

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index. No. **27566**  
(For London Office only.)**W129**

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Poop and Forecastle

(Type of Superstructures.)

Port of Survey London

Date of Survey 29th 30th June 1932

Name of Surveyor R. Blake.

Ship's Name OTIRA Nationality and Port of Registry British Southampton Official Number 135706 Gross Tonnage 7995 Date of Build 1919

Moulded Dimensions: Length 450.0' Breadth 58.0' Depth 40.0'

Moulded displacement at moulded draught = 85 per cent. of moulded depth 19320 tons

Coefficient of fineness for use with Tables .762

Particulars of Classification +100 A.1. Shell B.P. with freeboard  
SS. 7al. No. 3-11-31 12.31.

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	40.00	(a) Where D is greater than Table depth (D - Table depth) R = $(40.05 - 30.00) \times 3$ $10.05 \times 3 = +30.15$		Moulded Breadth (B)	58.00
Stringer plate	6.0	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = —		Standard Round of Beam = $\frac{B \times 12}{50}$	13.92
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$		If restricted by superstructures —		Ship's Round of Beam	12
Depth for Freeboard (D) =	40.05			Difference	Deficient 1.92
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$	$= \frac{1.92}{4} \left( 1 - \frac{16.44}{44} \right) = 0.356$

## DEDUCTION FOR SUPERSTRUCTURES

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed	31.0	31.00	7.6		31.00
„ overhang	✓				
R.Q.D. enclosed	✓				
„ overhang	✓				
Bridge enclosed	✓				
„ overhang aft	✓				
„ overhang forward	✓				
Fore enclosed	43.0	43.00	7.6		43.00
„ overhang	✓				
Trunk aft	✓				
„ forward	✓				
Tonnage opening aft	✓				
„ forward	✓				
Total	74.0	74.00			74.00

Standard Height of Superstructure	7.50
„ „ R.Q.D.	
Deduction for complete superstructure	42.00
Percentage covered $\frac{S}{L} =$	16.44
„ „ $\frac{S_1}{L} =$	16.44
„ „ $\frac{E}{L} =$	16.44
Percentage from Table, Line A.	8.22
(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 =	$42.00 \times 0.822 = 3.45$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	55.00	1		55.00	60	60.00	1		60.00
$\frac{1}{4}L$ from A.P.	24.48	4		97.92	20.5	20.54	4		82.16
$\frac{3}{4}L$ „	6.05	2		12.10	5.5	5.13	2		10.26
Amidships	—	4		—	✓	—	4		—
$\frac{3}{4}L$ from F.P.	12.10	2		24.20	5.5	5.13	2		10.26
$\frac{1}{4}L$ „	48.95	4		195.80	20.5	20.54	4		82.16
F.P.	110.00	1		110.00	60	60.00	1		60.00
Total				495.02					304.84

Mean actual sheer aft = Deficient  
Mean standard sheer aftMean actual sheer forward = Deficient  
Mean standard sheer forwardLength of enclosed superstructure forward of amidships =  
„ „ aft of „ =Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \text{Deficient } \frac{190.18}{18} \left( .75 - \frac{66.78}{110} \right) = +7.06$ 

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 = 40.05

Summer freeboard = 11.04

Moulded draught (d) = 29.01

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 7.25

Addition for Winter North Atlantic Freeboard (if required) = —

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 16187$ 

Tons per inch immersion at summer load water line

 $T = 52.9$ Deduction =  $\frac{\Delta}{40T}$  inches $= 7.65$  $= 7\frac{3}{4}$ 

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient  $\frac{762 + 68}{1.36} = \frac{1.442}{1.36}$ 

	+	-
Depth Correction	30.15	—
Deduction for superstructures	—	3.45
Sheer correction	7.06	—
Round of Beam correction	4.0	—
Correction for Thickness of Deck amidships	—	—
Other corrections, scantlings, etc.	6.00	—
	43.61	3.45

Summer Freeboard = 132.50

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

Tropical Fresh Water Line above Centre of Disc	15"	Tropical Fresh Water Freeboard	11'-0"
Fresh Water Line	7 $\frac{3}{4}$ "	Fresh Water	9'-9 $\frac{1}{2}$ "
Tropical Line	7 $\frac{1}{4}$ "	Tropical	10'-4 $\frac{3}{4}$ "
Winter Line below	7 $\frac{1}{4}$ "	Winter	10'-5 $\frac{1}{4}$ "
Winter North Atlantic Line	—	Winter North Atlantic	11'-7 $\frac{3}{4}$ "



UTIRA

Particulars of fiddle, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles:—

NONE

Particulars of Companionways :—

1-20 dia Vent on Boat Dr Coaming 2'-0" x 7/16" L Tunnel Escape

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

Note: all vents coamings  
closed by wood plugs  
and canvas covers.

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

Particulars of Gangway Cargo and Coaling Ports:—

NONE.

Particulars of Side Scuttles :—

Particulars of Guard Rails :—

Particulars of Gangways, Lifelines, etc. :—

~~NONE.~~  
crew berthed in Poots. Suitable provision made for rigging  
lifelines for use in any part of the  
ship which might have to be used  
by the crew in the regular working  
of the ship

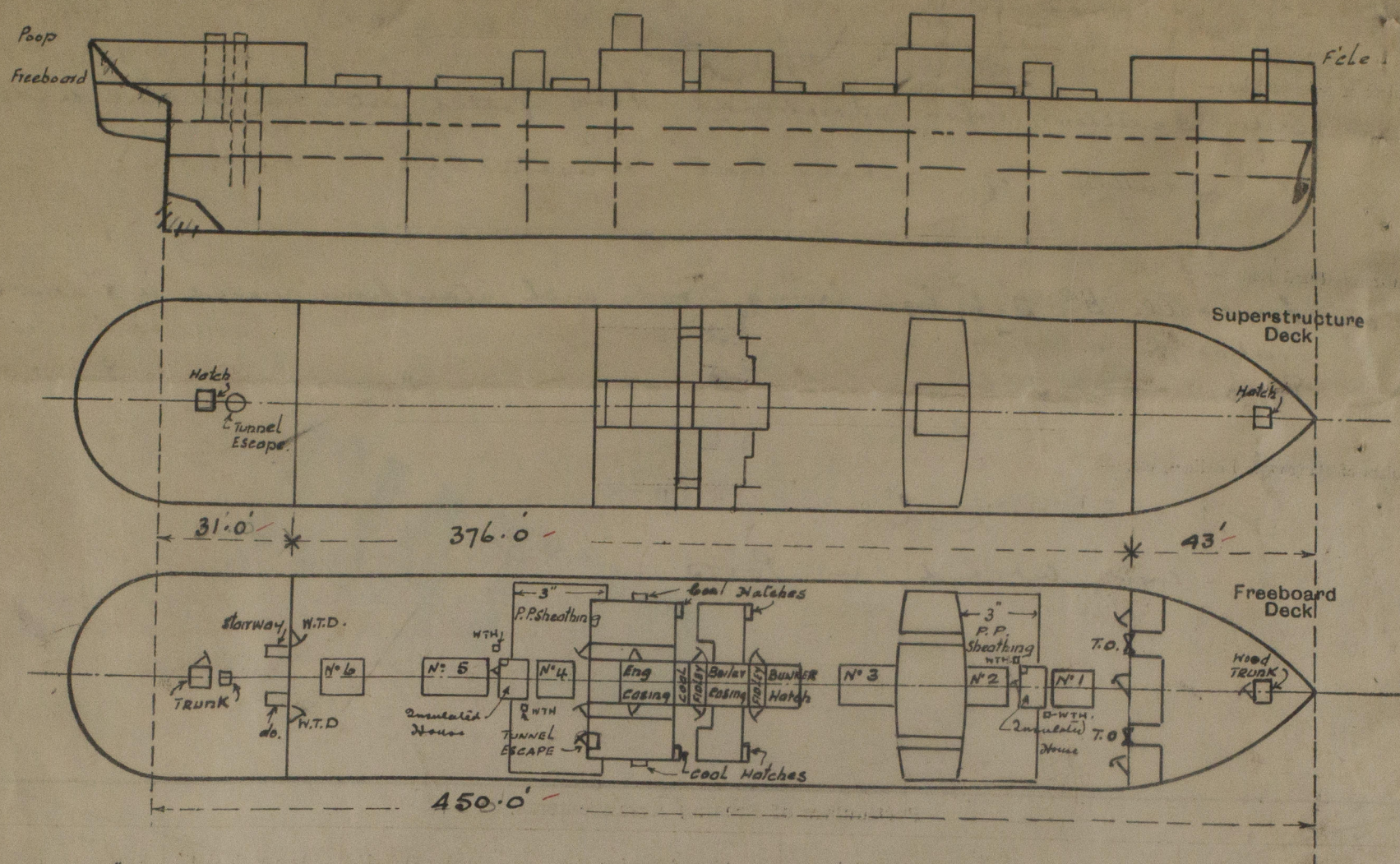
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..	3/8" ✓	5/16" ✓	angle 6" x 3 1/2" x 7/16" ✓	28 1/2" ✓	Lugs ✓	2 at 5'-0" x 2'-0" ✓	15 1/2" ✓	7'-6" ✓ Steel to Top of Sheathing ✓
Raised Quarter Deck Bulkhead ...	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, Forward Bulkhead ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Forecastle Bulkhead ... ..	5/16" ✓	1/4" ✓	3 1/2" x 2 1/2" x 5/16" ✓	74" ✓	None ✓	3 at 5'-3" x 2'-2" ✓ 2 at 5'-4" x 3'-6" ✓	14" ✓ 14" ✓	7'-6" ✓ Steel to Steel ✓
Trunk, Aft ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Free-board <del>Raised Quarter</del> Decks ...	3/8" ✓	5/16" ✓	4" x 2 1/2" x 3/8" ✓	36 1/2" ✓	Continuous ✓	4 at 5'-3" x 2'-3" ✓	18" ✓	8'-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 ... ..	2	Hinged steel watertight doors. operated both sides.
Raised Quarter Deck Bulkhead ...	✓	
Bridge, After Bulkhead ... ..	✓	
Bridge, Forward Bulkhead ... ..	✓	
Forecastle Bulkhead ... ..	2	Hinged steel doors. operated from both sides.
Exposed Machinery Casings on Free-board <del>Raised Quarter Decks</del> ...	14	when wood <sup>(1 3/4" thick)</sup> doors. operated from both sides.
Exposed Machinery Casings on Super-structure Decks ... ..	2	tombard openings. 3" wood battens carried full height in vertical steel channels.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	4	Hinged steel doors. operated from both sides.
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 shewn on the following sketches:—



2 1/2" Pitch Pine Sheathing on Poop over crew's quarters.  
 No wood sheathing on Forecastle Deck.  
 3" Wood Sheathing on Freeboard Deck in way of N<sup>o</sup> 2 & 4 Holds only.

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

Forecastle Deck	1	Hatch 2'-11" x 2'-11"	coaming 2'-0" high	wood cover, cleats, battens & tarpaulins
Freeboard Deck	2	" 2'-2" x 2'-1"	" 1'-6"	" " " " " "
	1	" 6'-0" x 18'-0"	" 2'-6"	" " " " " "
	2	" 4'-6" x 3'-0"	" 1'-6"	" " " " " "
	2	" 5'-6" x 2'-10"	" 1'-6"	" " " " " "
	4	" 2'-2" x 2'-1"	" 1'-6"	W.T. Steel linged covers
Poop Deck	1	" 3'-0" x 2'-10"	" 1'-9"	wood cover, cleats, battens & tarpaulins

Draft	Displacement	Keel 24"
25'-0"	13,562 tons	Summer mld = 29'-0" - 29'-2 1/2" BK
26'-0"	14,162 "	Aut A @ 29'-3" BK = 16200 T.P.1 = 52.9
27'-11"	15,362 "	" " 29'-2 1/2" - 16200-13 = 16187
28'-11"	15,962 "	
29'-3"	16,200 "	Tons per inch 52.9.

This vessel was surveyed afloat, and survey confined to freeboard.

Builder's name and yard number Harland & Wolff, Belfast. N<sup>o</sup> 541

Names of sister ships War Icarus, Royal Star, Bardic.

Owners Messrs Shaw Savill & Albion Co Ltd.

Fee £ 15 : 6 : - Received by me

4/7/32



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