

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

No 101195.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having "FORECASTLE & RAISED QUARTER DECK" *bridge*Port of Survey *LIVERPOOL*

(Type of Superstructures.)

Date of Survey *10 OCTOBER 1932*

Ship's Name **"CARROWDORE"** Nationality and Port of Registry **BRITISH BELFAST** Official Number **132047** Gross Tonnage **599** Date of Build **1914**  
**2 MONTHS**

Name of Surveyor *J. J. Callaghan Son*

Moulded Dimensions: Length **180'-0"** Breadth **29'-0"** Depth **13'-0"**  
Moulded displacement at moulded draught = 85 per cent. of moulded depth **1145** tons  
Coefficient of fineness for use with Tables **.695**

Particulars of Classification **22/100-A-1***S.S. L. No. 3-10-25*  
*S.S. L. No. 101-29*

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... .. <b>13'-0"</b>	(a) Where D is greater than Table depth (D - Table depth) R = <b>(13.04 - 12.00) 1.385 = + 1.44</b>	Moulded Breadth (B) <b>29'-0"</b>
Stringer plate ... .. <b>.04</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{6.96}{50} = \frac{6.96}{50}$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <b>8 1/2"</b>
Depth for Freeboard (D) = <b>13.04</b>		Difference <b>1.54</b>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{1.54^2 \times 23.42}{4 \times 18.24} = - .09$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	✓		✓		
" overhang ... ..	<b>182.66</b>	<b>102.66</b>	✓		<b>102.66</b>
R.Q.D. enclosed ... ..	<b>122.66</b>	<b>122.66</b>	<b>4'-0"</b>	✓	<b>122.66</b>
" overhang ... ..	✓		✓		
Bridge enclosed. <i>(open)</i> <b>446 10.39</b>	<b>10.39</b>	<b>10.39</b>	<b>8'-0"</b>	✓	<b>10.39</b>
" overhang aft ... ..	✓		✓		
" overhang forward ... ..	✓		✓		
F'cle enclosed <i>OPEN</i> <b>18.00</b>	<b>14.29</b>	<b>14.29</b>	<b>7'-0"</b>	✓	<b>14.29</b>
" overhang ... ..	<b>15.00</b>	<b>4.50</b>	✓		<b>4.50</b>
Trunk aft ... ..	✓		✓		
" forward ... ..	✓		✓		
Tonnage opening aft ... ..	✓		✓		
" forward ... ..	✓		✓		
Total ... ..	<b>166.05</b>	<b>154.84</b>			<b>154.84</b>
	<b>146.15</b>	<b>137.84</b>			<b>137.84</b>

Standard Height of Superstructure	<b>6'-0"</b>
" " R.Q.D.	<b>3.533'</b>
Deduction for complete superstructure	<b>24"</b>
Percentage covered $\frac{S}{L} =$	<b>22.21</b> <b>81.14%</b>
" " $\frac{S_1}{L} =$	<b>84.69</b> <b>76.58%</b>
" " $\frac{E}{L} =$	<b>84.69</b> <b>76.58%</b>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<b>84.84</b> <b>71.09%</b>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = $24.00 \times \frac{71.09}{84.84} =$	<b>17.06</b>

## SHEER CORRECTION.

Actual height of R.Q.D. **4'-0"**  
Standard **3.533'**  
**.467**  
**= 5'-60"**

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	<b>28.00</b>	<b>1</b>		<b>28.00</b>	<b>33</b>	<b>33.00</b>	<b>1</b>		<b>28.00</b>
1/2 L from A.P. ... ..	<b>12.46</b>	<b>4</b>		<b>49.84</b>	<b>4</b>	<b>14.32</b>	<b>14.18</b>	<b>12.46</b>	<b>49.84</b>
3/4 L " ... ..	<b>3.08</b>	<b>2</b>		<b>6.16</b>	<b>3 1/2</b>	<b>3.54</b>	<b>4.25</b>	<b>3.08</b>	<b>6.16</b>
Amidships ... ..		<b>4</b>			<b>0</b>				
3/4 L from F.P. ... ..	<b>6.16</b>	<b>2</b>		<b>12.32</b>	<b>6</b>	<b>5.91</b>	<b>5.91</b>	<b>5.91</b>	<b>11.82</b>
1/2 L " ... ..	<b>24.92</b>	<b>4</b>		<b>99.68</b>	<b>24</b>	<b>23.70</b>	<b>23.70</b>	<b>23.70</b>	<b>94.80</b>
F.P. ... ..	<b>56.00</b>	<b>1</b>		<b>56.00</b>	<b>54 1/2</b>	<b>54.50</b>	<b>54.50</b>	<b>54.50</b>	<b>54.50</b>
Total ... ..				<b>252.00</b>					<b>245.12</b>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{6.88}{18} \left( .75 - \frac{.4057}{2} \right) = + .13$

If limited on account of midship superstructure.

Mean actual sheer aft = *mass*  
Mean standard sheer aft =

Mean actual sheer forward = *deficient*  
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = **7.10**

" " aft of " = **7.10**

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **14.04** Ft.  
Summer freeboard = **4.78**  
Moulded draught (d) = **12.88**

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = **1.72** = **3 1/4**

Addition for Winter North Atlantic Freeboard (if required) = **3 1/2 + 2 = 5 1/2**

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$  **1548** **1403**

Tons per inch immersion at summer load water line

$T =$  **10.2**

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

= **3.38** **44**

= **3 1/2**

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

Correction for coefficient **.695 + .68** **1.375**  
**1.36** **1.36**

	+	-
Depth Correction ... ..	<b>1.44</b>	
Deduction for superstructures ... ..		<b>17.06</b>
Sheer correction ... ..	<b>.13</b>	<b>.09</b>
Round of Beam correction ... ..		
Correction for Thickness of Deck amidships ... ..	<b>48.00</b>	
Other corrections, scantlings, etc. ... ..		

Summer Freeboard = **14.04** **52.44**

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

Tropical Fresh Water Line above Centre of Disc ... **3 1/2**  
Fresh Water Line " " ... **3 1/2**  
Tropical Line " " ... **3 1/2**  
Winter Line below " " ... **3 1/2**  
Winter North Atlantic Line " " ... **3 1/2**

Tropical Fresh Water Freeboard ... **3 1/2**  
Fresh Water " " ... **3 1/2**  
Tropical " " ... **3 1/2**  
Winter " " ... **3 1/2**  
Winter North Atlantic " " ... **3 1/2**

**4'-4 1/2"**  
**3'-10 1/2"**  
**4'-1"**  
**4'-2"**  
**4'-7 1/4"**  
**4'-9 1/4"**



## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Fixed Well: <i>Q/t Well:</i>									
Description of Hatchway			No. 1	No. 2					
Dimensions of Hatchway			29'6" x 16'3"	31'2" x 16'3"					
COAMINGS		Height above Deck	3'0"	2'10"					
		Thickness	7/8"	5/8"					
		Stiffeners	7/8"	7/8"					
		Brackets, Stays	12" FLANGED PLATE WITH 3/8" x 3/8"	As No. 1					
HATCH BEAMS		Number	1 - FIXED	As No. 1					
		Spacing	CR:						
		Scantling and Sketch	6" x 4" x 1/2"	As No. 1					
			FOR FURTHER PARTICULARS SEE: AMENDED HATCHWAY PLAN	As No. 1					
Bearing Surface			RIVETED CONNECTION	As No. 1					
FORE AND AFTERS		Number	3	3					
		Spacing	4'0"	4'0"					
		Unsupported Lengths	14'06"	14'0"					
		Scantling* and Sketch	14'06"	15'4"					
Bearing Surface			3:	3:					
HATCH COVERS		Material	W-W	As No. 1					
		Thickness	2 1/2"						
		How fitted	THWART						
		Bearing Surface	2"						
Spacing of Cleats			2'0"						
Number of Tarpaulins			2	As No. 1					

\*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?

1/2" -

1/2" -

1/2" -

1/2" -

Particulars of fiddle, funnel and ventilator coamings:— *Funnel Room Skylight of wood strongly constructed and efficient.*

BUNKER MATCH:- 7'-2" x 17'-0" x 10" Coaming x 3/8" thick

Wood latches 2 1/2" thick in efficient -

condition with 2" Rest Bars and suit all tarpaulins: -

Particulars of Flush Bunker Scuttles:—

"None."

Particulars of Companionways:— 1. Under Forecastle head 1 @ 5'0" x 23" x 9" sill: of wood strongly constructed, and efficient leading to Crew quarters: Capable of being operated from both sides.

Entrance to mudship accommodation starboard side of Bridge: - 4'6" x 20 1/2" x 15 1/2" sill: wood door  
strongly constructed and capable of being operated from both sides. Lock good

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

1. P.15: @ 17" Coaming: 6 1/2" diam x 3 1/8" Thick To: FELE: ACCO: -  
 1st b: @ 30" " 10" " x 1/4" " " MEI: HOLD. FROM: FELE: HD: -  
 1 Port: @ 6" " 6" " x 1/4" " " MIDSHIP: ACCO: FROM: BRIDGE: DK: -  
 1 " @ 4" To LIP. x 3 1/2" diam x 1/4" " " " " " " -  
 1st b: @ 9" Coamy x 6 1/2" " x 1/4" " " " " " " -

Wood plugs and Canvas covers are on board for all masts:—

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

1 @ 3 1/2" dia. x 3 3/4" to lip on fore head leading to 1st peak tank: with branch pipe leading into Fore. well: -  
 1 @ 3 1/2" " x 3 3/4" " " IN. FWD. WELL: " " 12" D.B. " "  
 1 @ 3" " x 6" " " ON. R. & D.K. " " 12" D.B. " "  
 1 @ 3" " x 3" " " " " D.K. " " LOWER: A.P. TANK: -  
 1 @ 3" " x 5" " " " " " " " UPPER: A.P. TANK: -

manhole hatch a/b  
 Jugue's casing: (3)

- manhole hole a ft red  
Jugur casing: (see under "small slates")

Woods plugs air on board for all -  
air first.

Particulars of Gangway Cargo and Coaling Ports:—

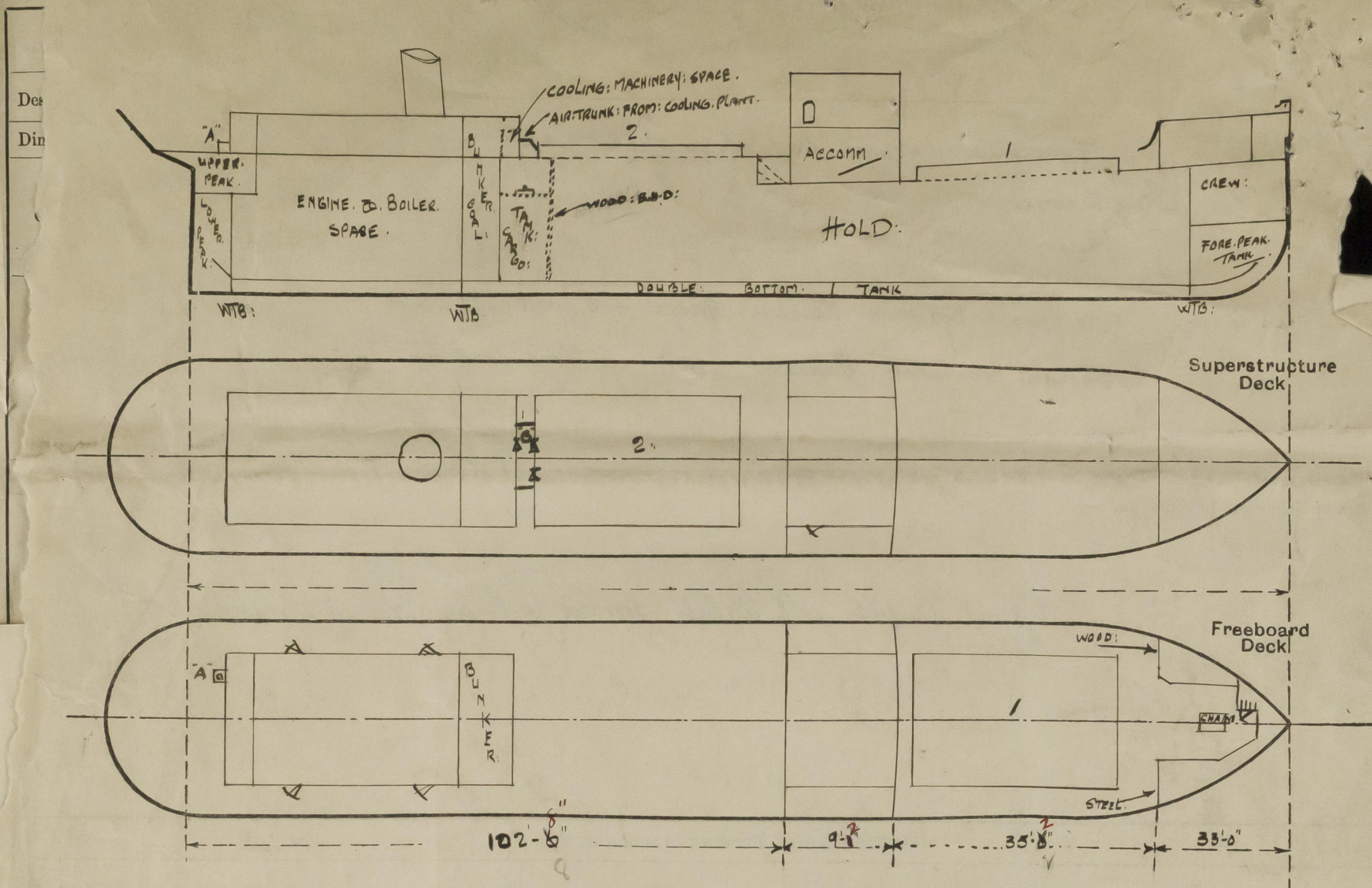
Stone -







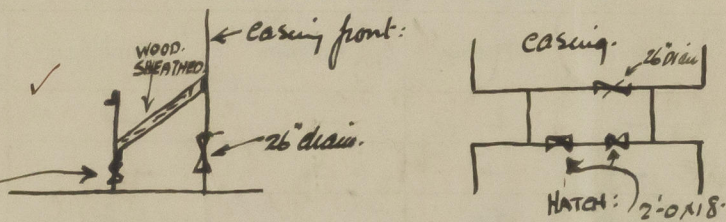
Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard, deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



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

Small Steel hatch: "A" 23" x 21 1/2" x 15" coaming fitted with riveted plate cover and manhole leading to upper after peak: ✓

"B". Air trunk at aft end of No. 2. Hatch is of steel strongly constructed and wood sheathed. The air passes through a 26" drain hole in machinery casing and hence into hold through two openings in hatch and 2'-0" x 18": ✓



Builder's name and yard number Scott & Sons: Bowling:

Names of sister ships ✓

Owners A. Guinness: Son & Co. Ltd:

Fee £ 6 : 16 : —

Received by me