

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

 Index No. 74-738
 (For London Office only.)

16 JUL 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

BRIDGEPort of Survey SOUTHAMPTON.Date of Survey 4th + 15th JULY 1932Name of Surveyor J. AndersonParticulars of Classification 100A1FOR TOWING SERVICES. S.S. No 1-30

Ship's Name

S.S. WELLINGTON.

(Type of Superstructures.)

Nationality and Port of Registry

BRITISH.
LIVERPOOL.

Official Number

149599.

Gross Tonnage

285

Date of Build

1926-9 mo.Moulded Dimensions: Length 105' 11" Breadth 27' 11" Depth 13' 6"Moulded displacement at moulded draught = 85 per cent. of moulded depth 618 tonsCoefficient of fineness for use with Tables .665 (.68 limit in Table 1).

Depth for Freeboard (D)

Moulded depth 13.50Stringer plate30

Sheathing on exposed deck

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

Depth for Freeboard (D) = 13.53

Depth correction

(a) Where D is greater than Table depth

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

$$(13.53 - 4.00) .804 = + 5.24$$

(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) 24.00

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = \frac{24.00 \times 12}{50} = 5.76$$

$$\text{Ship's Round of Beam} = 7.00$$

$$\text{Difference} = -52' \text{ mm}$$

Restricted to

$$\text{Correction} = \frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{52}{4} \times .8244 = -11$$

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 ...	<u>4.16</u>	<u>9.16</u>	<u>7.3</u>		<u>9.16</u>
" overhang aft ...	<u>12.34</u>	<u>9.25</u>			<u>9.25</u>
" overhang forward ...	✓				
Fore enclosed ...	✓				
" overhang ...	✓				
Trunk aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	✓				
" " forward ...	✓				
Total ...	<u>24.50</u>	<u>18.44</u>			<u>18.44</u>

Standard Height of Superstructure 6.0

" " R.Q.D. ✓

Deduction for complete superstructure 16.50

$$\text{Percentage covered } \frac{S}{L} = \frac{24.50}{122.5} = 20.48\%$$

$$\frac{S_1}{L} = \frac{18.44}{122.5} = 15.53\%$$

$$\frac{E}{L} = \frac{18.44}{122.5} = 15.53\%$$

Percentage from Table, Line A. 8.765 - 5 = 3.765
(corrected for absence of forecastle (if required))Percentage from Table, Line B. 11.19 - 5 = 6.119
(corrected for absence of forecastle (if required)) (2.354 + 17.53) + 3.765Interpolation for bridge less than 2L (if required) 2.063 + 3.765Deduction = 16.50 x .0583 = .96 5.83%

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>20.50</u>	1		<u>20.50</u>	<u>30"</u>	<u>30"</u>	1		<u>20.50</u>
$\frac{1}{2}$ L from A.P. ...	<u>9.12</u>	4		<u>36.48</u>	<u>13.5"</u>	<u>13.5"</u>	4		<u>36.48</u>
$\frac{3}{8}$ L " ...	<u>2.25</u>	2		<u>4.50</u>	<u>3.5"</u>	<u>3.5"</u>	2		<u>4.50</u>
Amidships ...		4			<u>0</u>	<u>0</u>	4		
$\frac{3}{8}$ L from F.P. ...	<u>4.51</u>	2		<u>9.02</u>	<u>5"</u>	<u>5"</u>	2		<u>9.02</u>
$\frac{1}{2}$ L " ...	<u>18.25</u>	4		<u>73.00</u>	<u>15.5"</u>	<u>15.5"</u>	4		<u>62.80</u>
F.P. ...	<u>41.00</u>	1		<u>41.00</u>	<u>36"</u>	<u>36"</u>	1		<u>35.00</u>
Total ...				<u>184.50</u>					<u>167.28</u>

Mean actual sheer aft = maxMean actual sheer forward = deficientLength of enclosed superstructure forward of amidships = NIL" " aft of " = NIL

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{17.22}{18} (.75 - .1024) = + .61$$

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 = 13.53Summer freeboard = 1.27Moulded draught (d) = 12.26

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3.06 = 3"

Addition for Winter North Atlantic Freeboard (if required =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$

Tons per inch immersion at summer load water line

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient ✓

Depth Correction 5.27Deduction for superstructures96Sheer correction61Round of Beam correction11

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

Summer Freeboard = 15.31SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc

Fresh Water Line " "

Tropical Line " "

Winter Line below " " 3"

Winter North Atlantic Line " "

Tropical Fresh Water Freeboard

Fresh Water " "

Tropical " "

Winter " "

Winter North Atlantic " "

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	BUNKER HATCH	BOSUNS	STORE				
Dimensions of Hatchway	10'6" x 5'6"	3'8" x 3'5 1/2"					
COAMINGS	Height above Deck	...	9 1/2" ABOVE BRIDGE DECK	18"					
	Thickness	...	5/16"	1/4"					
	Sides	...							
	Stiffeners	...	4 1/2" x 3" VERTICAL						
HATCH BEAMS	Brackets, Stays	...							
	Number	...	ONE						
	Spacing	...	CENTRE						
	Scantling and Sketch	...							
FORE AND AFTERS	Bearing Surface	...	2 1/2"						
	Number	...							
	Spacing	...							
	Unsupported Lengths	...							
HATCH COVERS	Scantling* and Sketch	...							
	Bearing Surface	...							
	Material	...	WOOD	WOOD					
	Thickness	...	3"	3"					
Spacing of Cleats	How fitted	...	17H	17H					
	Bearing Surface	...	2 1/2"	2 1/2"					
	Number	...	30	26					
	Number of Tarpaulins	...	NONE	ONE POOR CONDITION					

*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? ☒

Particulars of fiddle, funnel and ventilator coamings:— *Funnel and stokehold ventilators in efficient condition. Fiddle grating covered by strong hinged steel cover.*

Particulars of Flush Bunker Scuttles:— *2 - C.I. - 18" diam. (P+S) for access to side bunkers. 1 - C.I. - 18" diam. scuttle for access to aft peak. 1 - C.I. - 18" diam. scuttle for access to fore peak. 1 - C.I. - 18" diam. scuttle for access to chain locker.* *beyond joints.*

Particulars of Companionways:—

NONE

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

One Vent. 18" diam. mushroom ventilator - 26" coaming to ensure accommodation - fore well. One Vent. 6" diam. 36" coaming to ensure accommodation - fore well. Two Vents 6" diam. mushroom ventilator - 9" coaming on Bridge Deck. Ventilators provided with wood plugs & canvas covers. Two Vents 3 1/2" diam. C.I. from reeks - 12" to mouth to Brown's store - aft well.

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

Air pipes to fore peak tank 2 1/2" diam 25" high. Air pipes provided with wood plugs & canvas covers. One air pipe P+S to forward Bulge 2 1/2" diam 26" high - fore well. Air pipes to aft peak flush deck type with screw caps.

Particulars of Gangway Cargo and Coaling Ports:—

NONE

Particulars of Scuppers and Sanitary Discharge Pipes — *ONE 4" diam Sanitary discharge P+S - H. 3 pipe & storm valve.*

Particulars of Side Scuttles: *Side scuttles below freeboard deck and in bridge fitted with hinged deadlights.*

Particulars of Guard Rails:— *Guard rails 3'-0" high fitted with 3 rails - Strainers 3'-9" apart.*

Particulars of Gangways, Lifelines, etc.:—

NONE

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	65'6" 70'9"	3'3"	2 @ 2'6" x 1'5" 1 @ 2'4 1/2" x 1'5"	3	10'45 sq ft	13'1 sq ft
Forward Well	18'0"	3'3"	2'6" x 1'11"	ONE	4'79 sq ft	8'39 sq ft

State position of each freeing port (F. and A. position and height above deck edge) { After Well:— SEE SKETCH. - 7" ABOVE DECK
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— { FORWARD WELL BARS & HINGED SHUTTER
 AFT WELL HINGED SHUTTERS.
 Additional area where sheer is less than standard.

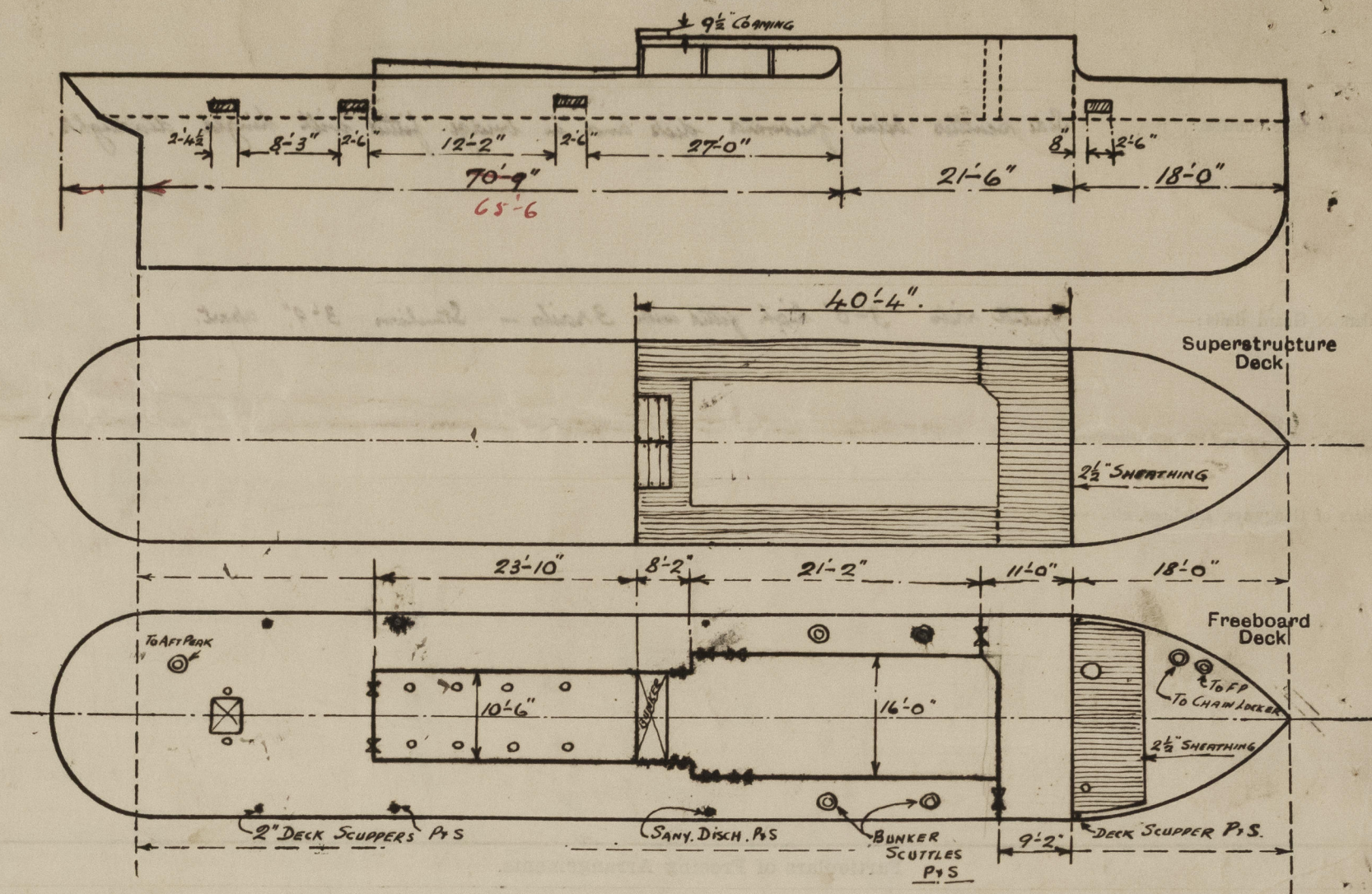
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓							
Raised Quarter Deck Bulkhead	✓							
Bridge, After Bulkhead	5/16"	5/16"	4 1/2" x 3" a	5'5" STAYS BETWEEN	✓	✓	✓	7'3"
Bridge, Forward Bulkhead	5/16"	5/16"	NOT OBTAINABLE	2'6"	NOT OBTAINABLE	✓	✓	7'3"
Forecastle Bulkhead	✓							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard	5/16"	5/16"	3 1/2" x 3" a	2'6"	Brackets T.	3 @ 4'6" x 2'0" P+S	16"	7'3"
Exposed Machinery Casings on Superstructure Decks	5/16"	5/16"	2 3/4" x 2 1/2" a	3'6"	Brackets T.	2 @ 3'6" x 2 ft	17"	5'0" 4'3" 9"
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	✓
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	✓
Exposed Machinery Casings on Freeboard	✓
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships	✓

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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:—

Shew taken afloat.

Builder's name and yard number *J. CRAN & SONERVILLE LTD. LEITH., No. 136.*

Names of sister ships.

Owners *ALEXANDRA TOWING CO. LTD.*

Fee £ *3 : 8 : 0* Received by me *[Signature]*



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