"	6" x 7 1/2"	filled				
HATCH COVERS	Material	Wood	Wood	Wood	Wood				
	Thickness	2 1/4"	2 1/2"	2 1/2"	2 1/4"				
	How fitted	Atkwh.	Atkwh.	Atkwh.	Atkwh.				
	Bearing Surface	1 1/2"	1 3/8"	1 1/2"	2"				
Spacing of Cleats	22"	25"	22"	18"					
Number of Tarpaulins	2	2	2	2					

Particulars of fiddle, funnel and ventilator coamings:— No fiddle—Sailing ship.

Particulars of Flush Bunker Scuttles:— None fitted.

Particulars of Companionways:— Bridge 2 off steel. 6'6" x 3'2" x 6" ab w dk. 30" substantially constructed, Wood door 5'4 1/2" x 2'4 1/2" cap. of being manip. fr. both sides, sill 13" ab w dk.

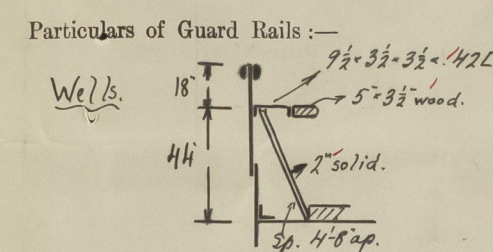
Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— Forewell. 1 off 18" diam. 28" ab w dk. 25" coam. Bridge. 1 - 15" - 33 1/2" - 25" - Wood covers & canvas fitted for all vents. Poop. 5 - 8" - 36" - 25" -

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— None fitted.

Particulars of Gangway Cargo and Coaling Ports:— None fitted.

Particulars of Scuppers and Sanitary Discharge Pipes — No scuppers below freeboard deck - Sanitary Discharge Pipes have N.R.V.

Particulars of Side Scuttles: Side lights have hinged dead rights.



Particulars of Gangways, Lifelines, etc.:— Gangway over after well, 32" wide & 3" planks, guard rails have two horizontal rods & stanchions 39" high sp. 4'9" apart.

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	33'11"	5'2"	36" x 23"	1		
Forward Well	71'5 1/2"	5'2"	36" x 22" 29" x 17"	1		

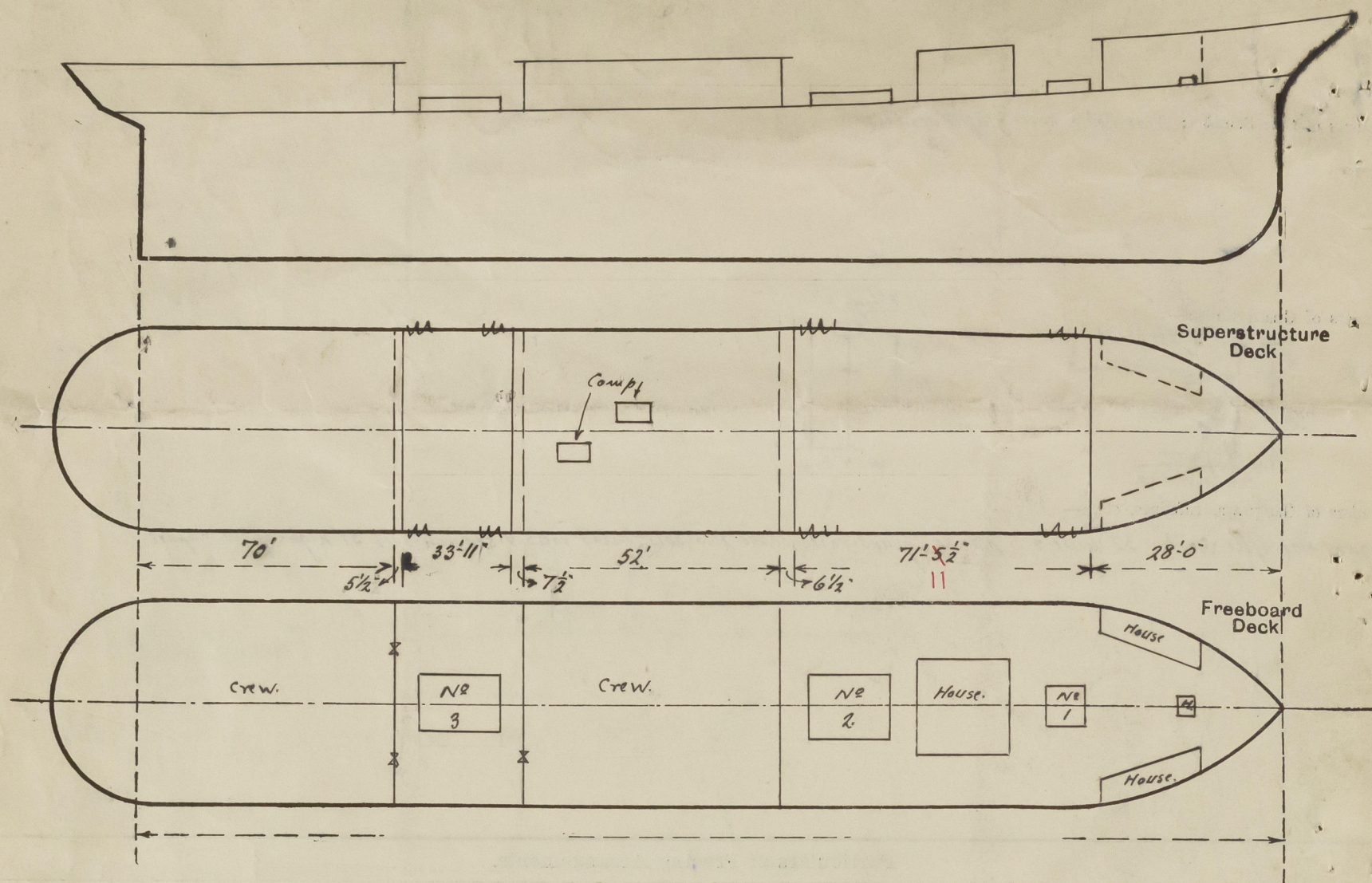
State position of each freeing port (F. and A. position and height above deck edge) } After Well:— 25'4" bridge 13'6" sill 15"
Forward Well:—
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Hinged plate shutters.

Additional area where sheer is less than standard.

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	18 1/2" x 42"	40"	not accessible wood lining			4'6" x 2'	17" ab w dk	7'0"
Raised Quarter Deck Bulkhead	✓							
Bridge, After Bulkhead	Verl. pl. -	30"	5" x 3" x 40"	30"	Tokrs. bars	5'1" x 2'	15" ab w dk	7'4"
Bridge, Forward Bulkhead	Verl. pl. -	36"	6 1/2" x 3" x 46"	30"	Lugged. lgs. ball.	None	✓	7'4"
Forecastle Bulkhead	✓							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓							
Exposed Machinery Casings on Superstructure Decks	✓							
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships	✓							

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	Hinged steel doors cap. of being manip. fr. both sides.
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	Hinged steel door cap. of being manip. fr. both sides.
Bridge, Forward Bulkhead	No openings.
Forecastle Bulkhead	✓ open
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships	✓

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:—



3' woodsheathing on Pop, Bridge, Fore and Maindeck.
State any special features in the construction of the ship:—

Timber Deck. Cargo. Freeboards are not requested.

$$\begin{aligned} \text{Tonnage} &= L_{10} \times 25.75 \\ &+ 2.25/2 = \frac{1.12}{26.87} \end{aligned}$$

Builder's name and yard number C. Connell & Co., Glasgow. Yard. N° 184.

Names of sister ships

Owners Rederi A/B. Sunnan (P.G. Thulin, Mgr.) Stockholm.

Fee £ Kr. 230.00.

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