

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index. No. **18395**  
(For London Office only.)

16 JUN 1932

10872

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~Leaving Raised quarter deck, Bridge + ForecastlePort of Survey BelfastDate of Survey 9-11 June 1932Name of Surveyor L.R. RyanParticulars of Classification + 100 A 1NAVIEDALE

(Type of Superstructures.)

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

GROVE HILLBritish123 1583831906Moulded Dimensions: Length 141.8442.2BelfastBelfastBreadth 23.5Depth 11.83Moulded displacement at moulded draught = 85 per cent. of moulded depth 633 tonsCoefficient of fineness for use with Tables .661.68 lowest allowed.

## Depth for Freeboard (D)

Moulded depth ... .. 11.83Stringer plate ... .. .036

Sheathing on exposed deck

 $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 11.87

## Depth correction

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

$(11.87 - 9.46) \times 1.090 = 2.63$

(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) 23.5

Standard Round of Beam =  $\frac{B \times 12}{50} = 5.64$

Ship's Round of Beam = 6

Difference = .36

Restricted to

Correction =  $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.36}{4} \times 1.905 = -.02$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	✓				
" overhang ... ..	✓		<u>3.90</u>		
R.Q.D. enclosed ... ..	<u>82.91</u>	<u>82.91</u>	<u>4.0</u>		<u>82.91</u>
" overhang ... ..	<u>9.92</u>	<u>9.92</u>	<u>7.0</u>		<u>9.92</u>
Bridge enclosed ... ..	<u>20.41</u>	<u>20.41</u>	<u>7.2</u>		<u>20.41</u>
" overhang aft ... ..	<u>1.55</u>	<u>1.55</u>			<u>1.55</u>
" overhang forward ... ..	<u>1.55</u>	<u>1.55</u>			<u>1.55</u>
Forecastle enclosed ... ..	<u>1.55</u>	<u>1.55</u>			<u>1.55</u>
" overhang ... ..	<u>1.55</u>	<u>1.55</u>			<u>1.55</u>
Trunk aft ... ..	<u>1.55</u>	<u>1.55</u>			<u>1.55</u>
" forward ... ..	<u>1.55</u>	<u>1.55</u>			<u>1.55</u>
Tonnage opening aft ... ..	<u>1.55</u>	<u>1.55</u>			<u>1.55</u>
" forward ... ..	<u>1.55</u>	<u>1.55</u>			<u>1.55</u>
Total ... ..	<u>116.33</u>	<u>114.79</u>			<u>114.79</u>

Standard Height of Superstructure 6.0" " R.Q.D. 3.28Deduction for complete superstructure 20.18

Percentage covered  $\frac{S}{L} = 82.04$

" "  $\frac{S_1}{L} = 80.95$

" "  $\frac{E}{L} = 80.95$

Percentage from Table, Line A. 76.48  
(corrected for absence of fore-castle (if required))Percentage from Table, Line B.  
(corrected for absence of fore-castle (if required))

Interpolation for bridge less than .2L (if required)

Deduction =  $20.18 \times 76.48 = -15.44$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	<u>24.18</u>	1		<u>24.18</u>	<u>24</u>	<u>24.00</u>	1		<u>24.18</u>
$\frac{1}{4}$ L from A.P. ... ..	<u>10.76</u>	4		<u>43.04</u>	<u>11.5</u>	<u>11.65</u>	4		<u>46.60</u>
$\frac{2}{4}$ L " ... ..	<u>2.66</u>	2		<u>5.32</u>	<u>2</u>	<u>2.91</u>	2		<u>5.82</u>
Amidships ... ..		4					4		
$\frac{3}{4}$ L from F.P. ... ..	<u>5.32</u>	2		<u>10.64</u>	<u>5</u>	<u>4.39</u>	2		<u>8.78</u>
$\frac{1}{4}$ L " ... ..	<u>21.52</u>	4		<u>86.08</u>	<u>18.5</u>	<u>17.58</u>	4		<u>70.32</u>
F.P. ... ..	<u>48.36</u>	1		<u>48.36</u>	<u>39</u>	<u>39.00</u>	1		<u>39.00</u>
Total ... ..				<u>217.62</u>					<u>190.64</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{26.98}{18} (.75 - .4102) = +.51$

If limited on account of midship superstructure.

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 R.Q.D. Deck = 15.77 Ft.Summer freeboard = 4.06Moulded draught (d) = 11.71

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = 2.93 3"Addition for Winter North Atlantic Freeboard (if required) = 2"

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 776$

Tons per inch immersion at summer load water line

$T = 6.6$

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

$= 2.94$

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

Correction for coefficient

	+	-
Depth Correction ... ..	<u>2.63</u>	
Deduction for superstructures ... ..		<u>15.44</u>
Sheer correction ... ..	<u>.51</u>	
Round of Beam correction ... ..		<u>.02</u>
Correction for Thickness of Deck amidships ... ..	<u>46.75</u>	
Other corrections, scantlings, etc. ... ..		
	<u>49.89</u>	<u>15.46</u>

Summer Freeboard = 48.86

## 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 " " ... .. 0"Winter Line below " " ... .. 3"Winter North Atlantic Line " " ... .. 5"Tropical Fresh Water Freeboard ... .. 4"Fresh Water " " ... .. 3"Tropical " " ... .. 4"Winter " " ... .. 4"Winter North Atlantic " " ... .. 4"

20 JUN 1932

1. 1. 44

RECEIVED

MARKING FORM

RECEIVED 10 JAN 1935

MARKING FORM

RECEIVED 12 APR 1934

R



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

		HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS							
		No. 1.		No. 2.		At 7' cle first		Bunker hatch	
Description of Hatchway		On Freeboard deck		On R.Q. Deck		On Freeboard deck		On top of casing	
Dimensions of Hatchway		20' x 13' 6"		19' 9" x 13' 6"		20' x 21'		Approx. 4' 6" x 5' 0"	
COAMINGS	Height above Deck	4' 5"		36"		12"		q <sup>2</sup> above casing top	
	Thickness	40"		38"		38"		32"	
	Sides	38"		38"		38"		32"	
	Stiffeners	24 round spec'd 5" sides		24 round spec'd 5" sides		✓		✓	
	Brackets, Stays	24 round spec'd 5" sides		24 round spec'd 5" sides		✓		✓	
HATCH BEAMS	Number	One		One		Nme		Nme	
	Spacing	10'		9' 10"		Nme		Nme	
	Scantling and Sketch	7" x 2 1/2" x 33'		7" x 2 1/2" x 32'					
		49' x 44'		38' x 44'					
	Bearing Surface	3"		3"					
FORE AND AFTERS	Number	3		3		Nme		Nme	
	Spacing	5' 4 1/2"		5' 4 1/2"					
	Unsupported Lengths	10'		As No. 1.					
	Scantling* and Sketch	Center Angles. 8' to 6' at ends. Side 5' 5" x 5' 5" 7 1/2" x 6 3/4"		As No. 1.					
	Bearing Surface	at hatchway ends. Center 7' 10" x 3" Side 2' 3"		As No. 1.					
HATCH COVERS	Material	Wood		Wood		Wood		Wood	
	Thickness	2 1/2"		2 1/2"		2 1/4" damaged		2 1/2"	
	How fitted	Through ship.		Through ship		one piece 1' 8" x 1' 4"		7 re-raft 2' 4" x 3/4"	
	Bearing Surface	2 1/2" at hatch ends. 2 1/4" on Center 7' 10"		As No. 1.		1' 8" x 1' 4"		30"	
Spacing of Cleats		24" x 1/2"		24" x 1/2"		8" x 10"		30"	
Number of Tarpaulins		2		2		Nme		Nme	
<p>*Are wood fore and afters steel shod at all bearing surfaces? Yes ✓</p> <p>Are battens and wedges efficient and in good condition? Yes ✓</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? Yes (except bunker hatch small hatch fore)</p> <p>Are lashings provided in accordance with rule requirements? Ring plate at Nos. 1. + 2 hatchways.</p>									

## Particulars of fiddley, funnel and ventilator coamings:—

Funnel coming of steel riveted to casing top.  
 Bunkers ventilator - coming 2' 6" above casing, strong, riveted to casing top.  
 Fiddley openings protected by hinged steel covers.  
 R.R. skylight on top of casing, steel, satisfactory.

## Particulars of Flush Bunker Scuttles:—

None. ✓

## Particulars of Companionways:—

Formed by deckhouse abaft casing, over stairway opening giving access to accommodation below freeboard deck. Deckhouse of steel, door 1' 4" thick panelled, sill 18".

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

### On 7' cle deck.

1. 9" dia. 19" high x 1/2" thick to hold space through paint house.
  1. 6" dia. 19" high x 1/4" thick to forecath space.
- Also 2 stone funnels to forecath space.

### On Bulkhead

- 2 screw down mushroom ventilators 18" high 6" dia. unworkable.

### On R.Q. Deck.

1. 9" dia. 37" high x 5/16" to hold.

Ventilators on Forecath dk. have canvas covers & wooden plugs remainder have ~~no~~ <sup>wood plugs with chains as</sup> means of closing.

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

On 7' cle deck one air pipe to forepeak tank 7" high.

On Freeboard deck forward, one air pipe to double bottom 15" high.

Raised quarter deck at after end of bridge, two air pipes to double bottom 9" high

abft casing one air pipe to afterpeak tank

height

wood plugs with chains as means of closing for any air pipes.

## Particulars of Gangway Cargo and Coaling Ports:—

None. ✓



© 2020

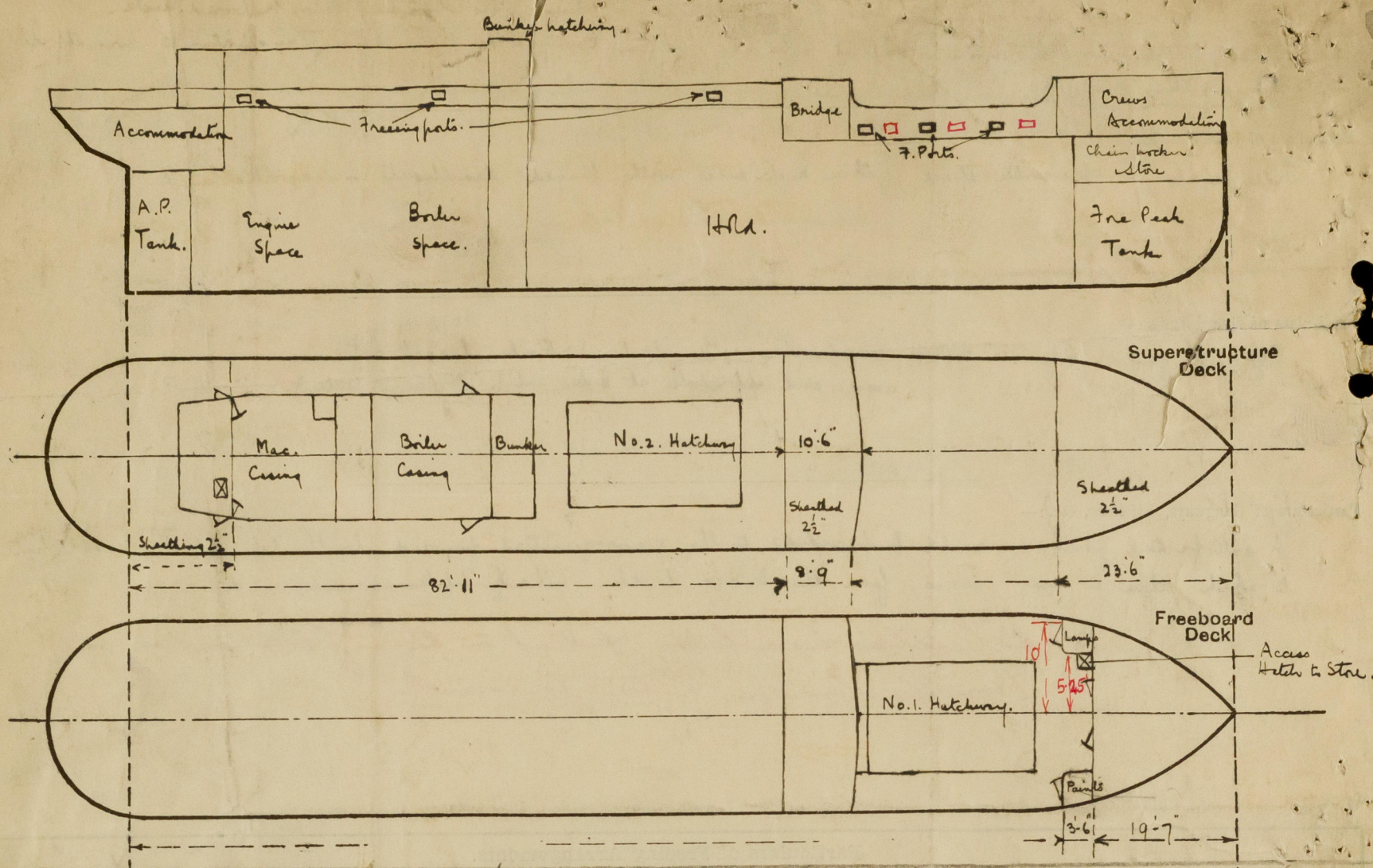
Lloyd's Register Foundation







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:—



This survey was held afloat in dry dock. Vessel was drydocked for sale, and it is understood that any requirements will be carried out in Aberdeen, to which port it is suggested the list of requirements and assignment be sent.

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

Yocle = 19.58  
 +  $\frac{3.5 \times 475}{20} = 0.83$   
 20.41 eqw. enclosed.  
 23.50  
 3.09 overhang

OMIT

11.71  
 12-3 1/2 HK 7.53  
 + 3 1/2 x 6.6 23  
 776

Builder's name and yard number Ailsa S.B. Co. Ltd. Ayr.

Names of sister ships

Owners Geo. Bonner & Co. Ltd. Helmsdale Co. Sutherland.

Fee £ 5 : 2 : -

Received by me



© 2020

Lloyd's Register Foundation