

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index. No. **15378**  
(For London Office only.)

14 SEP 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having *forecastle, bridge and poop.*

(Type of Superstructures.)

Ship's Name *"EQUATOR"* Nationality and Port of Registry *Italian Trieste* Official Number *623* Gross Tonnage *4248* Date of Build *1901-11*

Moulded Dimensions: Length *109.548* Breadth *14.22* Depth *9.424*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *10410* tonnes

Coefficient of fineness for use with Tables *.790*

Port of Survey *Helmingfors*Date of Survey *29/8 32*Name of Surveyor *John Taylor*Particulars of Classification *WDAI*  
*S.S. Hull No. 3-227*  
*S.S. Reg. No. 1-31*

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... <i>9.424</i>	(a) Where D is greater than Table depth (D-Table depth) R = $8.33(9.424-7.300)27.67$ $= + 4.93$	Moulded Breadth (B)
Upper plate ... <i>13</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = $\checkmark$	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{295}{50} = 5.9$
Nothing on exposed deck		Ship's Round of Beam = $300\%$
$P \left( \frac{L-S}{L} \right) = \checkmark$		Difference <i>10 excess</i>
Depth for Freeboard (D) = <i>9.437</i>	If restricted by superstructures $\checkmark$	Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{10}{4} \times .5458 = -1.36$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>8.73</i>	<i>8.73</i>	<i>2.28</i>		<i>8.73</i>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	<i>30.45</i>	<i>30.45</i>	<i>2.24</i>		<i>30.45</i>
" overhang aft ...					
" overhang forward ...					
W'cle enclosed ...	<i>10.59</i>	<i>10.59</i>	<i>2.28</i>		<i>10.59</i>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	<i>49.77</i>	<i>49.77</i>			<i>49.77</i>

Standard Height of Superstructure *2165*" " R.Q.D.  $\checkmark$ Deduction for complete superstructure *998*Percentage covered  $\frac{S}{L} = 45.42\%$ " "  $\frac{S_1}{L} = 45.42\%$ " "  $\frac{E}{L} = 45.42\%$ Percentage from Table, Line A.  
(corrected for absence of forecastle (if required))Percentage from Table, Line B.  
(corrected for absence of forecastle (if required)) *32.11%*

Interpolation for bridge less than 2L (if required)

Deduction =  $998 \times 32.11 = -320.7$ 

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	<i>1167</i>	<i>1</i>		<i>1167</i>	<i>1371</i>	<i>1371</i>	<i>1</i>		<i>1371</i>
from A.P. ...	<i>518</i>	<i>4</i>		<i>2072</i>	<i>461</i>	<i>461</i>	<i>4</i>		<i>1844</i>
" ...	<i>130</i>	<i>2</i>		<i>260</i>	<i>115</i>	<i>115</i>	<i>2</i>		<i>230</i>
amidships ...	<i>✓</i>	<i>4</i>		<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>4</i>		<i>✓</i>
from F.P. ...	<i>260</i>	<i>2</i>		<i>520</i>	<i>248</i>	<i>248</i>	<i>2</i>		<i>496</i>
" ...	<i>1036</i>	<i>4</i>		<i>4144</i>	<i>993</i>	<i>993</i>	<i>4</i>		<i>3972</i>
" ...	<i>2334</i>	<i>1</i>		<i>2334</i>	<i>2286</i>	<i>2286</i>	<i>1</i>		<i>2286</i>
Total ...				<i>10499</i>					<i>10199</i>

Mean actual sheer aft = *Deficient*  
Mean standard sheer aftMean actual sheer forward = *Deficient*  
Mean standard sheer forwardLength of enclosed superstructure forward of amidships =  
" " aft of " = } *Does not apply.*Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{300}{18} \left( .75 - \frac{.2274}{.5224} \right) = + 9.7$ If limited on account of midship superstructure.  $\checkmark$ 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 = *9.437*

Summer freeboard = *18.08*

Moulded draught (d) = *7.629*

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{48}$  inches = *15.9%*Addition for Winter North Atlantic Freeboard (if required)  $\checkmark$ 

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 

Tons per inch immersion at summer load water line

T =

Deduction =  $\frac{\Delta}{40 T}$  inches= *15.9%*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.79 + .68}{1.26} = \frac{1.47}{1.26}$ 

	+	-
Depth Correction ...	<i>4.93</i>	
Deduction for superstructures ...		<i>320</i>
Sheer correction ...	<i>9</i>	
Round of Beam correction ...		<i>1</i>
Correction for Thickness of Deck amidships ...		
Other corrections, scantlings, etc. ...		
	<i>502</i>	<i>321</i>

Summer Freeboard = *18.08*SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, *Wood*, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ...	<i>3.18%</i>
Fresh Water Line " " ...	<i>15.9%</i>
Tropical Line " " ...	<i>15.9%</i>
Winter Line below " " ...	<i>15.9%</i>
Winter North Atlantic Line " " ...	$\checkmark$

Tropical Fresh Water Freeboard ...	<i>18.08%</i>
Fresh Water " " ...	<i>16.49%</i>
Tropical " " ...	<i>16.49%</i>
Winter " " ...	<i>19.67%</i>
Winter North Atlantic " " ...	$\checkmark$

# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS																		
Coal Hatch																		
Description of Hatchway		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Dimensions of Hatchway		1.1x0.9	0.5x0.6	6.77x4.83	7.3x4.83	2.84x4.83	1.08x0.88	1.75x0.9	1.32x4.83	2.43x4.83	7.3x4.83	6.77x4.83	2.46x2.80	2.42x4.83	1.08x0.88	1.75x0.9	1.13x0.88	1.16x4.42
COAMINGS	Height above Deck	0.25m	0.25	0.8	0.8	0.46	0.46	0.46	1.46	0.74	0.74	0.74	0.47	0.4	0.38	0.38	0.24	0.38
	Thickness	10	10	12	12	12	11	11	8	12	12	12	10	12	11	11	10	11
	Sides	10	10	12	12	12	11	11	8	12	12	12	10	12	11	11	10	11
	Ends	10	10	12	12	12	11	11	8	12	12	12	10	12	11	11	10	11
Stiffeners	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Brackets, Stays	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
HATCH BEAMS	Number	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—
	Spacing	—	—	2.25	2.4	—	—	—	—	—	—	—	—	—	—	—	—	—
	Scantling and Sketch	—	—	75x75x10	75x75x10	—	—	—	—	—	—	—	—	—	—	—	—	—
	Bearing Surface	—	—	85	85	—	—	—	—	—	—	—	—	—	—	—	—	—
FORE AND AFTERS	Number	—	—	3	3	—	—	—	—	—	—	—	—	—	—	—	—	3
	Spacing	—	—	2.25	2.43	—	—	—	—	—	—	—	—	—	—	—	—	1.13
	Unsupported Lengths	—	—	75x75x10	75x75x10	—	—	—	—	—	—	—	—	—	—	—	—	1.16
	Scantling* and Sketch	—	—	210x11	210x11	—	—	—	—	—	—	—	—	—	—	—	—	—
HATCH COVERS	Material	Wood	Wood	Wood	See No. 3	See No. 3	Wood	Wood	Wood	Wood	See No. 3	See No. 3	Wood	Wood	Wood	Wood	Wood	Wood
	Thickness	60mm	50	75	See No. 3	See No. 3	75	50	60	60	See No. 3	See No. 3	65	75	60	60	60	60
	How fitted	Attnw.	One	Attnw.	See No. 3	See No. 3	Attnw.	Attnw.	f. 4a	Attnw.	See No. 3	See No. 3	Attnw.	Attnw.	Attnw.	Attnw.	Attnw.	Attnw.
	Bearing Surface	50mm	50	50	See No. 3	See No. 3	50	60	60	55	See No. 3	See No. 3	50	50	50	50	55	70
Spacing of Cleats		650mm	280	590	600	580	430	500	510	520	See No. 3	See No. 3	530	520	430	500	750	600
Number of Tarpaulins		1	1	3	3	3	2	2	2	3	See No. 3	See No. 3	3	2	1	1	1	1
*Are wood fore and afters steel shod at all bearing surfaces?		None wood fore & afters																
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?		Nos. 3, 4, 5, 9, 10 & 11 hatchways fitted with ring bolts.																

Particulars of fiddle, funnel and ventilator coamings:— Fiddle protected by steel covers fitted with hinges. Funnel protected by a steel engine casing 1.4 met. high. 2 vent.  $\phi = 750$  mm, high = 2.0 met and 4 vent.  $\phi = 450$  mm, high 1.5 met placed on the engine casing.

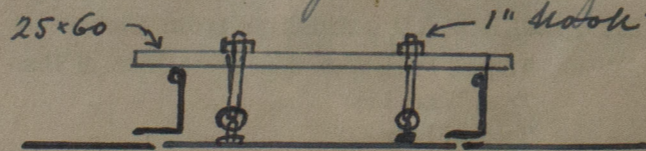
Particulars of Flush Bunker Scuttles:— None fitted

Particulars of Companionways:— One teak door 1310x530x402 in forec. bulkhead fitted with hinges and being closed from both sides with sill 500 high. One teak door 1300x560x402 in bridge aft bulkhead fitted with hinges and being closed from both sides with sill 520 high. One door of pine 1120x480x60 mm in poop bulkhead fitted with hinges and being closed from both sides and with sill 500 mm high.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— On forec. dk. 5 vent.  $\phi = 210$  mm, high = 500 mm and 4 vent.  $\phi = 150$  mm, high 540 mm. On freeb. dk. forward 3 vent.  $\phi = 540$ , high 2500, one vent.  $\phi = 500$ , high 950, one  $\phi = 460$  mm, high 800, and one  $\phi = 600$ , high = 1800. On bridge dk. One vent.  $\phi = 460$ , high = 800. On freeb. dk. aft 2 vent.  $\phi = 580$ , high = 900, 2 vent.  $\phi = 600$ , high = 1800, and one vent.  $\phi = 580$ , high = 900. On poop dk. one vent.  $\phi = 140$ , high 240, one  $\phi = 200$ , high = 540 and one  $\phi = 200$ , high = 2600. All ventilators being closed with wood covers and tarpaulins. X. Apparently supported.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— On forec. dk. 3 air pipes  $\phi = 70$  mm, high = 160 mm. On poop dk. 3 air pipes  $\phi = 80$ , high = 150. All these being closed by wood plugs. All air pipes on freeb. dk fitted with screwed covers 200 mm above the deck.

Particulars of Gangway Cargo and Coaling Ports:— One coaling port on each side in bridge space 520x490 fitted with hinges and being closed from inside.



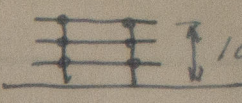
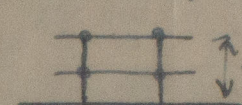
Forward Well	25.58	1.09
State position of each freeing port (F. and A. position and height above deck edge)		
State whether the freeing ports are fitted with shutters, bars, or rails.		
Additional area where sheer is less than standard.		

Particulars of Supers		
	Coaming	Plating
Poop Bulkhead	—	10mm
Raised Quarter Deck Bulkhead	—	—
Bridge, After Bulkhead	—	10
Bridge, Forward Bulkhead	12	10
Forecastle Bulkhead	—	10
Trunk, Aft	—	—
Trunk, Forward	—	—
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	—	—
Exposed Machinery Casings on Superstructure Decks	—	9
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	—	8
Deckhouses on Flush Deck Ships	—	—
Particulars of Closing Appliances (s)		
Poop Bulkhead	Doors of pine 6	
Raised Quarter Deck Bulkhead	2 doors of teak 45mm	
Bridge, After Bulkhead	2 doors closed with	
Bridge, Forward Bulkhead	2 doors of 10mm steel	
Forecastle Bulkhead	5 teak doors 40mm	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	1 door of teak 40mm	
Exposed Machinery Casings on Superstructure Decks	4 doors of steel 8mm	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	—	
Deckhouses on Flush Deck Ships	—	

Particulars of Scuppers and Sanitary Discharge Pipes — 3 scuppers on freeb. dk forward on each side  
 4 " " " " aft " " "  
 4 " " bridge " " " "

4 sanitary discharge pipes each fitted with one common non-return valve.

Particulars of Side Scuttles: All side scuttles in forecabin, bridge and poop spaces fitted with dead-lights.

Particulars of Guard Rails: — on forecabin & bridge dk.  1000 mm  
 on poop dk.  1000 mm

Particulars of Gangways, Lifelines, etc.: — ~~None fitted.~~

Eye bolts fitted to bulkheads and navigation coamings for rigging lifelines

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 ... ..	34.16	1.09	840 x 380	6	1.92	2.09
Forward Well ... ..	25.58	1.09	840 x 380	5	1.6 ✓	1.56
State position of each freeing port ... .. (F. and A. position and height above deck edge) { After Well: — The foremost 1.65 from bridge bulkhead Forward Well: — The aftermost 1.65 " " " " high above State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — fitted with 2 rails deck 0.43 m Additional area where sheer is less than standard. aft and 0.36 forward.						

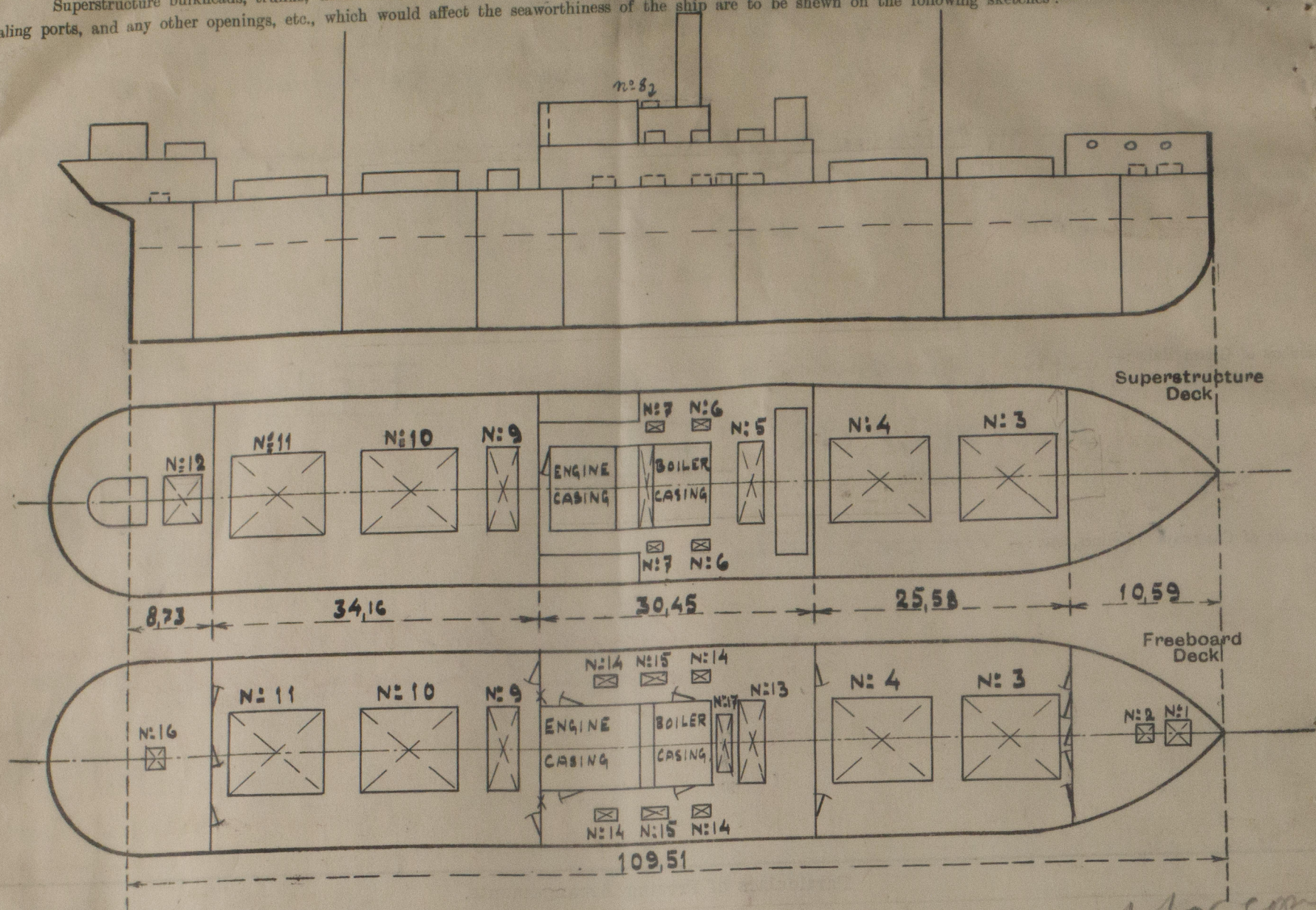
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..	—	10 mm	T flange 100	1.02	450 x 450 x 10	1.74 x 0.88 1.12 x 0.48 0.88 x 0.88	0.36 0.5 0.9	
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ... ..	—	10	"	1.15	none	2 x 2.24 x 1.1 2 x 1.3 x 0.58	0.52	
Bridge, Forward Bulkhead ... ..	12	10	L 180 x 90 x 12	0.78	400 x 400 x 10	2 x 1.5 x 1.05	0.52	
Forecastle Bulkhead ... ..	—	10	T flange 100	1.15	none	5 x 1.31 x 0.56	0.5	
Trunk, Aft ... ..								
Trunk, Forward ... ..								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks ... ..	—	9	"	1.2	none	1 x 1.3 x 0.6	0.5	2.16-1.4
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	—	8	L 200 x 90 x 12	1.2	none	4 x 1.3 x 0.6	0.67	2.24
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead ... ..	Doors of pine 60 mm thick fitted with hinges & being closed from both sides
Raised Quarter Deck Bulkhead ...	2 doors of teak 45 mm thick fitted with hinges & being closed from both sides
Bridge, After Bulkhead ... ..	2 doors closed with steel covers 10 mm and 6 screw bolts
Bridge, Forward Bulkhead ... ..	2 doors of 10 mm steel plate, fitted with hinges & being closed from both sides
Forecastle Bulkhead ... ..	5 teak doors 40 mm thick fitted with hinges & being closed from both sides
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks ... ..	1 door of teak 40 mm thick fitted with hinges & being closed from both sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	4 doors of steel 8 mm thick fitted with hinges & being closed from both sides
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:— The sheer has been measured. Afloat the draught being forward 3.7 m and aft 4.51 m.

The Owners desires to have the freeboards computed in accordance with the International Load Line Convention or to have the old freeboard retained, whichever of these are more favourable.

The Gross Tonnage has been altered by the Finnish measuring authority.

Builder's name and yard number: Turner Whiteley & Co. Ltd.

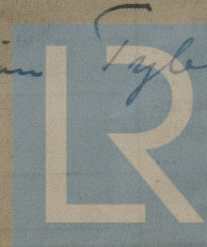
Names of sister ships: ✓

Owners: A/S Finland Amerika Linjen

Fee £ 12 : 15 : 0

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