

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Index. No. 12022.
(For London Office only.)

-9 SEP 1932

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having Raised Quarter, Bridge and Forecastle decks.

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>WALBORG</u>	<u>Swedish</u> <u>Oscarshamn.</u>	<u>2969.</u>	<u>1483</u>	<u>1896-11</u>

Moulded Dimensions: Length 77.72 m. Breadth 11.23 m. Depth 5.41 m.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 3238 tonnes
Coefficient of fineness for use with Tables .787

Port of Survey Lisabon.
Date of Survey 26th & 27th August, 1932.
Name of Surveyor A. Akerow.
Particulars of Classification 80/1071.
S.S. Ant. 2nd No. 3-4, 22
S.S. Esc. No. 2-31

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... <u>5.41 m.</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>8.33 (5.422 - 5.18) 19.63 = +40</u>	Moulded Breadth (B) <u>11.23</u> <u>11.28 m</u>
Stringer plate ... <u>12 mm.</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{225}{50} = 225$
Sheathing on exposed deck <u>3" wood sheathing on fore deck & bridge deck.</u>	If restricted by superstructures	Ship's Round of Beam = <u>229</u> <u>230 mm.</u>
$T \left(\frac{L-S}{L} \right) =$		Difference <u>Excess</u> <u>4</u>
Depth for Freeboard (D) = <u>5.422</u>		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{4}{4} \times .252 = \text{Nil}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...	<u>28700</u>	<u>28700</u>	<u>1066</u>	<u>1066/1240</u>	<u>24672</u>
" overhang ...					
Bridge enclosed ...	<u>20700</u>	<u>20700</u>	<u>2135</u>		<u>20700</u>
" overhang aft ...					
" overhang forward ...	<u>75</u>	<u>37</u>	<u>2135</u>		<u>37</u>
F'cle enclosed ...	<u>8600</u>	<u>8600</u>	<u>2135</u>		<u>8600</u>
" overhang ...	<u>200</u>	<u>100</u>	<u>2135</u>		<u>100</u>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	<u>58275</u>	<u>58137</u>			<u>54109</u>

Standard Height of Superstructure	<u>1845</u>
" " R.Q.D.	<u>1240</u>
Deduction for complete superstructure	<u>801</u>
Percentage covered $\frac{S}{L} =$	<u>74.98</u>
" " $\frac{S_1}{L} =$	<u>74.80</u>
" " $\frac{E}{L} =$	<u>69.62</u>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<u>62.35</u>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	<u>801 x .6235 = 499</u>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>901</u>	<u>1</u>		<u>901</u>	<u>1010</u>	<u>838</u>	<u>838</u>	<u>1</u>	<u>838</u>
$\frac{1}{2}$ L from A.P. ...	<u>401</u>	<u>4</u>		<u>1604</u>	<u>250</u>	<u>382</u>	<u>382</u>	<u>4</u>	<u>1528</u>
$\frac{2}{3}$ L " ...	<u>99</u>	<u>2</u>		<u>198</u>	<u>10</u>	<u>95</u>	<u>95</u>	<u>2</u>	<u>190</u>
Amidships ...		<u>4</u>			<u>0</u>			<u>4</u>	
$\frac{2}{3}$ L from F.P. ...	<u>198</u>	<u>2</u>		<u>396</u>	<u>90</u>	<u>183</u>	<u>183</u>	<u>2</u>	<u>366</u>
$\frac{1}{2}$ L " ...	<u>802</u>	<u>4</u>		<u>3208</u>	<u>610</u>	<u>732</u>	<u>732</u>	<u>4</u>	<u>2928</u>
F.P. ...	<u>1802</u>	<u>1</u>		<u>1802</u>	<u>1490</u>	<u>1524</u>	<u>1524</u>	<u>1</u>	<u>1524</u>
Total ...				<u>8109</u>					<u>7374</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{735}{18} \left(.75 - .3749 \right) = +15$

If limited on account of midship superstructure.

Mean actual sheer aft = Deficient
Mean standard sheer aft = Deficient
Mean actual sheer forward = Deficient
Mean standard sheer forward = Deficient
Length of enclosed superstructure forward of amidships = $\frac{10400}{L} = .13$
" " aft of " = $\frac{10300}{L} = .50L$

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

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Depth to Freeboard Deck = <u>5.422</u>	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.787 + .65}{1.36} = \frac{1.437}{1.36}$
Summer freeboard = <u>470</u>	$\Delta =$	Depth Correction ... <u>40</u>
Moulded draught (d) = <u>4.952</u>	Tons per inch immersion at summer load water line	Deduction for superstructures ... <u>499</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = <u>103</u> <u>mm</u>	T =	Sheer correction ... <u>15</u>
Addition for Winter North Atlantic Freeboard (if required) = <u>51</u> <u>mm</u>	Deduction = $\frac{\Delta}{40T}$ inches = <u>103</u> <u>mm</u>	Round of Beam correction ...
		Correction for Thickness of Deck amidships ...
		Other corrections, scantlings, etc. ...
		Summer Freeboard = <u>470</u>

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

Tropical Fresh Water Line above Centre of Disc ...	<u>206</u> <u>mm</u>	Tropical Fresh Water Freeboard ...	<u>264</u> <u>mm</u>
Fresh Water Line " " ...	<u>103</u> <u>mm</u>	Fresh Water " " ...	<u>367</u> <u>mm</u>
Tropical Line " " ...	<u>103</u> <u>mm</u>	Tropical " " ...	<u>367</u> <u>mm</u>
Winter Line below " " ...	<u>103</u> <u>mm</u>	Winter " " ...	<u>573</u> <u>mm</u>
Winter North Atlantic Line " " ...	<u>154</u> <u>mm</u>	Winter North Atlantic " " ...	<u>624</u> <u>mm</u>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

[illegible]

Particulars of fiddley, funnel and ventilator coamings:— Fiddley openings closed by 2 mm. ~~lute~~ shell covers
 Funnel coaming 950 mm; 2 vents to stockhold 170 x 345 ~~500~~ ^{lute} baling skylight, corr. wooden coaming 90 mm;
 ER skylights, all of wood, 4 lights for covers 170 mm; 2 vents to ER 530 x 4 - ϕ 300
 1 funnel to galley; 1 vent p.s.b. to entrance and boatswain shops 270 x 5 - ϕ 300;
 All placed on top of boat deck, 2090 above the bridge deck.

Particulars of Flush Bunker Scuttles:— None

- 1 ladder to fore peak 500x600, 75mm bearing surfaces on all 4 sides for 60 mm wood covers, flush with wood deck.
- 1 skylight p.e.s. to saloon on bridge deck connected to bridge house, steel coaming with wood top, height 380, with battening down arrangement.
- 1 skylight abt on bridge deck to mess room steel coaming with wooden top 2x500, no means for closing.

Particulars of Companionways:— 1 comp. hood on f'cle dk $1200 \times 800 \times h = 1890$, steel with steel door, sill 250 mm, hood bolted to wood dk.

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

	Free decks	Sheer
<u>End well:</u>	1 fwd N ^o 1 taken to hold 790x6-φ 300, bolted to steel deck 1 aft " " " " " 780x4-φ 300;	1 to fore peak 32 p.s. transverse 290x5-φ 200 she with screw covers and bolted to wood deck;
<u>Bridge deck</u>	1 on p. side to pentery 1400x5-φ 150;	
<u>R.O. deck</u>	1 fwd N ^o 3 taken and aft of N ^o 4 ditto 800x8-φ 20.	

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

Truss well :- 1-2" fwd N^o 1 Lantz, h = 950, goose neck.

1-2" p.2 s. h = 1200 with screw caps.

Bridge dk: 1-2 1/2' Shd side from ut = n = 760'

R.O. deck:- 1-2 Res. N. 1150, 1150, 1150, 1150
1-4. 2nd Co. Lunal, L=410, 400, 400, 400

Some with screw

Particulars of Gangway Cargo and Coaling Ports:—

Name

Particulars of Scuppers and Sanitary Discharge Pipes —

4 scuppers	p.s. in two well	passing through deck and shell
4 "	p.s. on R.P. deck	" " " "

1 we exhaust pipe port side fwd, about 240 mm. above main deck.
 1 " " " star " amidsh. " 3000 " below bridge "
 1 " " " port " " " 2200 " " " "

All our pipes with cast iron chests and none return valves.

Particulars of Side Scuttles: 4-6" 8-8" p.s.s. in crew quarter fwd.
8-8" on port side and 6-8" starboard side amidsh.

All with deadlights.

Particulars of Guard Rails :—

Fale dute:

Particulars of Gangways, Lifelines, etc. :—

~~None.~~

Lifelines provided a forward well

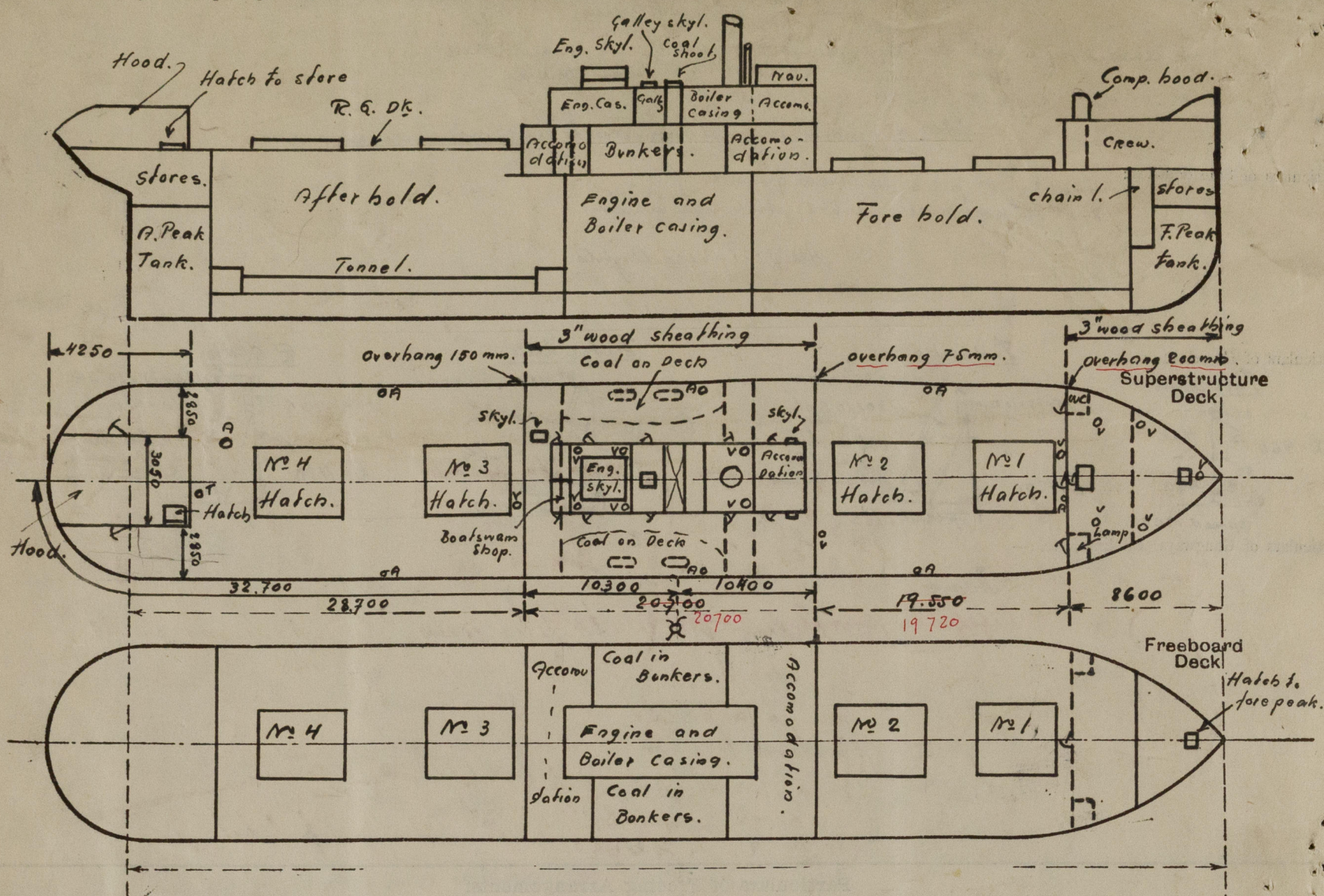
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Bridge deck.	20.700	930	430 x 360	1	15,48 dm ²	
After Well ... <i>to the</i> ...	32.700	1150	760 x 470.	4	142,88 dm ²	
Forward Well	19.550.	1200	760 x 470.	4.	142,88 dm ² .	
<p>State position of each freeing port</p> <p>(F. and A. position and height above deck edge)</p> <p>State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—</p> <p>Additional area where sheer is less than standard.</p>						

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								
Raised Quarter Deck Bulkhead ...		8	webs and 75x75x10 A	900	Brackets top and bottom	None	✓	1070
Bridge, After Bulkhead		8	webs and 75x75x10 A	900	Brackets top and bottom	5-8" sideights None	✓	1070
Bridge, Forward Bulkhead	600x12	10	76130x75x12 A 100x100x10 A	750	Brackets top and bottom	6-10" sideights None	✓	2135
Forecastle Bulkhead		9	75x75x10 A and 130x75x10 B.D.	850 700	None Brackets	3 doors 1250x570.	480	2135
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super- structure Decks	510x10.	7	75x75x10 A.	760	Bars at top Throughgoing at bottom	2 p. 3 A. 1240x570.	410.	2070
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances		7	75x75x10 A.	760	None	None	✓	2135
Deckhouses on Flush Deck Ships ...		8.	75x75x10 A.	720.	None	p. 1480x600 5. 1480x800.	480 470.	2130

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

Poop Bulkhead	...	...	✓
Raised Quarter Deck Bulkhead	...	...	None
Bridge, After Bulkhead	...	...	None
Bridge, Forward Bulkhead	...	...	None 6-10" side lights.
Forecastle Bulkhead	...	...	✓ 4-6" side lights
Exposed Machinery Casings on Free-board or Raised Quarter Decks	...	...	Openings to crew quarters and lamp room closed by hinged steel doors with handle openings from both sides.
Exposed Machinery Casings on Super-structure Decks	...	...	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	Openings p.s. to stokehold and engine room, closed by hinged steel doors with handle opening from both sides.
Deck doors on ^{60' deck aft} Flush Bulk Ship	...	...	None
	...	...	Opening p.s. closed by hinged wooden doors with handle opening from both sides.

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:— A timber deck cargo freeboard is also desired.

It was stated that timber also is carried on bridge deck.

A strong steel deck house fitted aft.

All double bottom tanks with longitudinal sub-divided center girder, w^t in the engine room.

The hand steering wheel protected by steel house aft.

The steering arrangement laid on deck alongside bulwark and inside stanchions.

Fitting for uprights do not fulfil the Rule requirements, none on bridge deck.

There are no eyeplates for loadings.

The vessel examined in dry dock during annual survey.
The vessel left dry on the 28th August, 1932.

Builder's name and yard number R. Gagg & Sons, Middlesbrough.

Names of sister ships

Owners V. H. Anderson.

Fee £ Kr. 170.00

Received by me

F. Anderson.



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