

23 NOV 1932

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Rpt. C.11.

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Index. No. 24023
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

No 101395.

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having Raised Quarter, Bridge and Forecastle Deck

(Type of Superstructures.)

Ship's Name CLARECASTLE Nationality and Port of Registry British Belfast Official Number 136345 Gross Tonnage 627 Date of Build 1914.12.

Moulded Dimensions: Length 179.9 Breadth 28.5 Depth 13.6
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1190 tons
Coefficient of fineness for use with Tables .708

Port of Survey Sirkenhead
Date of Survey Nov. 21st 1932
Name of Surveyor T. Richardson
Particulars of Classification 100.A.1.
S.S. Lr. No 3-12.26
S.S. Bkn. No 1-30

Depth for Freeboard (D) Moulded depth ... 13.6
Stringer plate R.Q.D.49
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \text{See Sketch}$
Depth for Freeboard (D) = 13.54

Depth correction
(a) Where D is greater than Table depth (D-Table depth) R = $(13.54 - 11.99) 1.384 = 2.15$
(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) 28.5
Standard Round of Beam = $\frac{B \times 12}{50} = 6.84$
Ship's Round of Beam = 8.5
Difference 1.66
Restricted to
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.66}{4} \times .2297 = .094$

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 ...	<u>103.5</u>	<u>103.50</u>	<u>4.0</u>	-	<u>103.50</u>
„ overhang ...					
Bridge enclosed ...	<u>10.44</u>	<u>10.44</u>	<u>8.0</u>	-	<u>10.44</u>
„ overhang ...					
„ overhang forward ...	<u>11.0</u>				
„ overhang forward ...	<u>32.8</u>	<u>24.63</u>	<u>7.0</u>	-	<u>24.63</u>
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ forward ...					
Total ...	<u>146.61</u>	<u>138.57</u>			<u>138.57</u>

Standard Height of Superstructure 6.0
„ „ R.Q.D. 3.532
Deduction for complete superstructure 23.99
Percentage covered $\frac{S}{L} = 81.50$
„ „ $\frac{S_1}{L} = 77.03$
„ „ $\frac{E}{L} = 77.03$
Percentage from Table, Line A. (corrected for absence of fore-castle (if required)) 71.65
Percentage from Table, Line B. (corrected for absence of fore-castle (if required))
Interpolation for bridge less than .2L (if required)
Deduction = - 17.18

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>27.99</u>	1		<u>27.99</u>	<u>34.5</u>	<u>33.00</u>	1		<u>27.99</u>
$\frac{1}{4}$ L from A.P. ...	<u>12.46</u>	4		<u>49.84</u>	<u>13</u>	<u>14.30</u>	4		<u>49.84</u>
$\frac{2}{4}$ L „ ...	<u>3.08</u>	2		<u>6.16</u>	<u>2.5</u>	<u>3.57</u>	2		<u>6.16</u>
Amidships ...		4					4		
$\frac{3}{4}$ L from F.P. ...	<u>6.16</u>	2		<u>12.32</u>	<u>4.5</u>	<u>5.92</u>	2		<u>11.84</u>
$\frac{4}{4}$ L „ ...	<u>24.92</u>	4		<u>99.68</u>	<u>25</u>	<u>23.70</u>	4		<u>94.80</u>
F.P. ...	<u>55.98</u>	1		<u>55.98</u>	<u>51</u>	<u>54.50</u>	1		<u>54.50</u>
Total ...				<u>251.97</u>					<u>245.13</u>

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{6.84}{18} (.75 - .4075) = +.13$$

If limited on account of midship superstructure.

Mean actual sheer aft = Excess
Mean standard sheer aft = Standard
Mean actual sheer forward = Deficient
Mean standard sheer forward = Standard
Length of enclosed superstructure forward of amidships =
„ „ aft of „ =
Sheer forward
Stand. 18.48 Act. 17.76
74.76 71.10
55.98 54.50
149.22 143.36
149.22 143.36 = .961

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 17.54
Summer freeboard = 4.44
Moulded draught (d) = 13.10

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.27 $\frac{3}{4}$
Addition for Winter North Atlantic Freeboard (if required) = 2

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ 1397
Tons per inch immersion at summer load water line

T = 10.08

Deduction = $\frac{\Delta}{40T}$ inches = 3.46

3 1/2

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

708 + 68 = 1388

1.36

1.36

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

48.00

50.28 17.28

Summer Freeboard = 53.20

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel Deck: R.Q.D.

Tropical Fresh Water Line above Centre of Disc ... 6 3/4
Fresh Water Line „ „ ... 3 1/2
Tropical Line „ „ ... 3 1/4
Winter Line below „ „ ... 3 1/4
Winter North Atlantic Line „ „ ... 5 1/4

Tropical Fresh Water Freeboard ... 4' - 5 1/4"
Fresh Water „ „ ... 3' - 10 1/2"
Tropical „ „ ... 4' - 1 3/4"
Winter „ „ ... 4' - 2"
Winter North Atlantic „ „ ... 4' - 8 1/2"
Winter North Atlantic „ „ ... 4' - 10 1/2"

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	...	...	...	N ^o . 1. FORWARD	N ^o . 2. R. Q. D ^K	BUNKER HATCH ON CASING TOP			
Dimensions of Hatchway	...	...	...	29'6" x 15'6"	31'3" x 15'6"	7'0" x 16'6"			
COAMINGS	Height above Deck	...	...	3'0"	2'9"	9"			
	Thickness	...	...	.50"	.50"	3/8"			
	Sides	...	...	.40"	.40"	✓			
	Stiffeners	...	...	see sketch	as No. 1. Hatch	✓			
	Brackets, Stays	...	...	none	none	✓			
HATCH BEAMS	Number	...	...	2	2				
	Spacing	...	...	see sketch	see sketch				
	Scantling and Sketch	...	...	Plat 33'-27" x 7 1/2" angles 3' x 3' x 3/8" Copes 3' x 1 1/2" solid.	Plat 32'-24" x 7 1/2" otherwise same No. 1.	✓			
	Bearing Surface	...	...	3"	3"				
FORE AND AFTERS	Number	...	...	3	3				
	Spacing	...	...	3' 10 1/2"	3' 10 1/2"				
	Unsupported Lengths	...	...	as per web spacing	as per web spacing				
	Scantling* and Sketch	...	...	Pitch Pine Centre 8 1/2" x 7 1/2" sides 7 1/2" x 7"	Pitch Pine Centre 9" x 7 1/2" sides 8" x 7 1/2"	✓			
	Bearing Surface	...	...	3"	3"				
HATCH COVERS	Material	...	...	W. W.	W. W.				
	Thickness	...	...	2 1/2"	2 1/2"				
	How fitted	...	...	thru antislips	thru antislips				
	Bearing Surface	...	...	2"	2"				
Spacing of Cleats	...	...	...	24"	24"				
Number of Tarpaulins	...	...	...	2	2				
<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 ✓</p> <p>Are lashings provided in accordance with rule requirements? Yes ✓ Rope lashings</p>									

Particulars of fiddley, funnel and ventilator coamings:—

Stoke Hold Gratings covered by strong steel hinged covers. -
Funnel and Dickey ventilator in efficient condition. -
Engine Skylight of 2" Teak, with hinged Teak Flaps. strongly constructed

Particulars of Flush Bunker Scuttles:—

None. -

Particulars of Companionways :—

One Entrance to Forecastle. 5'0" x 2'6": full depth of Icle between decks. Wood door 5'0" x 1'10" x 1 1/2" solid
10" sill. Door operated both sides.
One Entrance to Budge accommodation from House on Bridge. Teak Door 1 1/2" frames. 3/4" panels. 4'7" x 1'9"
16" sill. Door operated both sides.
One Entrance to Cabin aft below R. Q. from Engineers mess Room 3'3" x 2'2". Flush. Teak door into Eng's. mess Room
1 1/4" frames. 3/4" panels 4'3" x 1'9". 4 1/2" sill. Door operated both sides.

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

2	Vents on 3rd. Dk.	6" diam.	Coaming 18" x 1/4"	led to Crews Quarters below 3rd. Dk.	
1	" " 3rd. Dk.	10" "	6' 6" x 1/4"	" " " " " "	Supported by Forecastle.
1	" " Bridge Dk.	7" "	12" high	led to Bridge accommodation	M.V.
1	" " " "	6" "	6" " " "	" " " "	M.V.
1	" " " "	3" "	4" " " "	" " " "	S.N.
1	" " R. Q. Dk.	8" "	Coaming 2' 10" x 1/4"	led to Hold.	

all Vents constructed in accordance with the Rules & Coamings closed with wood plugs & canvas covers.

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

1. C.I. Air pipe on Forecastle Deck. 8" high x 3" diam. from Fore Peak.
 1. C.I. " " " 3rd Deck. forward 3' 5" high x 3" " " C.D.B. Tank
 2. C.I. " " " R. Q. Deck. 2' 6" " x 2 1/2" " " "
 1. C.I. " " " " aft. 2' 6" " x 2 1/2" " " after Peak.
 all air pipes are closed with Canvas Covers.

Particulars of Gangway Cargo and Coaling Ports :—

None.

Particulars of Scuppers and Sanitary Discharge Pipes:—

Scuppers this stringer angle in forward well 4 1/2" x 3 1/2" on Quarter Dk. 5" x 2 1/2" —
 1. Elbow Scupper p & s. abreast E.R. Door 2" diam. out 6" below Dk. —
 Discharge from W.C. forward 1" diam. out above 3rd Deck.
 " " in Bridge 4" " 2 1/2" below 3rd Dk. } fitted with non return Valves.
 " " aft. 4" " 2 1/2" " R.Q. Dk. }

Particulars of Side Scuttles:—

Side Scuttles to Crew's Quarters forward 8" diam. provided with hinged Deadlights:—
 " " Cabin aft. 8" " " " "
 All Scuttles of substantial construction. —

Particulars of Guard Rails:—

Guard rails on fore-castle Dk. 3' 0" high with 2 rods + blanchions 4' 6" apart.
 Steel bulwarks on fore-board Dk. in well 4' 3" high efficiently constructed and supported.
 " " " R. Quarter Dk. 3' 2" " " "
 " " " Bridge Dk. 2' 9 1/2" " " "

Particulars of Gangways, Lifelines, etc.:—

Hatch top forms gangway with rope stretched from side to fore end of Bridge
 bowed down to hatch coaming & a stiffener. —

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	103' 6" ✓	3' 2"	1 @ 2' 0" x 1' 3" 4 @ 3' 2" x 1' 6"	1. 4.	21.21.	20.7 ft
Forward Well	34' 6" ✓	4' 3"	2' 6" x 1' 6"	3.	11.25.	10.0 ft

State position of each freeing port } After Well:— from Bridge end. 8' 6", 17' 9", 22' 3", 44' 6", 75' 3". 4" above deck edge.
 (F. and A. position and height above deck edge) } Forward Well:— " front 1' 3", 12' 6", 21' 6". 10" above deck edge.
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Hinged plate shutters forward
 Rods. aft.

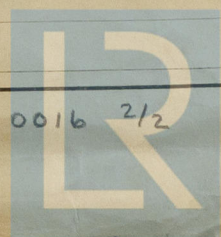
Additional area where sheer is less than standard.

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 } ...		5' 1/6" —	4 x 3 x 2 1/2 x 50	30	blts top & botm	none. —		4' 0" R.Q.D. 8' 0" Bridge
Bridge, After Bulkhead ... } ...		28" —	4 x 3 x 2 1/2 x 50	30	Brackets top & bottom	4. 10" lights	✓	8' 0" —
Bridge, Forward Bulkhead		28" —						7' 0" —
Fore-castle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Fore-board or Raised Quarter Decks ...	7' 1/6" —	1' 4" —	3" x 2 1/2" x 5' 1/6"	30"	Brackets to Casing Top.	4 steel doors 4' 2" x 1' 11"	43"	6' 10"
Exposed Machinery Casings on Super-structure 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 ... } ...	
Bridge, Forward Bulkhead	4. 10" lights opening from inside — no openings
Fore-castle Bulkhead	open fore-castle with steel side-houses —
Exposed Machinery Casings on Fore-board or Raised Quarter Decks ...	Steel doors. — manipulated from both sides.
Exposed Machinery Casings on Super-structure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships ...	

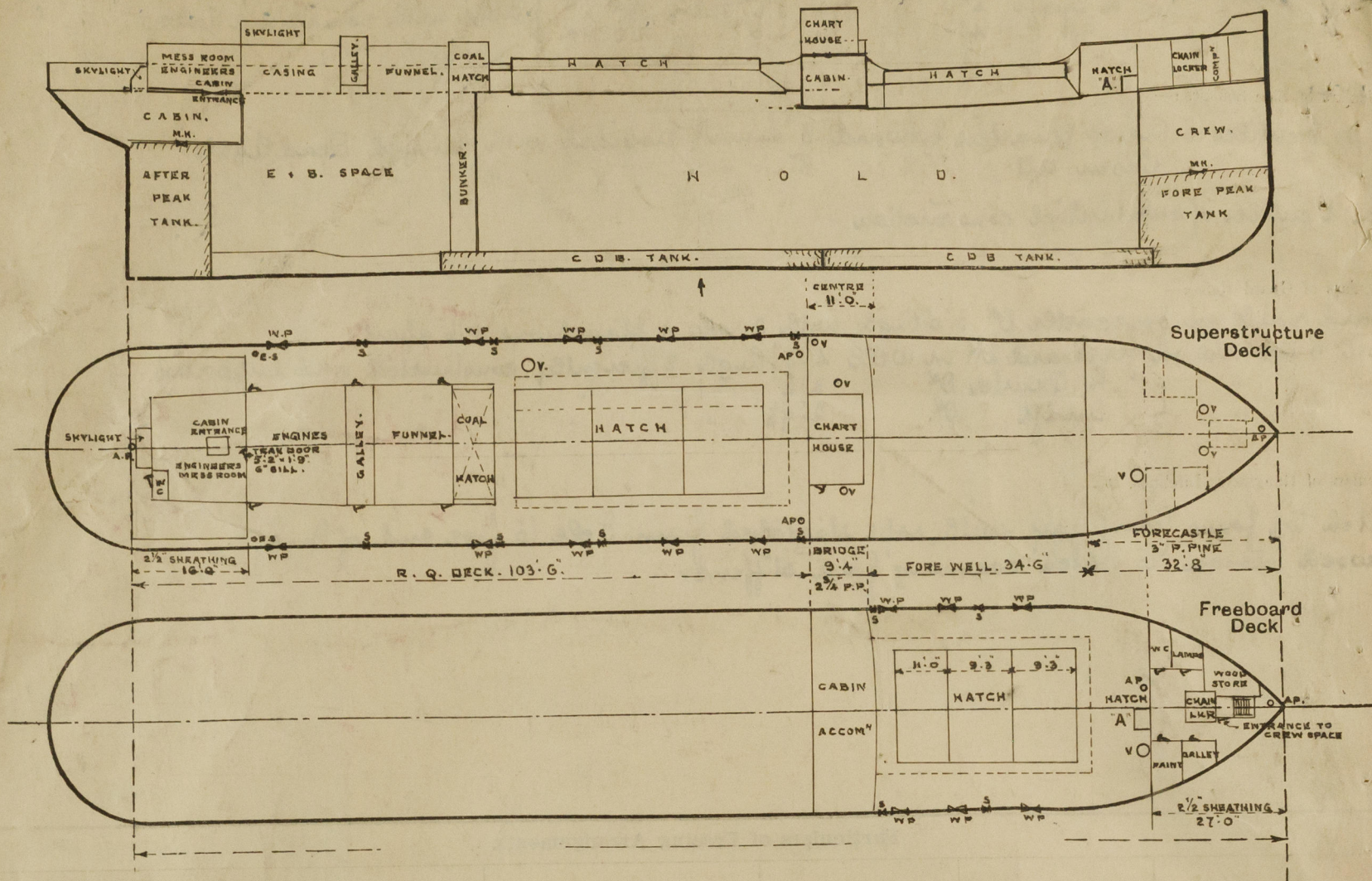


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Clare Castle

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:—



$7000 \times \frac{1}{10} = 17.99 \times 96.1$
 32.67
 14.68×96.1

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

Vessel surveyed in Dry Dock, for freeboard assignment only.
 Timber freeboard not required.

Builder's name and yard number Scott & Sons, Bowling. Yard No. 256.

Names of sister ships

Owners A. Guinness Son & Co. Ltd.

Fee £ 6 : 16 : 0.

Received by me

[Signature]



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