

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "RHODESIA CASTLE" (H & W. L. BELFAST No 1431.)	Official Number 84515	Nationality and Port of Registry BRITISH LONDON	Gross Tonnage 17040	Date of Build LAUNCHING DATE 5:4:51.	Port of Survey Belfast
To CTR. OF RUDDER STOCK Moulded Dimensions Length 540'-10 5/8" Breadth 74'-0" Depth 43'-11 3/16" + 5/16" SHEER AT AMIDSHIPS. Moulded displacement at moulded draught = 85 per cent. of moulded depth 30397 tons Coefficient of fineness for use with Tables .710					Date of Survey during construction
Surveyor's Signature A. B. Fletcher					Particulars of Classification *100A1 with freeboard.

DEPTH FOR FREEBOARD (D).

Moulded depth ... 44.01
Stringer plate ... 0.03
Sheathing on exposed deck 3" ... 0.07
 $T \left(\frac{L-S}{L} \right) = 25 \left(\frac{540.89 - 379.86}{540.89} \right)$
Depth for Freeboard (D) = **44.11**

DEPTH CORRECTION.

(a) Where D is greater than Table depth (D-Table depth) R = $(44.11 - 36.06) 3 = +24.15"$
(b) Where D is less than Table depth (if allowed) (Table depth-D) R = **8.05**
If restricted by superstructures

ROUND OF BEAM CORRECTION.

Moulded Breadth (B) **74.00**
Standard Round of Beam = $\frac{B \times 12}{50} = 17.76"$
Ship's Round of Beam **9"**
Difference **8.76**
Restricted to
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{8.76}{4} \times 0.2987 = +.65$

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					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
Fore enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	379.86	379.37			379.37

Standard Height of Superstructure **7.50**
" " R.Q.D.
Deduction for complete superstructure **42.00**
Percentage covered $\frac{S}{L} = 70.22$
" " $\frac{S_1}{L} = 70.13$
Percentage from Table, Line A. **8.8**
(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 = $.6316 \times 42 = 26.53$

LOWEST POINT OF SHEER IS 12'-0" AFT OF **Q**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	64.09	1		64.09	57 1/16"	56.75	1		56.75
1/8 L from A.P.	28.52	4		114.08	24 3/16"	23.88	4		95.52
1/4 L	7.05	2		14.10	5 9/16"	5.25	2		10.50
Amidships	-	4		-	5/16"	0	4		-
3/4 L from F.P.	14.10	2		28.20	16 7/8"	16.56	2		33.12
1/2 L	57.04	4		228.16	59 1/8"	58.81	4		235.24
F.P.	128.18	1		128.18	128 3/8"	128.56	1		128.56
Total				576.81					559.69

Mean actual sheer aft $\frac{576.81}{18} = 32.04$
Mean standard sheer aft = **32.04**

Mean actual sheer forward $\frac{228.16}{4} = 57.04$
Mean standard sheer forward = **57.04**

Length of enclosed superstructure forward of amidships = **.5**

" " aft of " = **> .1**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{17.12}{18} \left(\frac{.75 - .3511}{.75} \right) = +.38$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **44.04**
Summer freeboard = **15.96**
Moulded draught (d) = **28.08**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **7.02" = 7'**

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line $\Delta = 21779$
Tons per inch immersion at summer load water line $T = 75.71$

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

Full DRAFT. **29'-0"** Full DISPL. **22538 Tons.** T.P.I. **76.18**

28'-0" **21627** **75.62**

27'-0" **20721** **75.06**

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient $\frac{.710 + .68}{1.36} = 1.39$

Depth Correction ... **24.15**

Deduction for superstructures ... **26.53**

Sheer correction ... **.38**

Round of Beam correction ... **.65**

Correction for Thickness of Deck amidships ... **.84**

Other corrections, scantlings, etc. TO CORRESPOND **77.23**

TO AN ALL SEASONS MOULDED DRAUGHT OF **28'-1"**

Summer Freeboard = **191.50**

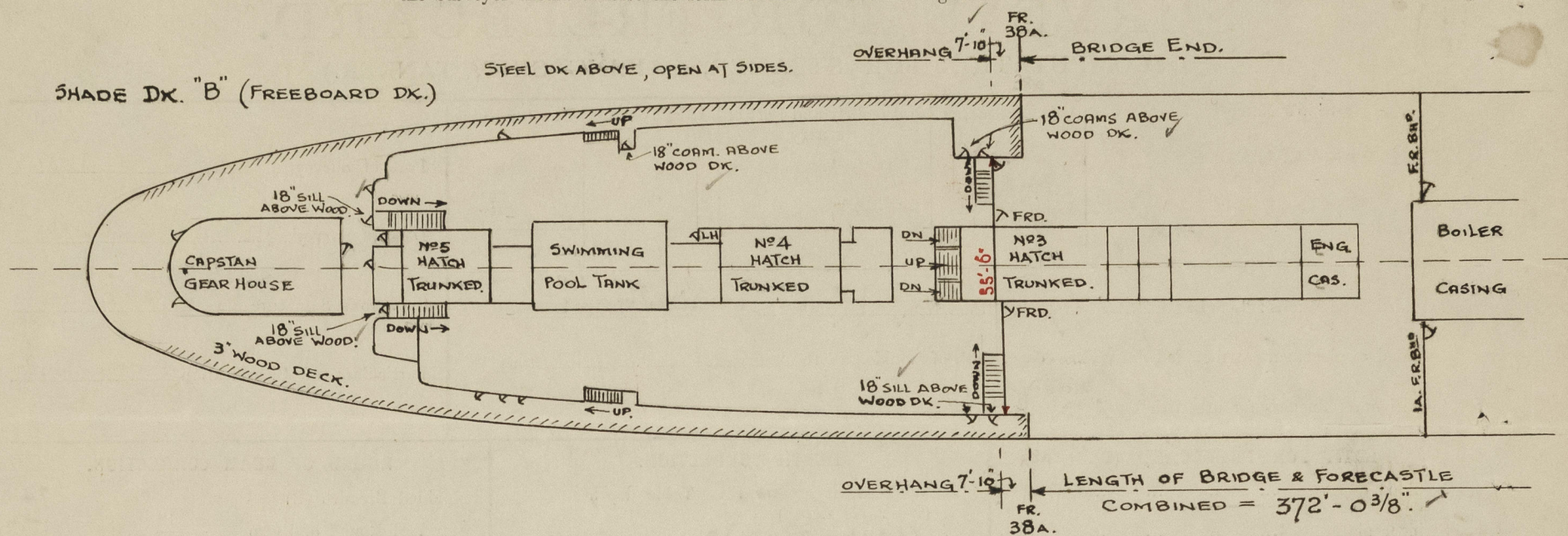
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, **W**, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc **7 1/4"**
Fresh Water Line **7 1/4"**
Tropical Line **NIL.**
Winter Line below **NIL.**
Winter North Atlantic Line **NIL.**

Tropical Fresh Water Freeboard **15-11 1/2"**
Fresh Water **15-4 1/4"**
Tropical **15-11 1/2"**
Winter **15-11 1/2"**
Winter North Atlantic **15-11 1/2"**

Rhodesia Castle.

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.



BRIDGE END CLOSING APPLIANCES:- 2" thick Wood doors to companionways, 18" sills above wood deck, operated from both sides.
Wood doors to spaces without access to deck below 9" sills above wood deck, operated from both sides.

<u>BRIDGE.</u>			
Enclosed	L =	372.03' ✓	Overhang 7.83' ✓
+ 7.83 + 55.5	=	5.87' ✓	5.87' ✓
74 ✓	Equiv.	377.90' ✓	Equiv. 1.96' ✓

Trade of ship For carriage of Passengers, Refrigerated and General cargo

Names of sister ships ✓

Builder's name and yard number Harland & Wolff Ltd, Belfast. Yard No 1431.

Owners Union Castle Mail Steamship Co. Ltd.,

Fee £



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