

7 JUN 1932

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD. 10.864

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Forecastle, Bridge, Raised Quarter Deck & PoopPort of Survey Belfast

(Type of Superstructures.)

Date of Survey May & June 1932

Ship's Name

CLEWBAY

Nationality and Port of Registry

British  
Belfast

Official Number

109684

Gross Tonnage

645

Date of Build

1904-7

Name of Surveyor T.D. PhilstonMoulded Dimensions: Length 182.83 Breadth 28.50 Depth 13.75Moulded displacement at moulded draught = 85 per cent. of moulded depth 1256 tonsCoefficient of fineness for use with Tables .722Particulars of Classification +100A1

## Depth for Freeboard (D)

Moulded depth ... .. 13.75Stringer plate ... .. 5.0 .0365

Sheathing on exposed deck

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

Depth for Freeboard (D) = 13.79

## Depth correction

(a) Where D is greater than Table depth

$$(D - \text{Table depth}) R = (13.79 - 12.19) 1.407 = + 2.25$$

(b) Where D is less than Table depth (if allowed)

$$(\text{Table depth} - D) R =$$

If restricted by superstructures

## Round of Beam correction

Moulded Breadth (B) 28.50

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = \frac{6.84}{8} = 1.16$$

Ship's Round of Beam = 8

Difference

Restricted to

$$\text{Correction} = \frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) = .29 \times .2807 = -.08$$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	17.00	17.00	5.2		17.00
" overhang ...					
R.Q.D. enclosed ...	82.50	82.50	11.0		82.50
" overhang ...					
Bridge enclosed ...	4.33	11.00	7.25		11.00
" overhang aft ...					
" overhang forward ...					
Deck enclosed ...	25.16	21.01	7.25		21.01
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	135.66	131.51			131.51

Standard Height of Superstructure 6.00" " R.Q.D. 3.55Deduction for complete superstructure 24.28Percentage covered  $\frac{S}{L} = 74.20\%$ "  $\frac{S_1}{L} = 71.93\%$ "  $\frac{E}{L} = 71.93\%$ 

Percentage from Table, Line A.

(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)

Deduction =  $24.28 \times .6538 = -15.87$ 

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	28.28	1		28.28	32	32.00	1		28.28
$\frac{1}{2}$ L from A.P. ...	12.58	4		50.32	12	11.55	4		50.32
$\frac{2}{3}$ L " ...	3.11	2		6.22	3	2.96	2		6.22
Amidships ...		4					4		
$\frac{2}{3}$ L from F.P. ...	6.22	2		12.44	7	6.12	2		12.24
$\frac{1}{2}$ L " ...	25.17	4		100.68	25	24.49	4		97.96
F.P. ...	56.56	1		56.56	53	53.00	1		53.00
Total ...				254.50					248.02

Mean actual sheer aft = Excess  
Mean standard sheer aftMean actual sheer forward = Deficient  
Mean standard sheer forwardLength of enclosed superstructure forward of amidships = .105  
Laft of " = .50

$$\begin{array}{r} \text{FORWARD} \\ 3 \times 6.22 = 18.66 \\ 3 \times 25.17 = 75.51 \\ 1 \times 56.56 = 56.56 \\ \hline 150.73 \end{array} \quad \begin{array}{r} 6.12 \times 2 = 12.24 \\ 24.49 \times 4 = 97.96 \\ 53.00 \times 1 = 53.00 \\ \hline 163.20 \end{array} \quad \begin{array}{r} 18.36 \\ 73.47 \\ 53.00 \\ \hline 144.83 \end{array} = .961$$

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{6.48}{18} \left( .75 - .371 \right) = +.14$$

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 Freeboard Deck = 17.79 Ft.  
Summer freeboard = 4.60  
Moulded draught (d) = 13.19

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches =  $3.297 = 3\frac{1}{4}$ Addition for Winter North Atlantic Freeboard (if required) = +2

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = 1446$$

Tons per inch immersion at summer load water line

$$T = 10.4$$

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

$$= 3.52$$

$$= 3\frac{1}{2}$$

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

Correction for coefficient  $\frac{.722 + .680}{1.36} = \frac{1.402}{1.36} \times$ 

Depth Correction ...	2.25
Deduction for superstructures ...	15.87
Sheer correction ...	.14
Round of Beam correction ...	.08
Correction for Thickness of Deck amidships ...	48.00
Other corrections, scantlings, etc. ...	

Summer Freeboard = 55.32SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:— 4-7 $\frac{1}{4}$ 

Tropical Fresh Water Line above Centre of Disc ... 6 $\frac{3}{4}$   
Fresh Water Line " " ... 3 $\frac{1}{2}$   
Tropical Line " " ... 3 $\frac{1}{4}$   
Winter Line below " " ... 3 $\frac{1}{4}$   
Winter North Atlantic Line " " ... 5 $\frac{1}{4}$

Tropical Fresh Water Freeboard ... 4-0 $\frac{1}{2}$   
Fresh Water " " ... 4-3 $\frac{3}{4}$   
Tropical " " ... 4-4  
Winter " " ... 4-10 $\frac{1}{2}$   
Winter North Atlantic " " ... 5-0 $\frac{1}{2}$

10 JUN 1932

MARKING FORM

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RECEIVED 11 APR 1934

RECEIVED 21 JUN 1932



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8
Description of Hatchway		Freeboard Deck	Raised Quarter Deck	Bunker Hatch	Trimming Hatch on Freeboard Dk.				
Dimensions of Hatchway		23'-6" x 14'-0"	25'-2" x 14'-0"	5'-11" x 14'-0"	28'-2" x 19'				
COAMINGS	Height above Deck	39"	24 1/2"	34 1/2"	24 1/2"				
	Thickness	37"	37"	37"	37"				
	Stiffeners	8 x 3 1/2 x 1/2 BA	8 x 3 1/2 x 1/2 BA	8 x 3 1/2 x 1/2 BA	✓				
	Brackets, Stays	3 each side	2 each side	nil	✓				
		inside coaming	inside coaming						
HATCH BEAMS	Number	3	2	✓	✓				
	Spacing	9' 1" max.	max 9' 2"						
	Scantling and Sketch	7' 5 1/2" min.	min 7' 5"						
		Top angles 3 x 3 x .40"	Top angles 3 x 3 x .40"						
		plate 24 1/2" x .50"	plate 24 1/2" x .50"						
FORE AND AFTERS	Bearing Surface	3 x 3 x .31"	3 x 3 x .31"						
	Number	3	3	✓	✓				
	Spacing	3' 6"	3' 6"						
	Unsupported Lengths	9' 1" max	9' 2" max						
	Scantling* and Sketch	Centre 7' x 7"	Centre 6' 2" x 7"						
HATCH COVERS	Material	Canadian Spruce	Canadian Spruce						
	Thickness	2 1/2"	2 1/2"		2 1/2"				
	How fitted	Transverse	Transverse	Foreaft					
	Bearing Surface	3" sides	3" sides	2 1/2"	1 1/2"				
		2 1/2" on foreaft	2 1/2" on foreaft						
Spacing of Cleats		24"	24"	24"	18" to 11"				
Number of Tarpaulins		2	2	2	1 x 2				
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>yes. no.</i></p> <p>Are battens and wedges efficient and in good condition? <i>yes</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>yes</i></p> <p>Are lashings provided in accordance with rule requirements? <i>Manilla rope lashings</i></p>									

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

Funnels coaming of steel, strong, rivetted to casing top.  
 Fiddle ventilator coamings of steel, strong, rivetted to casing top.  
 Fiddle opening protected by steel cover, hinged.  
 Engine room skylight, steel, strong, rivetted to casing top.  
 Ventilator coamings, to crew space, of steel, rivetted to casing top.  
 Skylight of wood, to crew space, bolted to casing top.

## Particulars of Flush Bunker Scuttles:—

none

## Particulars of Companionways:—

On freeboard deck, below forecabin erection, to crew space below freeboard deck, companion of steel, rivetted to deck, opening 58" x 19 1/2", sill 16", closed by hinged hardwood door 1 1/2" panelled 1" thick, securing both sides.  
 Formed in side of forecabin room giving access from bridge deck to bridge space on freeboard deck, opening 58" x 22", sill 12", closed by hardwood door 1 1/2" panelled 3/4" thick.

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

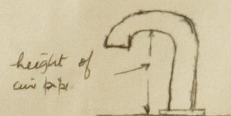
On forecabin deck to crew space below freeboard deck, 1 coaming of steel 8" dia x 12" high x 7/16" thick with steel trunk below forecabin deck.  
 10" high wind platform on freeboard deck to hold, 1 " " " 10" " x 24" " x 1/4" "  
 Bridge deck to bridge space, 2 coamings - 1 6" dia x 7" high & 1 4" dia x 18" high with screwdown mushroom closing.  
 Raised quarter deck to hold, 1 " " 8 3/4" dia x 36" high x 5/16" thick.  
 Poop deck to crew space, 1 coaming 5 1/2" dia x 17" high x 1/2"  
 Fitted with wood plugs.

*Efficient means of closing provided.*

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

On freeboard deck below forecabin erection, to forepeak 3" dia x 36" high.  
 " " " to No. 1 double bottom tank 4" dia x 36" high.  
 " raised quarter " " No. 2 " " 2 @ 3" dia x 30" high.  
 " poop " " after peak tank 2 - 1 @ 3 3/8" high & 1 @ 9 1/2" high - 2" dia.

*Efficient closing appliances provided.*



## Particulars of Gangway Cargo and Coaling Ports:—

none



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Blew bay

Particulars of Scuppers and Sanitary Discharge Pipes —

In bridge space, 1 sanitary discharge fitted with

Particulars of Side Scuttles:

In crew space forward below foreboard deck, efficient, fitted with deadlights.

Bridge space efficient, no deadlights fitted.

Crew space aft, below raised quarter deck, efficient, 1 with deadlight, 3 without deadlights.

Particulars of Guard Rails:—

On forecastle deck, guard rails, 2 rows, 35" high. Efficient.

Foreboard " bulwarks of steel, 52½" high. Efficient.

Bridge " of wood 36" " " "

Raised quarter " of steel 39" " " "

Poop " " 40" " " "

Particulars of Gangways, Lifelines, etc.:—

An efficient gangway from the bridge to the crew's quarters forward is provided by the top of the cargo hatchway to which there is easy access from the bridge ladder. ~~No arrangements are provided for the fitting of lifelines.~~ Efficient steel wire lifeline fitted in well, capable of being rigged either side of the vessel.

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Raised quarter deck & poop. After Well ... ..	99'6"	39" 240"	3 @ 22½" x 16" 2 @ 36" x 18" 1 @ 33" x 19"	6	20.85	20
Forward Well ... ..	48'10"	52½"	34½" x 18"	3	12.95	11.4

State position of each freeing port ... .. } ~~Forward quarter deck~~ 6" } see sketch.  
(F. and A. position and height above deck edge) } After Well:— 11" }  
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—

6 shutters on steel swivels.  
3 " on hinges (brass pins) each side.

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

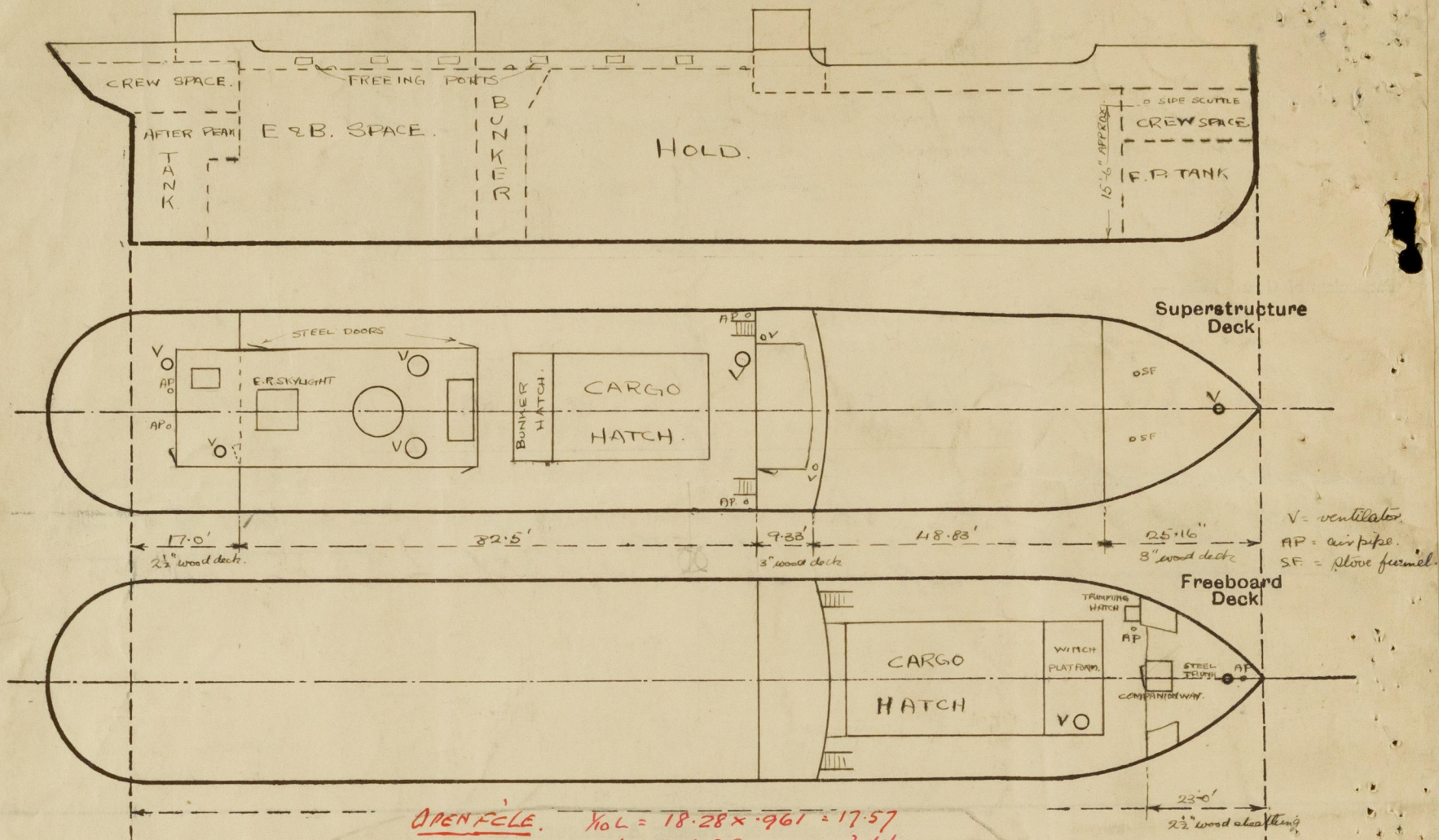
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..	✓	31"						
Raised Quarter Deck Bulkhead ...	✓	31"	Diaphragm & brackets 4" x 3" x 58" B.H. double remains 3½ x 3" x 32"	✓				
Bridge, After Bulkhead ... ..	✓	31"	5" x 3" x 31" with 3 x 3 x 31 runners	34"	nil	✓	✓	✓
Bridge, Forward Bulkhead ... ..	37"	31"		27" / 16 30"	Bracketed at bottom at wings also at "apron" feet	✓	✓	✓
Forecastle Bulkhead ... ..	✓							
Trunk, Aft ... ..	✓							
Trunk, Forward ... ..	✓							
Exposed Machinery Casings on Fore- board or Raised Quarter Decks ...	31"	25"	2½ x 2½ x .25 (stanchion) 2½ x 1½ half round (engine room)	31" 26½"	Bracketed top only. Taking top bar only.	3 @ 60" x 24"	20½"	7'9"
Exposed Machinery Casings on Super- structure Decks ... ..	✓							
Machinery Casings within Superstruc- tures 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 ... ..	✓
Exposed Machinery Casings on Fore- board or Raised Quarter Decks ...	3-½" hinged steel doors in halves, non water tight, capable of being manipulated from both sides
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:—



OPEN FEEL.  $NOL = 18.28 \times .961 = 17.57$   
 $+ \frac{1}{2} \text{ of } 6.88 = 3.44$   
21.01

OMIT.

This survey has been held in conjunction with a full Special Survey.

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

The bridge front is also stiffened by an extension from the after end of the cargo hatch across the bulkhead for the width of the hatch 20" above the freeboard deck. There is an opening 57" x 22" (sill 14 1/2") in the after end of the deck house at the after end of the machinery casing closed by a hinged teakwood door 1 3/8" panelled 7/8" thick securing from both sides. Within this deck house there is a stairway leading to the crewspace below the poop deck. Also within this deckhouse there is an opening 65" x 21 1/2" (sill 3 1/2") through the after bulkhead of the machinery casing closed by a hinged teakwood door 1 1/2" panelled 3/4" thick securing from both sides.

It has been arranged with the owners to raise the height of the air pipes on the freeboard deck to 36" high & on the raised quarter deck & poop deck to 30". This is now being carried out.

OMIT.

Builder's name and yard number Aika S. B. Co. Ltd. Troon.

Names of sister ships

Owners John Kelly Ltd. (W. Clint. Manager)

Fee £ 6 : 16 : 0 Received by me



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