

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

25 MAY 1932
Index. No. 22545
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having poop, bridge and forecsts

(Type of Superstructures.)

Ship's Name Runmarö Nationality and Port of Registry Swedish Stockholm Official Number 7601 Gross Tonnage 2876 Date of Build 1912

Moulded Dimensions: Length 314.0 Breadth 46.33 Depth 23.46
Moulded displacement at moulded draught = 85 per cent. of moulded depth 6615 tons
Coefficient of fineness for use with Tables .798

Port of Survey Stockholm
Date of Survey 23 31 14 29 32
Name of Surveyor K. J. Andersson
Particulars of Classification +100 A1
A. No. 3 - A. 25

Depth for Freeboard (D)
Moulded depth ... 23.46
Stringer plate43
Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
Depth for Freeboard (D) = 23.50

Depth correction
(a) Where D is greater than Table depth
(D-Table depth) R = $(23.50 - 20.93) 2.415$
 $2.57 \times 2.415 = +6.21$
(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) 46.33
Standard Round of Beam = $\frac{B \times 12}{50} = 11.12$
Ship's Round of Beam = 11.5
Difference Excess .38
Restricted to
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.38}{4} \left(1 - \frac{.5043}{.4957} \right) = -.05$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	<u>24.5</u>	<u>24.50</u>	<u>7.0</u>		<u>24.5</u>	Standard Height of Superstructure <u>6.64</u>
" overhang ...						" " R.Q.D. <u>✓</u>
R.Q.D. enclosed ...						Deduction for complete superstructure <u>36.27</u>
" overhang ...						Percentage covered $\frac{S}{L} = 50.16$
Bridge enclosed...	<u>97.92</u>	<u>97.92</u>	<u>7.5</u>		<u>97.92</u>	" $\frac{S_1}{L} = 49.57$
" overhang aft ...						" $\frac{E}{L} = 49.57$
" overhang forward						Percentage from Table, Line A. -
F'cle enclosed <u>Open</u> ...	<u>35.08</u>	<u>33.24</u>	<u>7.0</u>		<u>33.24</u>	(corrected for absence of forecsts) -
" overhang ...						Percentage from Table, Line B. <u>35.63</u>
Trunk aft ...						(corrected for absence of forecsts) -
" forward ...						Interpolation for bridge less than .2L (if required) -
Tonnage opening aft						Deduction = $36.27 \times .3563 = 12.92$
" " forward						
Total ...	<u>157.50</u>	<u>155.66</u>			<u>155.66</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<u>41.40</u>	1		<u>41.40</u>	<u>42.00</u>	<u>42.00</u>	1		<u>42.00</u>	Mean actual sheer aft = <u>Excess</u>
$\frac{1}{4}$ L from A.P. ...	<u>18.43</u>	4		<u>73.72</u>	<u>18.8</u>	<u>18.37</u>	4		<u>73.48</u>	Mean actual sheer forward = <u>Excess</u>
$\frac{2}{4}$ L " ...	<u>4.55</u>	2		<u>9.10</u>	<u>5.5</u>	<u>4.59</u>	2		<u>9.18</u>	Mean standard sheer forward
Amidships ...	-	4		-	0	-	4		-	Length of enclosed superstructure forward of amidships = <u>.157</u>
$\frac{3}{4}$ L from F.P. ...	<u>9.11</u>	2		<u>18.22</u>	<u>12.25</u>	<u>10.12</u>	2		<u>20.24</u>	" " aft of " = <u>.154</u>
$\frac{1}{4}$ L " ...	<u>36.84</u>	4		<u>147.36</u>	<u>42.5</u>	<u>40.49</u>	4		<u>161.96</u>	
F.P. ...	<u>82.80</u>	1		<u>82.80</u>	<u>93.0</u>	<u>93.00</u>	1		<u>93.00</u>	
Total ...				<u>372.60</u>					<u>399.86</u>	
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{372.60 - 399.86}{18} \left(.75 - \frac{.4992}{.4957} \right) = - .756$										
If limited on account of midship superstructure. 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.
Depth to Freeboard Deck = 23.50
Summer freeboard = 3.62
Moulded draught (d) = 19.88
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4.97
Addition for Winter North Atlantic Freeboard (if required) = 2

Deduction for Fresh Water.
Displacement in salt water at summer load water line $\Delta = 6625$
Tons per inch immersion at summer load water line $T = 30.46$
Deduction = $\frac{\Delta}{40T}$ inches = 5.44

TABULAR FREEBOARD corrected for Flush Deck (if required)
Correction for coefficient $\frac{.798 + .68}{1.36} = \frac{1.478}{1.36}$

	+	-
Depth Correction	<u>6.21</u>	
Deduction for superstructures		<u>12.92</u>
Sheer correction		<u>.76</u>
Round of Beam correction		<u>.05</u>
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	<u>6.21</u>	<u>13.73</u>
Summer Freeboard	<u>43.46</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>10.41</u>	Tropical Fresh Water Freeboard ...	<u>2.905</u>
Fresh Water Line " " ...	<u>5.44</u>	Fresh Water " " ...	<u>3.202</u>
Tropical Line " " ...	<u>4.97</u>	Tropical " " ...	<u>3.249</u>
Winter Line below " " ...	<u>4.97</u>	Winter " " ...	<u>4.043</u>
Winter North Atlantic Line " " ...	<u>4.97</u>	Winter North Atlantic " " ...	<u>4.243</u>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	1	2	3	4	5	Poop hatch to Store	Hatch to gal. shoot	Bunker hatch on bridge deck	Hatch on deck to forepeak
Dimensions of Hatchway	80'-5" x 17'-0"	86'-6" x 17'-0"	12'-3" x 14'-0"	24'-6" x 17'-0"	24'-6" x 17'-0"	8' x 10'	6'-5" x 17'-5"	3'-4" x 7'-8"	3' x 4'
COAMINGS	Height above Deck	39"	40"	31"	39"	30"	7'-5"	31"	9' BA
	Thickness Sides	.46"	.50"	.40"	.48"	.36"	.40"	.32"	.40"
	Stiffeners	none	.40"	.36"	.40"	.36"	.40"	.32"	.40"
	Brackets, Stays	1/2" x 4/8" plates	3	none	3	none	none	none	none
HATCH BEAMS	Number	3	5	2	4	1			
	Spacing	8'-2"	4'-6"	4'-2"	5'-0"	5'-0"			
	Scantling and Sketch	1 1/2" x 3 1/2"	1 1/2" x 3 1/2"	1 1/2" x 3 1/2"	Same as no. 1	3 x 3 x 3 1/2"			
	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3"			
FORE AND AFTERS	Number		none						
	Spacing								
	Unsupported Lengths								
	Scantling* and Sketch								
HATCH COVERS	Material	Wood				Wood	Wood	Wood	
	Thickness	3"				2 1/2"	2"	2"	
	How fitted								
	Bearing Surface	3"				2 1/2"	2 1/2"	2"	
Spacing of Cleats	24"					22"	26"	20"	24"
Number of Tarpaulins	2					2	2	2	2

*Are wood fore and afters steel shod at all bearing surfaces? - yes
 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: -

Fiddley openings: 10.6' x 3.5' + 8.0' x 2.17' + 6.0' x 1.4' on top of casing. 3' angle coaming. Steel covers with hinges and means for securing fitted. Ventilators to boiler room, port and starb. 35" diam. 18" thick. 10' high from top of casing.

Particulars of Flush Bunker Scuttles: -

none

Particulars of Companionways: -

On fore-castle: Steel house with hinged steel door 4' x 2' at aft end, sill 12" steel to crews quarter. The door can be closed and secured from both sides.

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

Free board deck: 4 to cargo holds forward and 4 ditto to cargo holds aft, height of coaming 36" diam. 15", thickness 3" about. Two ventilators on bridge deck height 30", diam. 14", thickness 3". One ventilator to funnel height 36", diam. 10", thickness 25". Rivets in deck angles 4' x 4 1/2" apart. Wood covers and tarpaulins for closing fitted.

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

4- 2" air pipes on freeboard deck 40" high goose neck. Wood plugs will be fitted for closing. means of closing provided

Particulars of Gangway Cargo and Coaling Ports: -

None

Rpt. 9a.

Port of STOCKHOLM.

Freeboard Continuation of Report No. C11 dated 20th May, 1932 on the

25 MAY 1932

S.S. "RUNMARÖ".

Load Line for Timber Deck Cargoes.

Double Bottom Tanks. - Nos. 3 & 4 - watertight centredivision.

Bulwark. - This ship is fitted with a permanent steel bulwark 4' high in wells forward and aft, stiffened at the upper edge by 6 1/2" x 3" x 36" BA and supported by 8" x 40" B plate stays, spaced 5'-8" apart, efficiently lugged to the steel deck.

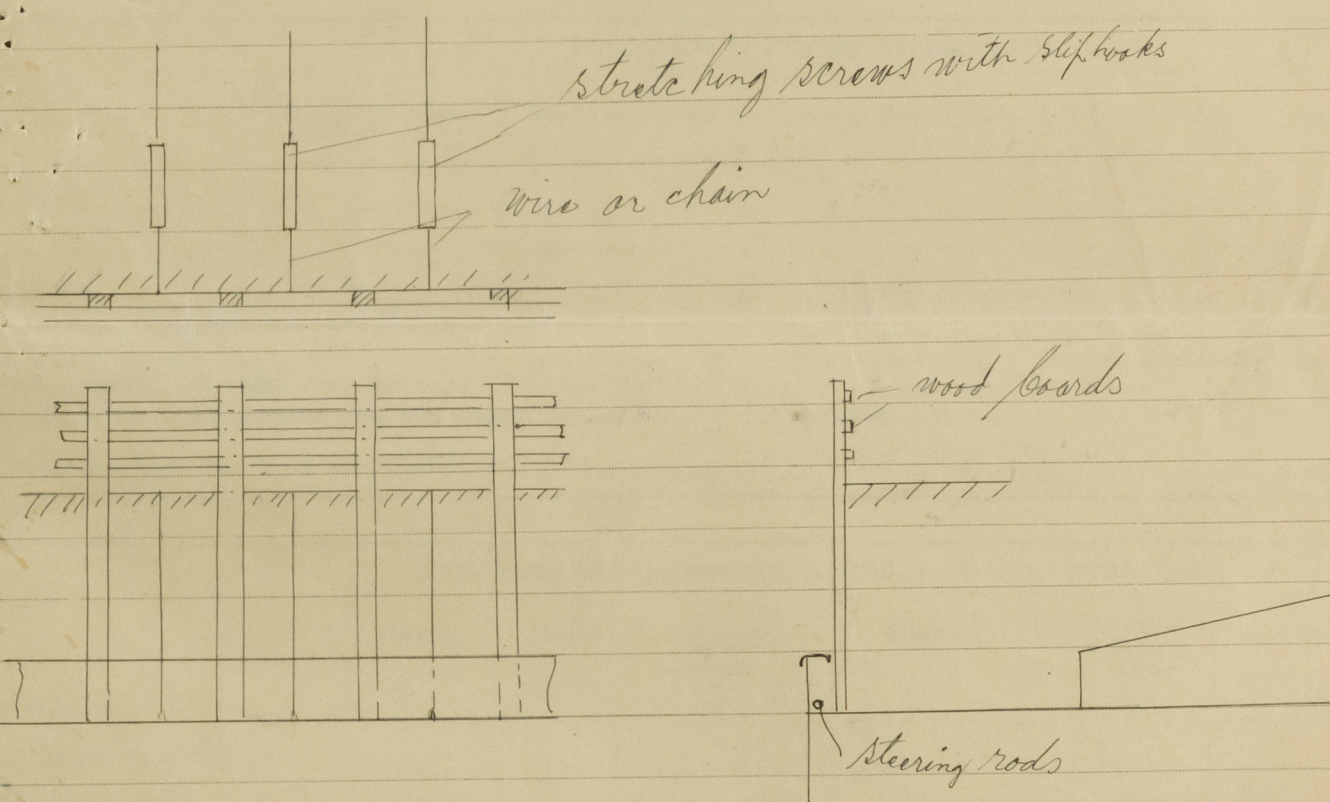
Life lines. - On top of timber deck cargo are stated to be arranged as shown on the sketch below.

Steering gear. - Steering rods and chains protected by wood casings when carrying deck cargo. A hand steering gear is placed on poop for emergency purposes, clear of deck cargo.

Uprights. - Angle sockets will be fitted and riveted to stringer plates and spaced in accordance with regulations.

Lashings. - Eye plates for lashings will be fitted and riveted to sheer strake and spaced in accordance with regulations.

The sketch below is stated to be the arrangement of securing the timber deck cargo.



H. J. Andersson

Particulars of Scuppers and Sanitary Discharge Pipes —

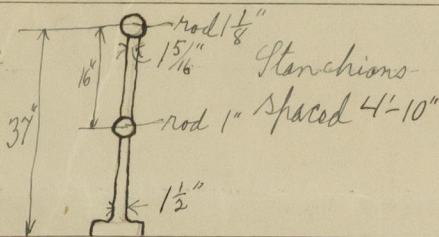
The discharge pipes are led through the ship's sides above the freeboard deck.

Particulars of Side Scuttles:

The side scuttles in crewspaces are above the freeboard deck and fitted with deadlights permanently attached in their proper positions.

Particulars of Guard Rails:—

On poop, bridge and fore-castle



Particulars of Gangways, Lifelines, etc. :—

Crews i fore-castle: Ship's shore-connecting gangway will be laid between no. 1 & 2 hatch ways, also life lines as convenient. one provided.

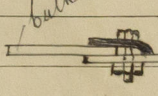
Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	84'	4'	30.5 x 15.5	4	13.2 sq ft	
Forward Well	72.5'	4'	30.5 x 15.5	4	13.2 sq ft	
State position of each freeing port } After Well:— 29'-52'-8"; 69'-7"; 76'-3" from poop front: lower edge 10.5" above deck. (F. and A. position and height above deck edge) } Forward Well:— 7'-9"; 13'-8"; 26'-4"; 46'-9" bridge 12.0" State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— <u>hinged shutters and one rail to each.</u> Additional area where sheer is less than standard. <u>One mooring pipe, starb. and port, in each well.</u>						

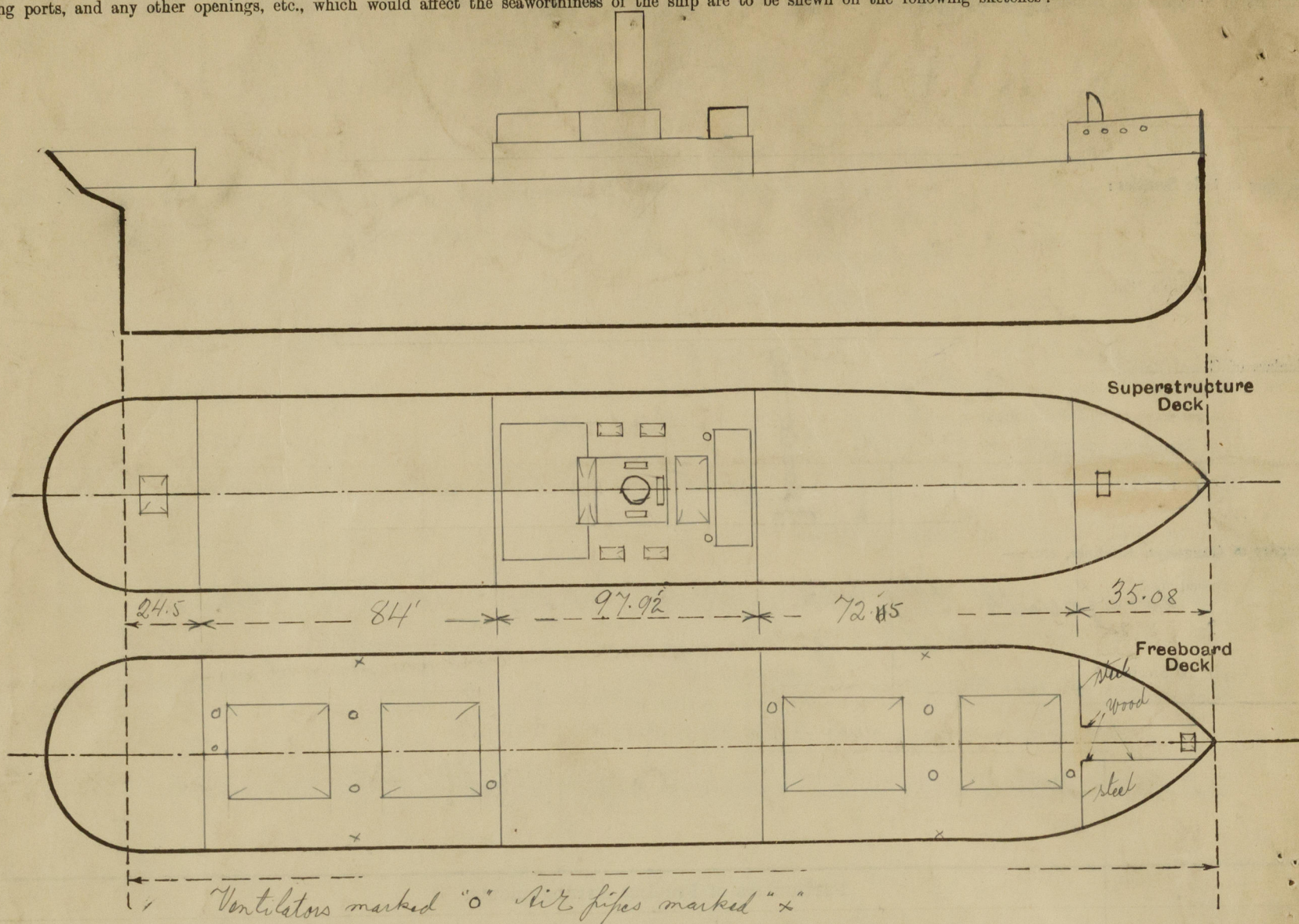
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	20" x 40"	.32"	6" x 3 1/2" x 36" BA	30"	none	63" x 36.5"	20"	7.0'
Raised Quarter Deck Bulkhead ...	—							
Bridge, After Bulkhead	none	.32"	3" x 3" x 36"	36"	none	90" x 36.5"	none	7.5'
Bridge, Forward Bulkhead	23" x 40"	.32"	9" x 3" x 40" BA	31"	Brackets top and bottom	52" x 33"	24"	7.5'
Fore-castle Bulkhead	none	.32	3" x 3" x 32"	24"	none	53" x 23"	17"	7.0'
Trunk, Aft	none	Wood	none	—	none	60" x 22.5"	10"	7.0'
Trunk, Forward								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks	19" x 36"	.32"	3" x 3" x 32"	33"	none	52" x 22"	19"	7.25'
Machinery Casings within Superstructures not fitted with Class I Closing Appliances			Engine casing protected by deck-house.					
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead	Portable plates, with bolts not passing through bkd., spaced 12" apart.	
Raised Quarter Deck Bulkhead ...	—	
Bridge, After Bulkhead	Portable plates with hook bolts, not passing through bulkhead, spaced 12" apart, operated from outside.	
Bridge, Forward Bulkhead	Steel doors with hinges and hook bolts not passing through bulkhead, " 17" - <u>Class I closing</u>	
Fore-castle Bulkhead	Steel doors to fore-castle houses, wood doors to crew spaces in fore-castle all doors with handle openings from both sides.	
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	One steel door, on starb. and 2 ditto on port side, to boiler room with handle opening from both sides.	
Exposed Machinery Casings on Super-structure 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:—



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

For timber deck cargo please see attached sheet.

Kel 14

85% wld D - 19.94 - 19.11 1/2 - 20'-1 BK.
Summ. wld - 19.88 - 19-10 1/2 - 20'-0 1/2 BK.

from Scale cut $\Delta = 4750 + 1898 = 6648 = 6615$ wld.
cut $\Delta = 6648 - (\frac{3}{4} \times 30.46) = 6625$.

Builder's name and yard number

W. Gray & Co. Ltd. West Hurtlepool, Yard no. 809

Names of sister ships

Owners

Rederiaktieb. Rex. Stockholm

Fee £

Kr. 240.00

Received by me



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