

Wm Russell
34317.

Newcastle-on-Tyne

89531.

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Rpt. C.11.

Index. No. 34046
(For London Office only.)

-6 DEC 1932

Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Touraine R & A

(Type of Superstructures.)

Ship's Name <u>FLATHOUSE</u>	Nationality and Port of Registry <u>British London</u>	Official Number <u>162665</u>	Gross Tonnage <u>1556</u>	Date of Build <u>124.6.17</u>
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Moulded Dimensions: Length 242 Breadth 36.33 Depth 18.0
Moulded displacement at moulded draught = 85 per cent. of moulded depth @ 15-3 = 2928 tons
Coefficient of fineness for use with Tables 762

Port of Survey Newcastle
Date of Survey 5th Dec 1932
Name of Surveyor Russell
Particulars of Classification 100 A 1

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>18.00</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(18.04 - 16.13) 1.861 = 3.55</u>	Moulded Breadth (B) <u>36.33</u> Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>8.72</u> Ship's Round of Beam = <u>9.10</u> Difference <u>3.8</u> Restricted to Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) =$ <u>$\frac{3.8}{4} \times 2.916 = 2.79$</u>
Stringer plate <u>45.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	
Depth for Freeboard (D) = <u>18.04</u>		

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poep enclosed						Standard Height of Superstructure <u>6.00</u>
" overhang						" " R.Q.D. <u>3.947</u>
R.Q.D. enclosed	<u>144.77</u>	<u>144.77</u>	<u>4-2</u>		<u>144.77</u>	Deduction for complete superstructure <u>30.2</u>
" overhang	<u>8.5</u>	<u>12</u>			<u>12</u>	Percentage covered $\frac{S}{L} =$ <u>71.44</u>
Bridge enclosed						" " $\frac{S_1}{L} =$ <u>70.84</u>
" overhang aft						" " $\frac{E}{L} =$ <u>70.84</u>
overhang forward	<u>25.24</u>	<u>25.24</u>	<u>7-3</u>		<u>25.24</u>	Percentage from Table, Line A. <u>64.03</u>
enclosed	<u>29.7</u>	<u>1.33</u>			<u>1.33</u>	(corrected for absence of forecastle (if required))
overhang	<u>2.66</u>					Percentage from Table, Line B.
Deck aft						(corrected for absence of forecastle (if required))
forward						Interpolation for bridge less than 2L (if required)
Deck opening aft						Deduction = <u>-19.34</u>
" forward						
Poep	<u>172.92</u>	<u>171.46</u>			<u>171.46</u>	
Total						

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	<u>34.20</u>	1		<u>34.20</u>	<u>46</u>	<u>42.64</u>	1		<u>42.64</u>	Mean actual sheer aft = <u>Excess</u>
$\frac{1}{2}$ L from A.P.	<u>15.22</u>	4		<u>60.88</u>	<u>17.2</u>	<u>17.38</u>	4		<u>75.92</u>	Mean standard sheer aft = <u>3.947</u>
$\frac{3}{4}$ L "	<u>3.76</u>	2		<u>7.52</u>	<u>4.2</u>	<u>4.34</u>	2		<u>9.38</u>	Mean actual sheer forward = <u>Excess</u>
Amidships		4					4			Mean standard sheer forward = <u>Excess</u>
$\frac{3}{4}$ L from F.P.	<u>7.52</u>	2		<u>15.04</u>	<u>8.2</u>	<u>8.69</u>	2		<u>17.38</u>	Length of enclosed superstructure forward of amidships = <u>0.98</u>
$\frac{1}{2}$ L "	<u>30.44</u>	4		<u>121.76</u>	<u>34.2</u>	<u>34.76</u>	4		<u>139.04</u>	" " aft of " = <u>5.00</u>
F.P.	<u>68.40</u>	1		<u>68.40</u>	<u>80</u>	<u>80.00</u>	1		<u>80.00</u>	
Total				<u>307.80</u>					<u>364.36</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{56.56}{18} = 3.142$
If limited on account of midship superstructure. $1.23 \times \frac{198}{200} = 1.22$
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 = 22.21 Ft.
Summer freeboard = 5.46
Moulded draught (d) = 16.75

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4.19 4/4
Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta =$ 3267
Tons per inch immersion at summer load water line
 $T =$ 18.03
Deduction = $\frac{\Delta}{40T}$ inches = 4.53
4 1/2

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient	<u>762 + 68 = 1442</u>	
	<u>1.36</u>	<u>1.36</u>
Depth Correction	<u>3.55</u>	
Deduction for superstructures	<u>19.34</u>	
Sheer correction	<u>1.22</u>	
Round of Beam correction	<u>0.03</u>	
Correction for Thickness of Deck amidships	<u>50.00</u>	
Other corrections, scantlings, etc.		
	<u>53.55</u>	<u>20.59</u>
Summer Freeboard =	<u>65.51</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>8 3/4</u>	Tropical Fresh Water Freeboard	<u>5 - 5 1/2</u>
Fresh Water Line " "	<u>4 1/2</u>	Fresh Water " "	<u>4 - 8 3/4</u>
Tropical Line " "	<u>4 1/4</u>	Tropical " "	<u>5 - 1 1/4</u>
Winter Line below " "	<u>4 1/4</u>	Winter " "	<u>5 - 9 3/4</u>
Winter North Atlantic Line " "	<u>6 1/4</u>	Winter North Atlantic " "	<u>5 - 11 3/4</u>

5m. 22.

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS													
Description of Hatchway			No. 1.	No. 2.	No. 3.	No. 4.	Scupper H on Deck Pl.	Scupper H on aft. bulk	under Deck on 1/2 Pl. etc.	Casing Tops			
Dimensions of Hatchway			27-28 ²⁴⁻² 20.	30-3 x 24	25-0 x 24-3	23-6 x 24	4-5 x 1-11	4-6 x 1-11	2-9 x 2-6	22-0 x 4-5 1/2			
COAMINGS	{	Height above Deck	48	48	48	48	20	20	9 x 3 BA.	9 x 3 BA.			
		Thickness	Sides	44	44	44	44	40	40				
			Ends	44	40	44	40	40	40				
		Stiffeners	7 x 3 x 5/16	7 x 3 x 5/16	7 x 3 x 5/16	7 x 3 x 5/16	✓	✓	✓	✓			
		Brackets, Stays	2	2	2	2							
HATCH BEAMS	{	Number	4	4	3	3							
		Spacing	5-5	6-0 1/2	6-3	5-10 1/2							
		Scantling and Sketch	28 x 38	32 x 40	28 x 38	3 1/2 x 40	✓	✓	✓	✓			
			5 x 3 1/2 x 40 angles	5 x 3 1/2 x 46 angles	5 x 3 1/2 x 46 angles	5 x 3 1/2 x 46 angles							
		Bearing Surface	3 x 1 1/2	3 x 1 1/2	3 x 1 1/2	3 x 1 1/2							
FORE AND AFTERS	{	Number											
		Spacing											
		Unsupported Lengths											
		Scantling* and Sketch					✓	✓	✓	✓			
		Bearing Surface											
HATCH COVERS	{	Material	WP.	WP.	WP.	WP.	WP.	WP.	WP.	W.P.			
		Thickness	3	3	3	3	3	3	3	2 1/2	3		
		How fitted	tra	tra	tra	tra	althw	althw	solid	solid	tra		
		Bearing Surface	3	3	3	3	2	2	3	3	3		
Spacing of Cleats			24	24	24	24	20	21	18	27			
Number of Tarpaulins			2	2	2	2	2	2	1	1			
*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/>													
Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/>													
Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/>													
Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/>													

Particulars of fiddley, funnel and ventilator coamings :—

Stakehold feelings covered by strong steel hinged covers. Holes, funnel vents w efficient condensation. Engine Room skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways :—

Companion apt to layman - Quail's below R of Sx in skin.
built into strong & thick dark house.
Over solid trap 124 thick 4-8 x 20. See 1-6.
operated both sides.

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

or 2 in hull on @ 6" dia x 3-0. 6" hole
 - - - @ 12" - x 3-0. 6" hole
 - Trunk fwd 2 @ 12" dia x 3-0. - -
 - Trunk hull 1 @ 12" - x 3-0. - -
 on R of St 2 @ 12" x 3-0. - -

or aft trunk db 2 @ 10 1/2 x 3-0. 6" hole
 on R of St one @ 10 1/2 x 3-0. - -
 - - - five @ 6" x 3-0. - - Curved face.

Efficient means of closing provided
~~No all fitted with plugs or covers~~
 plugs & covers

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

[illegible]

Particulars of Gangway Cargo and Coaling Ports :—

None

Flat House

Particulars of Scuppers and Sanitary Discharge Pipes:—

Forward scupper through ship in below upper deck. ~~no~~ valve *fitted*
 Forward scupper below upper deck with ship side valve -
 amidships scupper above -
 aft discharges all below R of A. Panty with trap - no valve
 Basins (very low) ~~no~~ valve *fitted*
 W.C. with valve -

Particulars of Side Scuttles:—

Sidelights in Fore & Quarter aft below R of A -
 all fixed with strong hinged deadlights
~~same glass bottom~~

Particulars of Guard Rails:—

On Fore deck 3-3 high 2 rods Structures 4-6 apart -

Particulars of Gangways, Lifelines, etc.:—

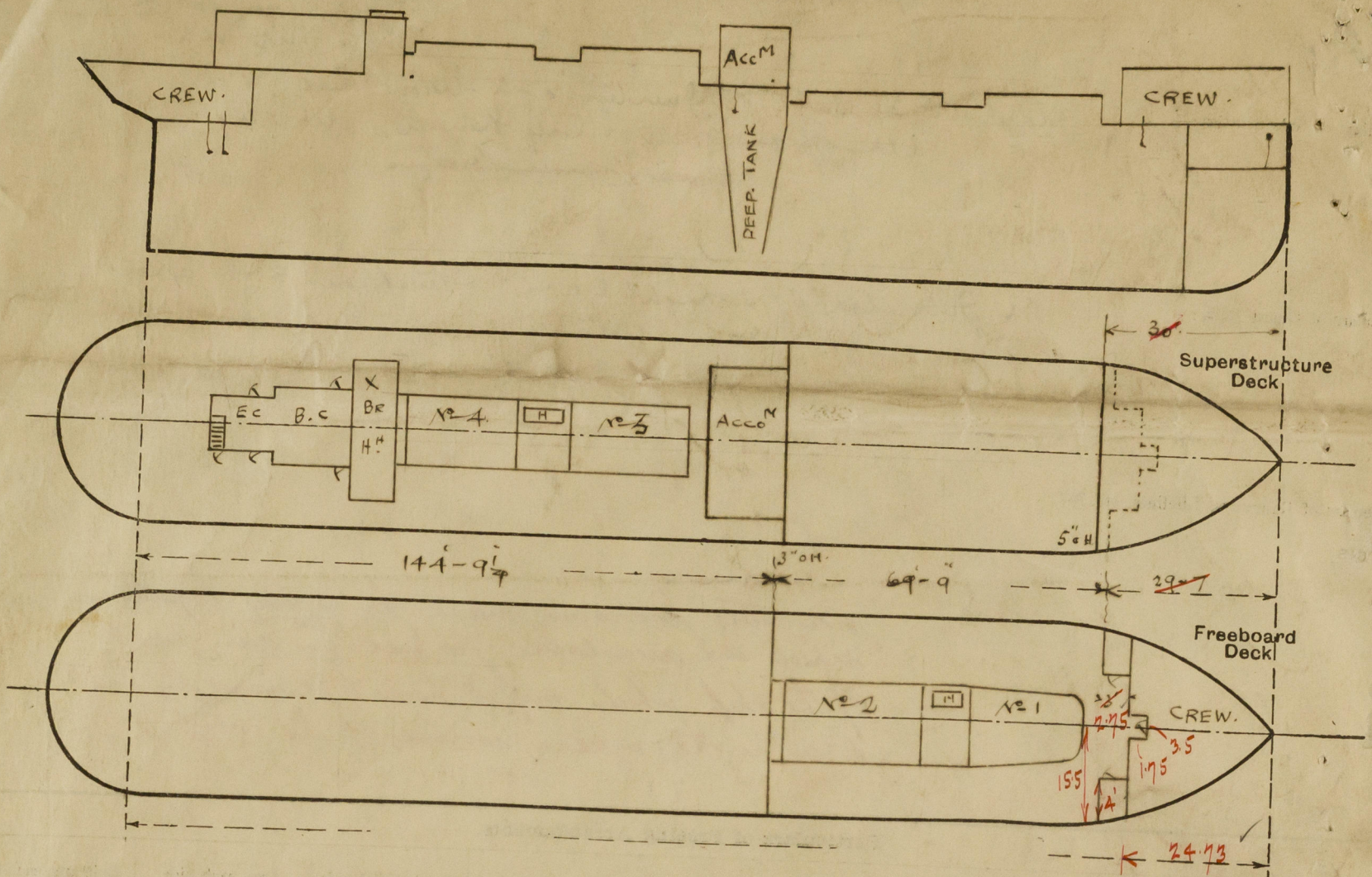
~~None~~
Scutabls provision made for rigging lifelines which are available for use in any part of the ship which might have to be used by the crew in the regular working of the ship.

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	144-9 1/4	3-6	14-3 } x 8 1/2" 14-4 } 14-5 } 7" up	3	30.6	28.9
Forward Well	69- ³³ 9	4-0	13-1/2 x 9" 11-1 } 10" up	2	18.2	13.9
State position of each freeing port { After Well:— 20-8 : 58-6 : 90-3 (F. and A. position and height above deck edge) { Forward Well:— 5-9 : 40-6.						
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— <i>open ports.</i>						
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
Poop Bulkhead								
Raised Quarter Deck Bulkhead	<i>2 in</i>		<i>diaphragm plates</i>	24"		none		4-2
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead	7/20 -	7/20 -	3" flange	30	none	2 @ 1-11 x 4-9 1 @ 2-6 x 4-9	1-6	7-3
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free-board or Raised Quarter Decks	7/20 -	7/20 -	3 1/2 x 3 x 7/20	36"	Bkts Tops	4-9 x 2-3 ER 4-9 x 2-0. BR	1-6	7-3
Exposed Machinery Casings on Super-structure 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).								
Poop Bulkhead								
Raised Quarter Deck Bulkhead	<i>no openings</i>							
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead	<i>Solid Oak door 1 3/4" operated both sides, breather: steel hinged Deckhouse opened both sides</i>							
Exposed Machinery Casings on Free-board or Raised Quarter Decks	<i>2 steel hinged doors 6 ER, 2 BR. not all operated both sides.</i>							
Exposed Machinery Casings on Super-structure Decks								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships								

Hathouse

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:-



Tons 24.73
 $\frac{4 \times 2.75 - 1.75^2}{15.5} = + .51$
 25.24 Equiv
 24.90
 2.66 OH

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

Vessel examined in dry dock. Not due for
Assignment by return a pleased
 The Crew are berthed forward, midships
 & aft, below R.O.D.
 Mld Displ at 85% (15-3) of Mld. 2928 ton 17.82 TPD
 Ex Displ at 16-3 3043. 17.98
 at 14-3 2715. 17.66

[Large handwritten signature]

Builder's name and yard number Swan Hunter & Wigham Richardson Ltd Sunderland
 Names of sister ships ☒
 Owners Stephenson Clark & Associated Cos Ltd.
 Fee £ 9 : 7 : 0 Received by me

Request form.

ENCLOSURE



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