

No 8731
Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

5 MAY 1932
Index. No. 23739
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Poop, Raised Quarter Deck, Bridge and Forecastle.
(Type of Superstructures.)
Port of Survey Gothenburg
Date of Survey April 1932
Name of Surveyor H. J. H. Lydenius
Particulars of Classification 100 A.1.
Ship's Name S/S GUNDBORG SEGRELL Nationality and Port of Registry Swedish Official Number 7277 Gross Tonnage 1435 Date of Build 1914-6
Moulded Dimensions: Length 242' 10" Breadth 38' 0" Depth 18' 0"
Moulded displacement at moulded draught = 85 per cent. of moulded depth 3040 tons
Coefficient of fineness for use with Tables .756

Depth for Freeboard (D) Moulded depth 18' 00"
Stringer plate04
Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$ ✓
Depth for Freeboard (D) = 18' 04"
Depth correction
(a) Where D is greater than Table depth
(D-Table depth) R = (18' 04" - 16' 19") 1' 85" = + 3' 45"
(b) Where D is less than Table depth (if allowed)
(Table depth-D) R = ✓
If restricted by superstructures ✓
Round of Beam correction
Moulded Breadth (B) 38'
Standard Round of Beam = $\frac{B \times 12}{50} =$ 9' 12"
Ship's Round of Beam = 9' 12"
Difference 38'
Restricted to ✓
Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) =$ $\frac{38^2}{4} \times .30 = - 1' 03"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>17' 10"</u>	<u>17' 83"</u>	<u>3' 3' 7"</u>		<u>17' 83"</u>
" overhang ...	<u>✓</u>				
R.Q.D. enclosed ...	<u>78' 5"</u>	<u>78' 42"</u>	<u>3' 9"</u>	<u>x 3' 75"/3.952</u>	<u>74' 41"</u>
" overhang ...	<u>✓</u>				
Bridge enclosed...	<u>49' 10"</u>	<u>49' 83"</u>	<u>7'</u>		<u>44' 85"</u>
" overhang aft ...	<u>6' 0"</u>				<u>49' 83"</u>
" overhang forward	<u>✓</u>				
F'cle enclosed ...	<u>23' 9"</u>	<u>23' 75"</u>	<u>7'</u>		<u>23' 75"</u>
" overhang ...	<u>✓</u>				
Trunk aft ...	<u>✓</u>				
" forward ...	<u>✓</u>				
Tonnage opening aft ...	<u>✓</u>				
" " forward	<u>✓</u>				
Total ...	<u>169' 83"</u>	<u>169' 83"</u>			<u>165' 82"</u> <u>160' 82"</u>

Standard Height of Superstructure 6' 00"
" " R.Q.D. 3' 952"
Deduction for complete superstructure 30' 28"
Percentage covered $\frac{S}{L} =$ 69.97%
" " $\frac{S_1}{L} =$ 69.97%
" " $\frac{E}{L} =$ 66.26% 68.30%
Percentage from Table, Line A. 56.64% 60.11%
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. ✓
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required) ✓
Deduction = 30' 28" x .5664 = - 17' 15"
.6011 - 18' 20"

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>34' 28"</u>	1		<u>34' 28"</u>	<u>42' 00"</u>	<u>42' 00"</u>	1		<u>42' 00"</u>
1/4 L from A.P. ...	<u>15' 26"</u>	4		<u>61' 04"</u>	<u>18' 17"</u>	<u>18' 17"</u>	4		<u>72' 68"</u>
1/2 L " ...	<u>3' 77"</u>	2		<u>7' 54"</u>	<u>4' 54"</u>	<u>4' 54"</u>	2		<u>9' 08"</u>
Amidships ...	<u>✓</u>	4		<u>✓</u>	<u>✓</u>	<u>✓</u>	4		<u>✓</u>
3/4 L from F.P. ...	<u>7' 54"</u>	2		<u>15' 08"</u>	<u>9' 08"</u>	<u>9' 08"</u>	2		<u>18' 16"</u>
3/4 L " ...	<u>30' 51"</u>	4		<u>122' 04"</u>	<u>36' 33"</u>	<u>36' 33"</u>	4		<u>145' 32"</u>
F.P. ...	<u>68' 56"</u>	1		<u>68' 56"</u>	<u>84' 00"</u>	<u>84' 00"</u>	1		<u>84' 00"</u>
Total ...	<u>308' 52"</u>			<u>308' 54"</u>					<u>371' 24"</u>

Mean actual sheer aft = Excess
Mean standard sheer aft
Mean actual sheer forward = Excess
Mean standard sheer forward
Length of enclosed superstructure forward of amidships = 104
" " aft of " = 500

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ $\frac{62' 70"}{18} (.75 - .35) = - 1' 39"$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.
Depth to Freeboard Deck = 18' 04"
Summer freeboard = 1' 37"
Moulded draught (d) = 16' 58"
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4' 14" 105' 7"
Addition for Winter North Atlantic Freeboard (if required) = 51' 11" ✓
Deduction for Fresh Water.
Displacement in salt water at summer load water line
 $\Delta =$
Tons per inch immersion at summer load water line
T = 105' 7"
Deduction = $\frac{\Delta}{40 T}$ inches = 106' 11"
TABULAR FREEBOARD corrected for Flush Deck (if required)
Correction for coefficient $\frac{68' 756}{1.36} = \frac{1.436}{1.36}$
Depth Correction 3' 45" 18' 20"
Deduction for superstructures - 17' 45"
Sheer correction - 1' 39"
Round of Beam correction - .03"
Correction for Thickness of Deck amidships - -
Other corrections, scantlings, etc. - 19' 68" 16' 17"
Summer Freeboard = 17' 46" 16' 41"

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:— 16' 41" 417 mm

Tropical Fresh Water Line above Centre of Disc ...	<u>212 mm</u>	Tropical Fresh Water Freeboard ...	<u>205 "</u>
Fresh Water Line " " ...	<u>106 "</u>	" Fresh Water " " ...	<u>311 "</u>
Tropical Line " " ...	<u>106 "</u>	" Tropical " " ...	<u>311 "</u>
Winter Line below " " ...	<u>106 "</u>	" Winter " " ...	<u>523 "</u>
Winter North Atlantic Line " " ...	<u>157 "</u>	" Winter North Atlantic " " ...	<u>574 "</u>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway			Hatch No. 1, 2, 3 & 4.	Hatch under Fore-le.	Hatches within bridge space	Coal hatch on bridge deck	Coal hatch on foredeck (7'6" high)	Hatch on poop		
Dimensions of Hatchway			24'-11" x 18'-0"	3'-6" x 2'-0"	19'-2" x 2'-3"	1'-9" x 4'-0"	3'-8" x 11'-0"	2'-4" x 2'-6"		
COAMINGS	{	Height above Deck	31 1/2"	3 1/2"	8"	18"	3 1/8"	18"		
		Thickness { Sides	46	38"	40"	36"	32"	30"		
			Ends	40	38"	40"	36"	32"	30"	
		Stiffeners	6' x 3" x 40' 5"	✓	✓	✓	✓	✓	✓	
Brackets, Stays		None fitted	✓	✓	✓	✓	✓	✓		
HATCH BEAMS	{	Number	4	FITTER	Deck beams carried through.	fitted.	do	FITTER.		
		Spacing	ab. 5'							
		Scantling and Sketch	4' x 3 1/4" x 40'							
		Angles: Web: Flange:	24" x 34" 6"							
Bearing Surface		3 1/2"	✓	✓	✓	✓	✓			
FORE AND AFTERS	{	Number	None	ONE	None	None.	do	None.		
		Spacing								
		Unsupported Lengths								
		Scantling* and Sketch								
Bearing Surface		fitted.	✓	✓	✓	✓	✓			
HATCH COVERS	{	Material	Wood.	Wood.	Wood.	Wood.	Wood.	Wood.		
		Thickness	3"	3"	2 1/2"	2 1/2"	2 1/2"	2 1/2"		
		How fitted	F. & A.	Ashwsh.	Ashwsh.	F. & A.	F. & A.			
		Bearing Surface	3"	3"	3"	2 1/2"	2 1/4"			
Spacing of Cleats		24"	21"	None.	15"	18"	16"			
Number of Tarpaulins		2.	2.	None.	2.	2.	2.			

*Are wood fore and afters steel shod at all bearing surfaces? None fitted.
Are battens and wedges efficient and in good condition? yes!
Are tarpaulins in good condition and in accordance with rule requirements? yes!
Are lashings provided in accordance with rule requirements? yes!

Particulars of fiddley, funnel and ventilator coamings:—All openings in fiddley top are fitted with strong, hinged steel covers. Vents to engine and boiler space and funnel on top of the 7'6" high fiddley casing in good condition.

Particulars of Flush Bunker Scuttles:— *None fitted.*

Particulars of Companionways: — Steel companionway on poop leading to crew's quarter. $3'6'' \times 5'0'' \times 5'11''$ having a wood door $4'1'9''$ at after end with a sill of $15''$ above wood deck.

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

File. 2 off 15" diam 35 1/2" x 30" coam.

After wall. 4¹¹ - 15⁻ - 46⁻ x 40⁻ coam, well protected & stiff. } Woodplugs & canvas covers fitted for all vents.
Posn 2 - 8 - 36⁻ x 25⁻ coam.

Роща 2 - 8 - 36 x 25 саж.

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

Height from deck to opening, at Fife 8', Canvas covers supplied for all airpipes.

Forwell 3 $\frac{1}{2}$ "
R. a deck 2 $\frac{1}{2}$ "
Poop. 7"

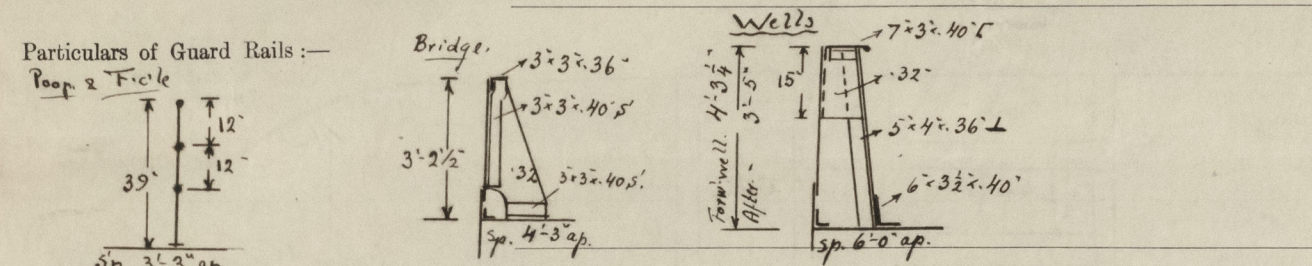
Particulars of Gangway Cargo and Coaling Ports:— *None fitted.*

Particulars of Scuppers and Sanitary Discharge Pipes — No scuppers below freeboard deck.
Sanitary Discharge pipes fitted with N. R. Valves

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Particulars of Side Scuttles: *Strong, hinged deadlights are fitted to all side lights in ship's side.*

Particulars of Guard Rails :—



Particulars of Gangways, Lifelines, etc.:—lifelines can be fitted from crew's quarter to bridge; wire rope through eyes in portable staunches.

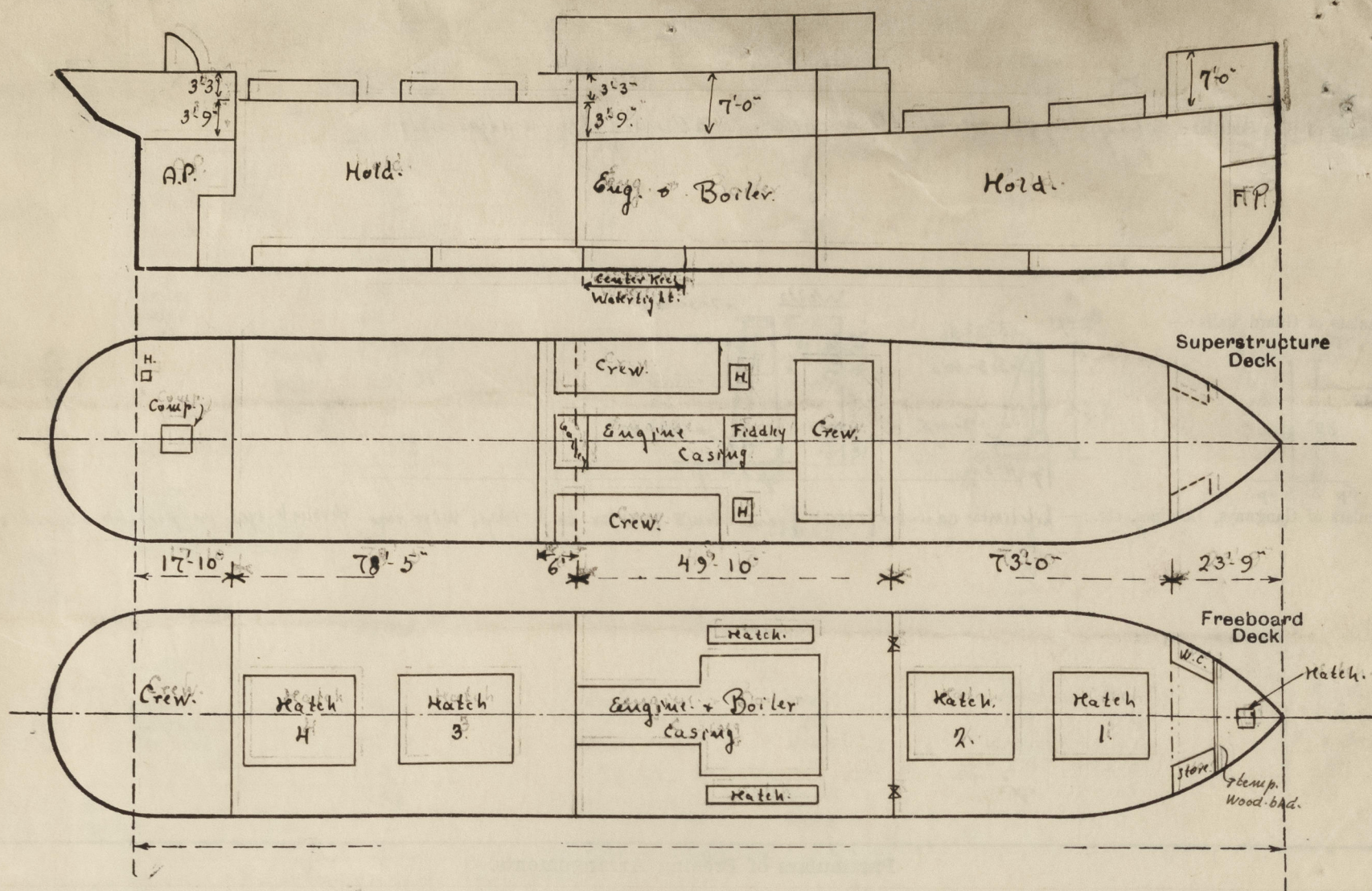
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	78' 5"	3' 5"	30" x 19"	4	15.80 ft	15.68 ft
Forward Well	73' 0"	4' 3 1/4"	1 off 30" x 20" 3 - 30" x 19"	4	16 ft	14.6 ft
<p>State position of each freeing port } After Well:— 61' 10" 42' 9" 23' 5" 6' 8" 18"</p> <p>(E. and A. position and height above deck edge) } Forward Well:— 18" 2' 0" 24' 2" 44' 0" 61' 4" 51' 12"</p> <p>State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Balanced steel shutters and one horizontal bar</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	✓		wood lining			No openings	✓	3'3" above R.Q. deck
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	None.	34"	4b 15"x.40" with 4" flange	3'-11"	Bracketed Top & Bottom.	No openings	✓	3'-5" above R.Q. deck
Bridge, Forward Bulkhead	18"x.38"	32"	8"x3"x.48" 5	30"	- do -	4'3"x3'0"	18"	7'0"
Forecastle Bulkhead	✓							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super-structure Decks	18"x.32"	30"	5" 5"x3"x.32" 3"x2"x.30"	27"	By 2 nd bck. at top No. bolt. att.	4'8"x1'11"	20"	7'6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	18"x.36"	32"	4"x3"x.40"	27"	No att.	No openings	✓	7'0"
Deckhouses on Flush Deck Ships ...	✓							

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

Poop Bulkhead	...	...	No openings.
Raised Quarter Deck Bulkhead	...	...
Bridge, After Bulkhead	...	...
Bridge, Forward Bulkhead	...	...	Steel plates with hook bolts (thru' port pl. only) spaced 9" ap. Manup. from outside only. <i>Class I Appliances</i>
Forecastle Bulkhead	...	...
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...	...
Exposed Machinery Casings on Superstructure Decks	...	...	Hinged steel doors cap. of being man. fr. both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	No openings
Beckhouses 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 shown on the following sketches:—



No sheathing in way of freeboard marking.

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

Timber deck freeboard. The ship is fitted with poop. - Centerkeel watertight as shown on sketch above. Bulwark is fitted in forward well and on R.A. deck for particulars please see page 3.

Sockets for Uprights. Spaced 7'9" apart centre to centre.

Ringbolts for lashings riveted to sheerstrake and spaced 7'9" apart.

Steering lead running under horizontal bulb stiffeners on hatch 3 & 4.

Hand steering gear fitted aft on poop.

PS. As the vessel was moored alongside the quay & another vessel was lying on the outer side it was not possible to measure the sheers.

Builder's name and yard number. Antwerp Eng. Co. Ltd., Hoboken. Yard N° 68.

Names of sister ships.

Owners. Augf A/B. Kjell (H. Jeansson, Mgr.), Kalmar, Sweden.

Fee Sw. Kr. 170.00

Received by me



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