

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

GLASGOW REPORT No. 52391

 Computation of Freeboard for Steamer, Sailing Ship, Tug
 having a Raised Quarter Deck Bridge & Forecastle
Port of Survey *Grangemouth*Date of Survey *22nd April 1932*Name of Surveyor *A. McQueen*Particulars of Classification *+ 100 A.1.*

Ship's Name

The Viceroy

Nationality and Port of Registry

British Glasgow

Official Number

160243

Gross Tonnage

824

Date of Build

1929-4
 Moulded Dimensions: Length *195.0'* Breadth *30.25'* Depth *14.16'*
 Moulded displacement at moulded draught = 85 per cent. of moulded depth *14.88* tons
 Coefficient of fineness for use with Tables *.734*

Depth for Freeboard (D)

Moulded depth ... *14.16'*Stringer plate ... *R.Q.D. 38"*

Sheathing on exposed deck

$$T \left(\frac{L-S}{L} \right) =$$

Depth for Freeboard (D) = *14.19'*

Depth correction

(a) Where D is greater than Table depth

$$(D - \text{Table depth}) R = (14.19 - 13.00) 1.5 = +1.79$$

(b) Where D is less than Table depth (if allowed)

$$(\text{Table depth} - D) R =$$

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) *30.25'*

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 7.26$$

Ship's Round of Beam = *7.2'*Difference *0.06*

Restricted to

$$\text{Correction} = \frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.24}{4} (1 - .7584) = -.01$$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Peep enclosed ...					
" overhang ...					
R.Q.D. enclosed ...	<i>110.5</i>	<i>110.5</i>	<i>4.0</i>		<i>110.5</i>
" overhang ...					
Bridge enclosed ... side	<i>9.16</i>	<i>10.38</i>	<i>4.5</i>		<i>10.38</i>
" overhang aft	<i>11.0</i>		<i>4.5</i>		
" overhang forward	<i>24.03</i>	<i>24.03</i>	<i>4.25</i>		<i>27.02</i>
File enclosed ...	<i>17.0</i>	<i>2.99</i>	<i>4.25</i>		
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<i>149.66</i>	<i>147.90</i>			<i>147.90</i>

Standard Height of Superstructure *6'*" " R.Q.D. *3.63'*Deduction for complete superstructure *25.5'*Percentage covered $\frac{S}{L} =$ *76.74*" $\frac{S_1}{L} =$ *75.84*" $\frac{E}{L} =$ *75.84*

Percentage from Table, Line A.

(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 = *70.18 × 25.5 = -17.90*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>29.5</i>	1		<i>29.50</i>	<i>30</i>	<i>30.0</i>	1		<i>29.50</i>
1/4 L from A.P. ...	<i>13.13</i>	4		<i>52.52</i>	<i>13</i>	<i>13.07</i>	4		<i>52.52</i>
1/2 L " ...	<i>3.25</i>	2		<i>6.50</i>	<i>3</i>	<i>3.26</i>	2		<i>6.50</i>
Amidships ...		4					4		
3/4 L from F.P. ...	<i>6.49</i>	2		<i>12.98</i>	<i>6</i>	<i>6.19</i>	2		<i>12.38</i>
1/4 L " ...	<i>26.26</i>	4		<i>105.04</i>	<i>25</i>	<i>24.77</i>	4		<i>99.08</i>
F.P. ...	<i>59.0</i>	1		<i>59.00</i>	<i>59</i>	<i>57.00</i>	1		<i>57.00</i>
Total ...				<i>265.54</i>					<i>256.98</i>

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{8.56}{18} (.75 - .3637) = +.17$$

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 = *18.19'*
 Summer freeboard = *4.60'*
 Moulded draught (d) = *13.59'*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *3.40 = 3 1/2"*Addition for Winter North Atlantic Freeboard (if required) = *2"*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = 1721$$

Tons per inch immersion at summer load water line

$$T = 11.66$$

Deduction = $\frac{\Delta}{40 T}$ inches

$$= 3.69$$

$$= 3 3/4$$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{734 + .68}{1.36} \times 22.25 =$

	+	-
Depth Correction ...	<i>1.79</i>	
Deduction for superstructures ...		<i>17.90</i>
Sheer correction ...	<i>.17</i>	
Round of Beam correction ...		<i>.01</i>
Correction for Thickness of Deck amidships ...	<i>48.00</i>	
Other corrections, scantlings, etc. ...		
	<i>49.96</i>	<i>17.91</i>

Summer Freeboard = *45.18'*

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

Tropical Fresh Water Line above Centre of Disc ...	<i>7 1/4</i>
Fresh Water Line " " ...	<i>3 3/4</i>
Tropical Line " " ...	<i>3 1/2</i>
Winter Line below " " ...	<i>3 1/2</i>
Winter North Atlantic Line " " ...	<i>5 1/2</i>

Tropical Fresh Water Freeboard ...	<i>4.0</i>
Fresh Water " " ...	<i>4.3 1/2</i>
Tropical " " ...	<i>4.3 3/4</i>
Winter " " ...	<i>4.10 3/4</i>
Winter North Atlantic " " ...	<i>5.0 1/4</i>

30 APR 1932

MARKING FORM

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14 SEP 1933

RECEIVED 28 MAY 1932

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway			N ^o 1	N ^o 2	Hatch to Fore peak	Bunker Hatch on Coaming Top				
Dimensions of Hatchway			39'-4" x 16'-6"	36'-8" x 16'-6"	3'-0" x 2'-4"	9'-0" x 16'-6"				
COAMINGS	{	Height above Deck	40 1/2	33"	24"	11"				
		Thickness	{	Sides	.44	.44	.40	.30		
				Ends	.44	.44	.40	.30		
		Stiffeners	none	none	none	none				
Brackets, Stays			4-10" P.B.	4-10" P.B.	none	none				
HATCH BEAMS	{	Number	4	6						
		Spacing	4'-11"	5'-3"						
		Scantling and Sketch	14 1/2 x 35	15 x 35						
		Steel I	3 1/2 x 3 x 44	3 1/2 x 3 x 44	none					
Bearing Surface			3	3						
FORE AND AFTERS	{	Number								
		Spacing								
		Unsupported Lengths								
		Scantling* and Sketch								
Bearing Surface			none	none	none					
HATCH COVERS	{	Material	H.P.	H.P.	H.P.	H.P.				
		Thickness	2 5/8	2 5/8	2 1/2	2 1/2				
		How fitted	F+A	F+A	F+A	F+A				
		Bearing Surface	2 1/2	2 1/2	2	2				
Spacing of Cleats			24"	20"	20"	24"				
Number of Tarpaulins			3	3	2	2				

Hatch coaming

*Are wood fore and afters steel shod at all bearing surfaces? none

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? Ring bolts for lashing provided at Cargo hatchways

Particulars of fiddley, funnel and ventilator coamings:—

Engine skylight on casing top of steel strongly constructed
 Lidley openings on casing top protected by strong hinged plate covers
 Ventilators on casing top in good condition

Particulars of Flush Bunker Scuttles:—

hone

Particulars of Companionways :—

honed on Freeboard deck or Raised Quarter deck
Entrance to officers quarters on bridge from steel house
on Bridge deck. Door 5'-0" x 2'-0". 1 5/8" thick 12" sill. Door manipulated
both sides

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

of ventilators in exposed positions on freeboard and superstructure decks:—

1	Vent on	Y'scle	to hold coaming	34" x 12" dia	x .35" thick
4	"	"	crew	36" x 6"	" x .35"
1	"	R.Q.D	hold	36" x 12"	" x .35"
3	"	Bridge	Officers Quarters	9" x 6"	" x .26"

with W.T. mushroom tops.

Ventilator coamings constructed in accordance with the Rules & closed with wood plugs & canvas covers.

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

of Air Pipes in exposed positions on deckboard, raised quarter, or superstructure decks:—			
1	air pipe on	Fore deck to fore peak	10" high x 2½" dia.
2	" " "	ford. well " O.B. tank	14" 36" x 3" "
2	" " "	R.Q.D. " " "	11" 30" x 3" "
2	" " "	" " "	11" 30" x 2½" "
1	" " "	to aft peak	14" 30" x 2½" "

no snifting holes
fitted. air pipes
closed with wood
plugs & canvas
covers.

Particulars of Gangway Cargo and Coaling Ports :—

hone.

Particulars of Scuppers and Sanitary Discharge Pipes —

Discharges from crew & officers w.c. led thro' freeboard deck fitted with storm valve at ships side & trap at inner end.
Scupper from crew quarters fwd led thro' freeboard deck fitted with screw plug at inner end but no storm valve at ships side. Sink discharge midships led thro' freeboard deck fitted with cock at inner end but no storm valve at S.S.

Particulars of Side Scuttles:

There are no side scuttles below the freeboard deck
Side scuttles in crew quarters fwd. & midships fitted with strong hinged deadlights.

Particulars of Guard Rails:—

Guard Rail on T'scle 3'-0" high above wood dk. with 2 rods. Stanchions 4'-3" apart
Steel Bulwark fitted on Bridge dk 3'-0" above wood deck efficiently constructed
Steel bulwark in well 3'-9" high efficiently constructed & supported

Particulars of Gangways, Lifelines, etc.:—

Stanchions & lifelines fitted between Bridge & T'scle, top of hatchway forming platform. Stanchions 3'-0" high spaced 8'-0" apart fitted in permanent sockets on hatch coaming. Lifeline 2" rope with lashings at both ends. Wood gangway from top of hatch to ladder at Bridge.

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 ...	110'-6"	3'-9"	3'-1 1/2" x 1'-6" 3'-0" x 1'-6" 2-10 1/2" x 1'-6"	3 } 5	13.5	22.1
Forward Well ...	45'-3"	3'-9"	2 @ 3'-0" x 1'-6" 1 @ 2'-3" x 1'-3"	3	11.8	11.0
State position of each freeing port ... { After Well:— 14'-3", 14'-3", 18'-3" from R.O.S. Bhd 6" above deck (F. and A. position and height above deck edge) { Forward Well:— 2'-0", 16'-0", 24'-3" " Bridge " " " State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 5 ports fitted with balanced hinged shutters with 1 rod. 1 open port at Bridge front with 2 rods. Additional area where sheer is less than standard.						

Particulars of Superstructures, Trunks, Casings, Deckhouses.

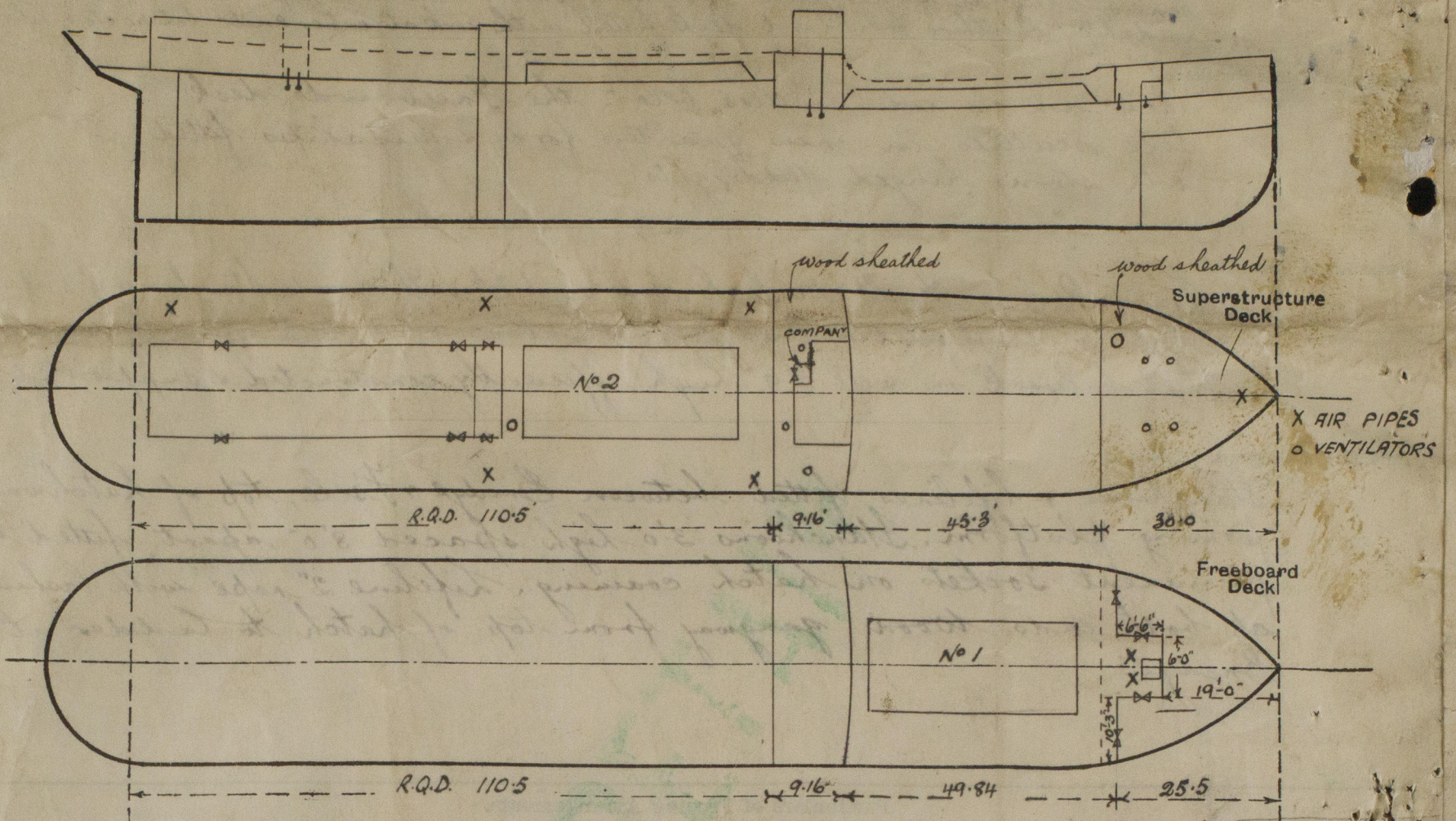
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Peep Bulkhead ...								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	none	30"	4" x 3" x 30"	2'-6"	Brackets top and bottom	none	none	4'-6"
Bridge, Forward Bulkhead ...	none	30"	6 1/2" x 3" x 34 1/2"	3'-6"	Brackets top and bottom	none	none	4'-6"
Forecastle Bulkhead ...	12" x 36"	25"	2 1/2" x 2 1/2" x 30"	36"	none	5'-6" x 2'-0"	12"	7'-3"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	12" x 38"	26"	3 1/2" x 3 1/2" x 34"	24"	Brackets at top	5'-1" x 2'-2"	18"	4'-0"
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).

Peep Bulkhead ...	
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	none
Bridge, Forward Bulkhead ...	none
Forecastle Bulkhead ...	2 Hinged steel doors + 2 hinged wood doors 1 1/2" thick in Fr. A. Bhd both sides
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	4 Hinged steel doors manipulated both sides
Exposed Machinery Casings on Superstructure Decks ...	2 " " 2'-0" x 2'-0" sill 3'-3" closed by battens & cleats
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	
Deckhouses on Flush Deck Ships ...	

The Monarch

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:—



Equr. Tels
 $6.5 \times 20.5 = 133.25$
 $26.5 = 5.03$
 24.03
 24.03
 2.99
 27.02

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

This vessel is engaged in trading between British & Continental Ports
 Limber Freeboard not required ✓

Particulars of Displacement obtained from Builders

Extreme displacement at	12'0" extreme draft	1484 tons	Tons per inch	11.52
"	" 13'0"	1622	"	11.61
"	" 14'0"	1762	"	11.70

Builder's name and yard number *Ailsa Shipbuilding Co. Ltd. Yoon Yard no 404*

Names of sister ships *The Countess, The Monarch, The Emperor (406, 412, 414)*

Owners *J. Hay & Sons*

Fee £ *6 : 16 : 0*

Received by me

Travelling Expen. 9/8



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