

15 APR 1932

Rpt. C.11.

Index. No. **33883**
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

N^o 100177

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Birkenhead</u>
having <u>Raised Forecastle</u>					Date of Survey <u>April 13th 1932</u>
(Type of Superstructures.)					Name of Surveyor <u>H.B. Murray</u>
Ship's Name <u>GUINNESS.</u>	Nationality and Port of Registry <u>British London</u>	Official Number <u>162544</u>	Gross Tonnage <u>1234</u> <u>M.O.T. 3254</u>	Date of Build <u>1931-5</u>	Particulars of Classification <u>+100A1 with freeboard.</u>
Moulded Dimensions: Length <u>208.29'</u> Breadth <u>34.25'</u> Depth <u>19.40"</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>2420</u> tons					
Coefficient of fineness for use with Tables <u>.735</u>					

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>19.40"</u>	(a) Where D is greater than Table depth (D - Table depth) R = $(19.21 - 13.89) \times 1.602 = +8.52$	Moulded Breadth (B) <u>34.25'</u>
Stringer plate <u>0.4</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 8.22$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = 25 \left(\frac{208.29 - 68.74}{208.29} \right) = 17$	If restricted by superstructures	Ship's Round of Beam = $8\frac{1}{2}"$
Depth for Freeboard (D) = <u>19.21</u>		Difference = <u>.28</u>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.28}{4} \left(1 - \frac{.1365}{.8635} \right) = -.06$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
Fore enclosed	<u>28.43</u>	<u>28.43</u>	<u>7'-0"</u>	<u>✓</u>	<u>28.43</u>
" overhang	<u>25.0</u>				
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	<u>28.43</u>	<u>28.43</u>			<u>28.43</u>

Standard Height of Superstructure <u>6'-0</u>
" " R.Q.D. <u>✓</u>
Deduction for complete superstructure <u>26.83</u>
Percentage covered $\frac{S}{L} = 13.65$
" " $\frac{S_1}{L} = 13.65$
" " $\frac{E}{L} = 13.65$
Percentage from Table, Line A. <u>6.82</u>
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. <u>✓</u>
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required) <u>NO BRIDGE.</u>
Deduction = $26.83 \times .0682 = 1.83$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>30.83</u>	1		<u>30.83</u>	<u>38"</u>	<u>36.0</u>	1		<u>36.00</u>
$\frac{1}{2}$ L from A.P.	<u>13.72</u>	4		<u>54.88</u>	<u>14.5</u>	<u>15.64</u>	4		<u>62.56</u>
$\frac{2}{3}$ L "	<u>3.39</u>	2		<u>6.78</u>	<u>4.5</u>	<u>3.91</u>	2		<u>7.82</u>
Amidships	-	4		-	-	-	4		-
$\frac{2}{3}$ L from F.P.	<u>6.78</u>	2		<u>13.56</u>	<u>7.25</u>	<u>7.17</u>	2		<u>14.34</u>
$\frac{1}{2}$ L "	<u>27.44</u>	4		<u>109.76</u>	<u>28.0</u>	<u>28.67</u>	4		<u>114.68</u>
F.P.	<u>61.66</u>	1		<u>61.66</u>	<u>66</u>	<u>66.00</u>	1		<u>66.00</u>
Total				<u>277.47</u>		<u>169.39</u>			<u>308.40</u>

Mean actual sheer aft = excess
Mean standard sheer aft = excess

Mean actual sheer forward = excess
Mean standard sheer forward = excess

Length of enclosed superstructure forward of amidships = ✓
" " aft of " = ✓ **NO BRIDGE.**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{23.93}{18} \left(\frac{.75 - .0682}{.6818} \right) = -.91$ (NO BRIDGE) NIL.

If limited on account of midship superstructure. NO BRIDGE.

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 = 19.29 Ft.
Summer freeboard = 3.62
Moulded draught (d) = 15.67

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3.92

Addition for Winter North Atlantic Freeboard (if required =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 2335$

Tons per inch immersion at summer load water line

T = 14.8

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

= 3.94 = 4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.735 + .68}{1.36} - \frac{1.415}{1.36}$

	+	-
Depth Correction	<u>8.52</u>	-
Deduction for superstructures	-	<u>1.83</u>
Sheer correction	-	-
Round of Beam correction	-	<u>.06</u>
Correction for Thickness of Deck amidships	<u>.96</u>	-
Other corrections, scantlings, <u>and to correspond</u> <u>15.4</u> <u>19.89</u> <u>1.89</u> <u>+ 18.00</u>		
Summer Freeboard = <u>43.50</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"</u>
Fresh Water Line " "	<u>4"</u>
Tropical Line " "	<u>4"</u>
Winter Line below " "	<u>4"</u>
Winter North Atlantic Line " "	<u>6"</u>


Tropical Fresh Water Freeboard	<u>2'-11"</u>
Fresh Water " "	<u>3'-3"</u>
Tropical " "	<u>3'-3"</u>
Winter " "	<u>3'-3"</u>
Winter North Atlantic " "	<u>4'-2"</u>

19 APR 1932

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway			...	No 1	No 2						
Dimensions of Hatchway			...	42'-6" x 18'-0"	27'-0" x 18'-0"						
COAMINGS	{	Height above Deck	...	3'-6"	3'-6"						
		Thickness	Sides44	.44					
			Ends44	.44					
		Stiffeners	...	7x3x1/2 BA	7x3x1/2 BA						
		Brackets, Stays	...	8	6						
HATCH BEAMS	{	Number	...	8	5						
		Spacing	...	54"-58"	54" ✓						
		Scantling and Sketch	...								
			plate 18"x36" ✓ 4x3x50 ✓	Same as hol. ✓							
		Bearing Surface	...	3x1/2 solid copc 3" ✓	3" ✓						
FORE AND AFTERS	{	Number	...								
		Spacing	...								
		Unsupported Lengths	...								
		Scantling* and Sketch	...	✓	✓						
		Bearing Surface	...								
HATCH COVERS	{	Material	...	Spruce	Spruce						
		Thickness	...	2 1/2" Double	2 1/2" Double						
		How fitted	...	F+A	F+A						
		Bearing Surface	...	3"	3"						
			...								
Spacing of Cleats			...	23"	23"						
Number of Tarpaulins			...	3	3						
*Are wood fore and afters steel shod at all bearing surfaces? Are battens and wedges efficient and in good condition? Are tarpaulins in good condition and in accordance with rule requirements? Are lashings provided in accordance with rule requirements?											

See C II Contd.

Particulars of fiddle, funnel and ventilator coamings:—

Fidley Funnel + ventilator coamings in efficient condition.
 Ek Skylights strongly constructed of steel with steel hinged flaps.
 Fidley Gratings fitted with strong hinged steel covers.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

One in aft end of Machinery casing leading to steering gear flat in aft Peak Space.
 Strong steel hinged door 65"x25" sill 12" manipulated from both sides.

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

On Raised Forecastle:—
 5-6" Vents, coamings 3'6"x1/4 to Ice Accom. } 2-21" Vents on top of Battery Room Entrances between
 1-6" Vent coaming 3'6"x1/4 to Fore Peak Space. } Nos 1 & 2 Hatchways coamings 18"x3/8"
 1-18" Vent coaming 2'6"x3/8 to Hood. ✓
 On Boat Deck see C II, Contd 19 to. Wood plugs & canvas covers supplied for all Vents.

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

1-4" Air pipe 21" high on Forecastle Deck to FP Tank. ✓ 2-4" Air pipes 30" high to DTB Tanks. ✓
 2-3 1/2" Air pipes 19" high on Forecastle Deck to DTB Tanks. ✓ 2-3" Air pipes 30" high to DTB Tanks. ✓
 1-4" Air pipe 28" high on Foreboard Deck to A.P. Tank. ✓
 1-2" Air pipe 37" high on Foreboard Deck to A.P. Tank. ✓
 2-4" Air filling pipes on Foreboard Deck 24" high to DTB Tanks. ✓
 2-2" Air pipes 36" high on Foreboard Deck to DTB Tanks. ✓
 2-3" Air pipe 30" high on Foreboard Deck to DTB Tanks. ✓
 Scaffolding hole fitted in the upper part of air pipes on freeboard deck side. 36" height and wood plug supplied to all air pipes. No plugs or covers supplied.

Particulars of Gangway Cargo and Coaling Ports:—

None

Particulars of Snappers and Sanitary Discharge Pipes —

Stringer snappers 5" x 3" ✓

All Sanitary discharge pipes fitted with storm valves at ship's side. ✓

Particulars of Side Scuttles:

All side scuttles below the freeboard deck fitted with hinged deadlights. ✓

In the Raised Forecastle the side scuttles are not fitted with deadlights. ✓

There is no access from within the Forecastle to spaces below the freeboard deck.

Particulars of Guard Rails:—

Guard rails around Forecastle 3'-4" high. stanchions spaced 4'-6". 3 rails. ✓

Particulars of Gangways, Lifelines, etc.:—

The crew are housed in the Forecastle, entering by strong wood hinged doors. ✓

Stanchions are fitted to the horizontal stiffener on the hatch coamings and are spaced 8'-0" apart and are 3'-0" high above the hatch. ✓

A wire is rigged from the Bridge house to the Forecastle Bulkhead and this in my opinion is efficient. ✓

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
1. BETWEEN BRIDGE HOUSE AND FORECASTLE. After Well ...	88'-7"	3'-6"	5 at 2'-9" x 1'-9" 1 at 5'-0" x 6"	5 } 1 }	26.56 sq. ft. ✓	17.7 sq. ft. ✓
2. BETWEEN AFT END OF BRIDGE HOUSE AND AFT SIDE HOUSES. Forward Well ...	26'-1"	3'-6"	2 at 2'-9" x 1'-9"	2. ✓	9.6 sq. ft. ✓	9.1 sq. ft. ✓
3. AFT OF AFT SIDE HOUSES. Aft Well ...	10'-0"	3'-6"	1 at 2'-9" x 1'-9"	1. ✓	4.8 sq. ft. ✓	4.4 sq. ft. ✓
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, and give particulars of such:— 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 ...								
Bridge, After Bulkhead ...								
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...	—	1/4" ✓	2 1/2 x 2 1/2 x 1/4" ✓	27" ✓	none ✓	2 at 5'-0" x 23" ✓ 3 at 5'-1/2" x 24" ✓	9" ✓	7'-0" ✓ 5 to 5. ✓
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	3/8" ✓	5/16" ✓	3 x 2 1/2 x 5/16" ✓	30" ✓	13/16" at top.	2 at 5'-0" x 2'-0" ✓ 1 at 5'-0" x 1'-9" ✓ 1 at 5'-5" x 2'-1/2" ✓	18" ✓ 16" ✓ 12" (companion) ✓	7'-5" ✓
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).

Poop Bulkhead ...	
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	
Bridge, Forward Bulkhead ...	
Forecastle Bulkhead ...	Strong wood & steel hinged doors manipulated from both sides. ✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	Strong steel hinged doors manipulated from both sides. ✓
Exposed Machinery Casings on Superstructure Decks ...	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	
Deckhouses on Flush Deck Ships ...	

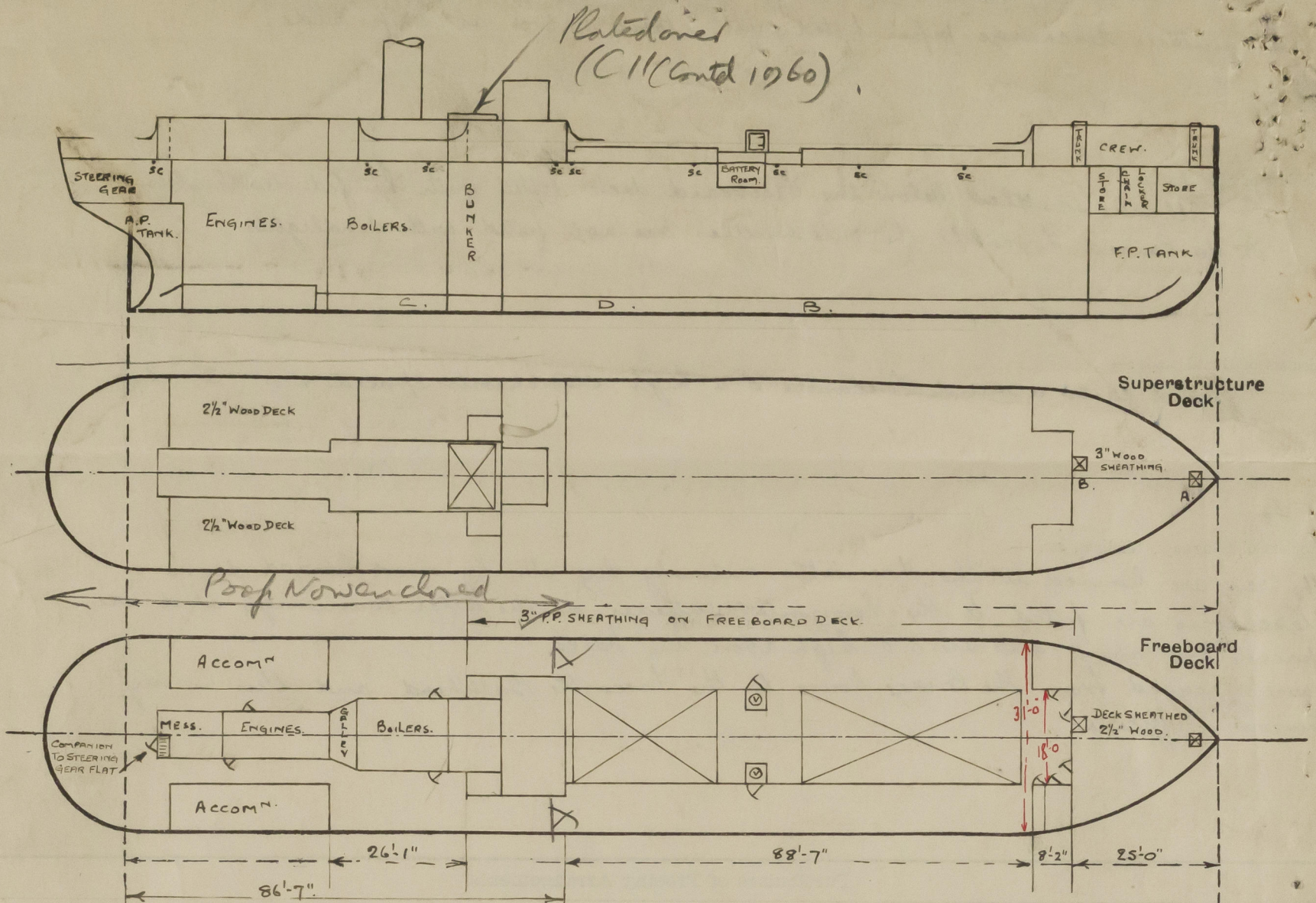
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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



Hatch A. on Forecastle Deck. Trunked to FP Store. 2'-3" x 2'-0" coaming 15" x 7/8". 3" H.P. covers 2 1/2" bearing cleats spaced 14"-17" 2 tarpaulins ✓
 Hatch B. on Forecastle Deck. Trunked to Hold. 2'-6" x 2'-0" coaming 15" x 7/8". 3" H.P. covers 2 1/2" bearing cleats spaced 15"-20" 2 tarpaulins ✓
 Hatch B is fitted with an insulated plug at the Freeboard deck level. ✓
 2 Entrance hatches to Battery Room between No 1 & 2 Hatchways. Steel. 40" x 39" x 49" high. Steel hinged insulated door 38" x 29" manipulated from both sides, 2 cleat handles 25" apart. Sills 39" ✓
 BUNKER HATCH on FIDLEY TOP. 14'-6" x 9'-0". Coaming 9 x 3 1/2" BA. 4 Steel hinged stiffened covers 3/8" thick. 1 Hatch beam 14" x 6 1/2" steel. 3" bearing. ✓
 State any special features in the construction of the ship:—

See C 11 (Contd). 1953.

FORECASTLE.

ENCLOSED	=	25.00
8.17 x 6.5	=	3.43
15.5	=	28.43

MUT

Builder's name and yard number Ailsa Ship Co Ltd. Linn No 417.

Names of sister ships _____

Owners A. Guinness Son & Co Ltd.

Fee £ 8 : 10 : 0

Received by me *MUT*



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