

# WRECK SECTION

## Lloyd's Register of Shipping.

### SURVEYS FOR FREEBOARD.

Index. No. 25477.  
(For London Office only.)

108843

N.N. Guararema.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having a raised quarter deck, bridge and field.

Port of Survey Barrow

Date of Survey 17/4/37

Name of Surveyor A.W. Jackson

Particulars of Classification 100 A1

Ship's Name

(Type of Superstructures.)

Nationality and Port of Official Number

Gross Tonnage

Date of Build

"SOUND FISHER"

British  
Barrow

142774

548

1919-2

Moulded Dimensions: Length 154.54 Breadth 26.0 Depth 12.25

Moulded displacement at moulded draught = 85 per cent. of moulded depth 850 tons

Coefficient of fineness for use with Tables .71

## Depth for Freeboard (D)

Moulded depth ... 12.25

Stringer plate ... .04

Sheathing on exposed deck

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

Depth for Freeboard (D) = 12.29

## Depth correction

(a) Where D is greater than Table depth  
(D-Table depth) R =

$$(12.29 - 10.30) 1.188 = +2.36$$

(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) 26.0

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 6.24$$

$$\text{Ship's Round of Beam} = 6.50$$

$$\text{Difference} = .26$$

Restricted to

$$\text{Correction} = \frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.26}{4} \times .633 = -.01$$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
„ overhang...					
R.Q.D. enclosed ...	95.54	95.54	4.25	✓	95.54
„ overhang ...					
Bridge enclosed. <i>one plan</i>	9.63	9.63	6.98	✓	9.63
„ overhang aft ...					
„ overhang forward	.09				
Fore enclosed ...	21.40	21.09	6.73	✓	21.09
„ overhang ...	6.10	3.05		✓	3.05
Trunk aft ...	.11				
„ forward ...					
Tonnage opening aft ...					
„ „ forward					
Total ...	132.37	129.31			129.31

Standard Height of Superstructure 6.00

„ „ R.Q.D. 3.364

Deduction for complete superstructure 21.45

$$\text{Percentage covered } \frac{S}{L} = 85.64$$

$$\frac{S_1}{L} = 83.67$$

$$\frac{E}{L} = 83.67$$

Percentage from Table, Line A. 49.85

(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) ✓

$$\text{Deduction} = 21.45 \times .4985 = 10.63$$

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	25.45	1	25.45	+10.63	46.63	1	46.63
1/4 L from A.P. ...	11.325	4	45.30	19.375	20.75	4	83.00
3/4 L „ ...	2.80	2	5.60	1.375	5.13	2	10.26
Amidships ...	-	4	-	-	-	4	-
3/4 L from F.P. ...	5.60	2	11.20	11.25	11.25	2	22.50
1/4 L „ ...	22.65	4	90.60	31.625	31.625	4	126.50
F.P. ...	50.91	1	50.91	60.00	60.00	1	60.00
Total ...			229.06				348.89

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{119.83}{18} \left( .75 - \frac{4282}{3218} \right) = -2.14$$

If limited on account of midship superstructure ✓

If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

Actual height of Raised Quarter deck = 4.25

Standard „ = 3.364

Excess = .886

= 10.63

Mean actual sheer aft = Excess

Mean actual sheer forward = Excess

Length of enclosed superstructure forward of amidships = &gt;.1L

„ „ aft of „ = &gt;.1L

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

RAISED QUARTER Ft.  
Depth to Freeboard Deck = 16.54  
Summer freeboard = 4.42  
Moulded draught (d) = 12.12

## Deduction for Tropical freeboard and addition for

$$\text{Winter freeboard} = \frac{d}{4} \text{ inches} = 3.03 = 3"$$

Addition for Winter North Atlantic Freeboard (if required) = 3" + 2" = 5"

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

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

$$\frac{d}{4} = 3.03 = 3"$$

## TABULAR FREEBOARD corrected for Flush Deck (if required)

$$\text{Correction for coefficient} = \frac{.41 + .68}{1.36} = \frac{1.39}{1.36}$$

Depth Correction ... 2.36

Deduction for superstructures ... 14.13

Sheer correction ... 2.14

Round of Beam correction ... .01

Correction for Thickness of Deck amidships

HEIGHT OF RAISED QUARTER DECK

Other corrections, scantlings, etc. ...

16.14

16.50

+ 34.08

Summer Freeboard = 50.58

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

Tropical Fresh Water Line above Centre of Disc ...	3"
Fresh Water Line „ „ ...	3"
Tropical Line „ „ ...	NIL
Winter Line below „ „ ...	3"
Winter North Atlantic Line „ „ ...	5"

Tropical Fresh Water Freeboard ...

Fresh Water „ „ ...

Tropical „ „ ...

Winter „ „ ...

Winter North Atlantic „ „ ...

4' 5" (limited)

4' 2" (limited)

4' 2" (limited)

4' 5" (limited)

4' 8" (limited)

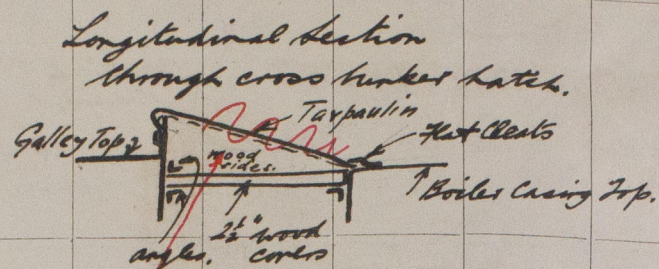
4' 10" (limited)

130 APR 1937



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	Stiffeners	...	...	...	...	...	...	...	...
	Brackets, Stays	...	...	...	...	...	...	...	...
		...	...	...	...	...	...	...	...
HATCH BEAMS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...
		...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
FORE AND AFTERS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Unsupported Lengths	...	...	...	...	...	...	...	...
	Scantling* and Sketch	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
HATCH COVERS	Material	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	How fitted	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
		...	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...
<p>*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/></p> <p>Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/></p> <p>Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/></p>									



The fore and afters steel shod at all bearing surfaces and the sides made inclined, the tarpaulins being fitted as shown.

Logs and brackets fitted to coaming, after end to permit battening down of tarpaulins directly on to covers.

Particulars of fiddle, funnel and ventilator coamings:—

Stokehold gratings covered by strong steel hinged covers. ✓  
Fiddle, funnel, and engine room ventilators in efficient condition. ✓  
Engine Rm. skylight of steel strongly constructed with steel hinged flap. ✓

Particulars of Flush Bunker Scuttles:—

On Raised Quarter Deck, 4 @ 18" diam. with cast iron covers having bayonet joints, having chain attachments. ✓

Particulars of Companionways:—

Steel Deckhouse on Bridge of strong construction covering open stairway into intact Bridge. Doorways 4'8" x 1'7 1/2", sills 18 1/2", closed by hinged wood doors operated from both sides. ✓

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

On Fiddle Deck. — 1 Vent 5 1/2" diam. coming 51" x 28" behind bow chock to intact Fiddle, stayed. ✓  
" " " — 1 Store funnel 7" diam, 60" high x 14", coming 8" unstayed. Also one 8" coming for store funnel. ✓  
" " " fitted with canvas cover. 1 C.I. Borescrew, 5" diam, 14" high. ✓  
" " " — 1 Vent 11 1/2" diam, coming 36", 30" high above Fiddle, extending through open part of Fiddle to hold. ✓  
" Bridge " — 2 C.I. Borescrews 5" diam, 14" high to intact Bridge. ✓  
" R.Q. " — 1 Vent 12" diam, coming 30" x 48" high, stayed, leading to hold. Wood plugs and canvas covers provided. ✓

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

On Fiddle Deck, 1-2" diam. G.N. airpipe 15" high from F.P. Tank. } closed by wood plugs. ✓  
" R.Q. Deck, 2-2" " " " 30" " " A.P. Tank. }

Particulars of Gangway Cargo and Coaling Ports:—

None. ✓





Particulars of Scuppers and Sanitary Discharge Pipes :— No scuppers or discharges from below freeboard deck.  
One sanitary discharge from intact side fitted with brass storm valve at ship's side, with trap at inner end. ✓

Particulars of Side Scuttles:— No side scuttles below freeboard and R.G. Deck.  
10" sidelights in Bridge and 9" diam. in side in strong hinged brass frames with hinged deadlights. ✓

Particulars of Guard Rails:— Guard rails on fiddle 3'0" high, two rods with stanchions 4'6" apart.  
Steel bulwark on foreboard deck in forward well, 4'3" high efficiently constructed & supported.  
" " " R.P.De. " 3'0" " " " " "  
" " " Bridge De. " 3'0" " " " " "

Particulars of Gangways, Lifelines, etc.:— *Gangways and lifelines provided in well for protection of the crew.*

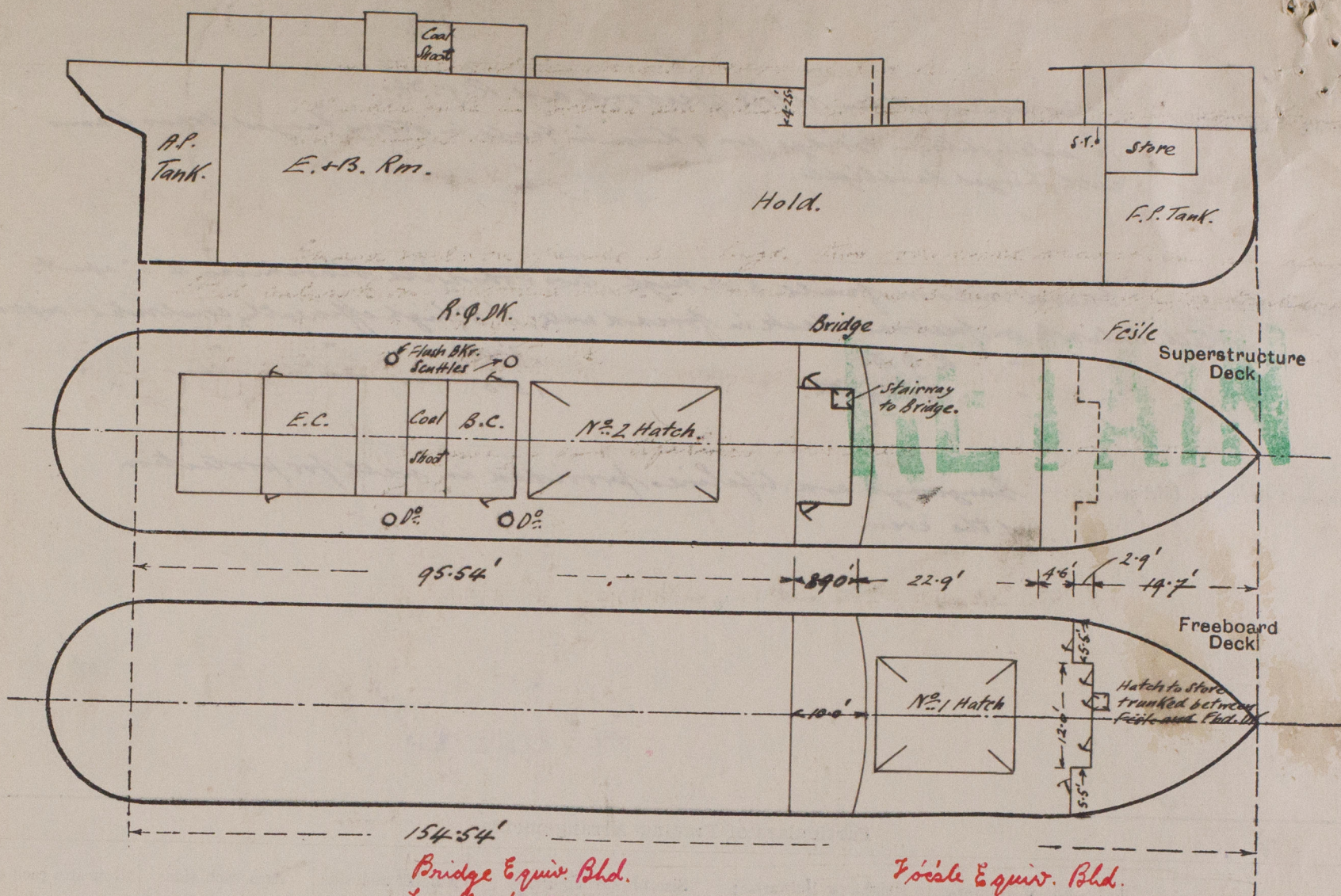
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well <i>on R. side</i>	<i>95.29'</i>	<i>3.0'</i>	<i>3 @ 3'-10" x 9"</i> <i>2 @ 2'-9" x 18"</i> <i>1 @ 3'-0" x 9"</i>	<i>6</i>	<i>19.125</i> <sup><i>.09</i></sup>	<i>18</i> <sup><i>19.06</i></sup>
Forward Well ... ..	<i>22.9'</i>	<i>4'-3"</i>	<i>3'-0" x 1.63'</i>	<i>2</i>	<i>9.78</i> ✓	<i>8.79</i> ✓
<p>State position of each freeing port ... .. } After Well:— <i>5'-11"-7"</i> <i>3'-7"</i> <i>7'-9"</i> <i>7'-6"</i> <i>7'-5"</i> <i>12'-0"</i> <i>86"</i> <i>3" above deck edge</i>  (F. and A. position and height above deck edge) } Forward Well:— <i>3'-10"</i> <i>2'-9"</i> <i>3'-10"</i> <i>3'-10"</i> <i>3'-10"</i> <i>2'-9"</i> <i>From midships fore. 25'-0" to 30'-5".</i> <i>8 1/2"</i> " " "</p> <p>State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—  <i>Balanced steel shutters with steel pins in steel sockets</i>  <i>over width over 9".</i></p> <p>Additional area where sheer is less than standard.</p>						

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 } ...	✓	✓	{ Deck brackets at break and	✓	✓	✓	✓	✓
Bridge, After Bulkhead ... }	28 ✓	28 ✓		30" ✓	nil	nil	✓	2.75 above R.P. Dc.
Bridge, Forward Bulkhead ... ..	30 ✓	28 ✓	6x3x.44 B.B. Longl. Bkts.	30 ✓	Bracketed ✓	nil	✓	6.98 ✓
Forecastle Bulkhead ... ..	24 ✓	24 ✓	3x3x.28 ✓	40 ✓	nil	4'6"x2'0"	18 ✓	6.73 ✓
Trunk, Aft ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Free-board or Raised Quarter Deck ...	30 ✓	26 ✓	3x3x.32 ✓	24-30 ✓	Bkts. at top only. ✓	4'5"x1'10" ✓	24 ✓	7.0
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).	
Poop Bulkhead ... ..	✓
Raised Quarter Deck Bulkhead ...	No openings ✓
Bridge, After Bulkhead ... ..	No openings ✓
Bridge, Forward Bulkhead ... ..	No openings ✓
Forecastle Bulkhead ... ..	<i>Strong hinged doors to file, 2 wood and 2 steel operated from both sides. ✓            Strong steel hinged weathertight door through bulkhead to companion hatch to store below foreward deck, operated from both sides. ✓            Steel hinged doors operated from both sides. ✓</i>
Exposed Machinery Casings on <del>Fore</del> board or Raised Quarter Deck ...	
Exposed Machinery Casings on Super- structure Decks ... ..	
Machinery Casings within Superstruc- tures 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 shown on the following sketches:—



Bridge Equiv. Bld.

Length at side = 8.90

$\frac{2}{3} \times 1.10 = .73$

9.63

Foyle Equiv. Bld.

$19.4 + \frac{5.5 \times 2.9}{11.5} = 21.09$

Overhang =  $27.20 - 21.09 = 6.11$

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

Vessel lengthened 12'-6 1/2" in way of No. 2 Hatch and ship's.

Builder's name and yard number Anderson D.D. & S.B. Co. Ltd. No. 302.

Names of sister ships ✓

Owners J. Fisher & Sons Ltd.

Fee £ 8 : 0 : 0

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