

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. **23709.**
(For London Office only.)No. **100153**

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Raised Quarter Deck, Bridge & ForecastlePort of Survey Liverpool

(Type of Superstructures.)

Date of Survey April 1932

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

CUMBRIABritish
Whitehaven1362012711914-7Name of Surveyor Alfred SkopMoulded Dimensions: Length 119' Breadth 23-37' Depth 9-25'Moulded displacement at moulded draught = 85 per cent. of moulded depth 462 tonsCoefficient of fineness for use with Tables .74Particulars of Classification * 100A1

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	9-3"	(a) Where D is greater than Table depth (D-Table depth) R = (9-28-7-93) .915 = + 1.23"		Moulded Breadth (B)	23-37"
Stringer plate	.36"	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	= 5.61"
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Ship's Round of Beam	= 6"
Depth for Freeboard (D) =	9-28"			Difference	.39"
				Restricted to	
				Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right)$	= $\frac{.39^2}{4} (1 - .58) = -.04$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Deep enclosed ...					
" overhang ...					
R.Q.D. enclosed	39.0	39.00	3-0'	$\times \frac{3.0}{3.127}$	37.42
" overhang					
Bridge enclosed ...	8.8	8.80	7-0'		8.80
" overhang aft					
" overhang forward					
F'cle enclosed ...	20.07	20.07	7-0'		20.07
" overhang	1.12	1.12			1.12
Trunk aft					
" forward					
Boatage opening aft					
" forward					
Total	70.10	68.99			67.41

Standard Height of Superstructure	6.00
" " R.Q.D.	3.127
Deduction for complete superstructure	17.9
Percentage covered $\frac{S}{L} =$	58.91%
" " $\frac{S_1}{L} =$	57.97%
" " $\frac{E}{L} =$	56.65%
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	41.31%
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than .2L (if required)	
Deduction =	17.90 \times 41.31 = - 7.39"

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	21.90	1		21.90	32.50	33.00	1		33.00
$\frac{1}{4}$ L from A.P. ...	9.74	4		38.96	14.00	14.22	4		56.88
$\frac{2}{4}$ L " ...	2.41	2		4.82	3.25	3.55	2		7.10
Amidships ...		4					4		
$\frac{3}{4}$ L from F.P. ...	4.82	2		9.64	4.50	5.13	2		10.26
$\frac{1}{4}$ L " ...	19.49	4		77.96	20.00	20.54	4		82.16
F.P. ...	43.80	1		43.80	47.50	48.00	1		48.00
Total				197.08					237.40

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{237.4 - 197.08}{18} \left(\frac{.75 - .2946}{2} \right) = -1.02' = \text{nil due to no midship superstructure}$

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 = 9-28
 Summer freeboard = .52
 Moulded draught (d) = 8-76

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 2.19 = 2 $\frac{1}{4}$ Addition for Winter North Atlantic Freeboard (if required) = 2"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 530

Tons per inch immersion at summer load water line

 $T =$ 5.33Deduction = $\frac{\Delta}{40T}$ inches $=$ 2 $\frac{1}{2}$ "

TABULAR FREEBOARD corrected for Plank Deck (if required)

Correction for coefficient

 $\frac{.68 + .74}{1.36} = \frac{1.42}{1.36}$

	+	-
Depth Correction	1.23	-
Deduction for superstructures	-	7.39
Sheer correction	-	-
Round of Beam correction	-	.04
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	1.23	7.43

Summer Freeboard = 6.22

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

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

Tropical Fresh Water Freeboard	0-6 $\frac{1}{4}$ "
Fresh Water	0-2 $\frac{1}{2}$ "
Tropical	0-3 $\frac{3}{4}$ "
Winter	0-4"
Winter North Atlantic	0-10 $\frac{1}{2}$ "

1906 Freeboards assigned

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		MAIN HATCH							
Dimensions of Hatchway		$36'-9"$ AT DK. $33'-0"$ AT TOP OF COAMING. } $\times 14'-1\frac{1}{2}"$ $2'-7\frac{1}{2}"$ AT SIDES, $2'-0"$ AT CR.							
COAMINGS	Height above Deck	.50							
	Thickness	.40							
	Stiffeners	$6 \times 3 \times 30$							
	Brackets, Stays	NONE							
HATCH BEAMS	Number	3							
	Spacing	$110" \times 87"$							
	Scantling and Sketch								
	Bearing Surface	$2\frac{1}{2}"$							
FORE AND AFTERS	Number	3							
	Spacing	$39" \times 47"$							
	Unsupported Lengths	$105" \times 82"$							
	Scantling* and Sketch								
HATCH COVERS	Material	PINE							
	Thickness	$2\frac{1}{2}"$							
	How fitted	Aftw.							
	Bearing Surface	$2\frac{1}{2}"$							
Spacing of Cleats		24							
Number of Tarpaulins		4							
*Are wood fore and afters steel shod at all bearing surfaces? <i>Ys.</i> Are battens and wedges efficient and in good condition? <i>Ys.</i> Are tarpaulins in good condition and in accordance with rule requirements? <i>Ys.</i> Are lashings provided in accordance with rule requirements? <i>Ys.</i>									

Particulars of fiddle, funnel and ventilator coamings:—

Fidley and funnel ventilators are in efficient condition.
Fidley gratings are covered by strong steel hinged covers.
Engine skylight is of steel strongly constructed.
Hatch on casing top to coal shoot $8'-0" \times 2'-6" \times 12"$ coaming $2\frac{1}{2}"$ wood covers fitted fore and aft. $2\frac{1}{2}"$ bearing surface. 1 Tarpaulin Cleats spaced 28" wood wedges & battens efficient.

Particulars of Flush Bunker Scuttles:—

1 Port 1 Starboard abreast casing in R.Q.D. 20" dia. } screw joints
1 " 1 " " " " 14" dia.

Particulars of Companionways:—

None

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

2 VENTS. ON FORE DK. TO CREW ACCOMM ON F.B.D. DE $6\frac{1}{2}"$ DIA - COAMINGS $33" \times 30"$
2 VENTS ON FREEBOARD DK (FORE WELL) TO HOLD $12"$ DIA - COAMINGS $36" \times 34"$
2 " " BRIDGE DK TO ACCOMM. ON F.B.D. DK $6"$ DIA - COAMINGS $33" \times 30"$

THERE ARE WOOD PLUGS & CANVAS COVERS ON BOARD FOR ALL COWL VENTS.

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

1 AIR PIPE ON FORECASTLE DECK $3"$ DIA CI $18"$ HIGH LED TO FORE BAWAST TANK.
2 " " BRIDGE DECK $3\frac{1}{2}"$ " " $17"$ " " ACCOMM. ON F.B.D. DK.
1 " " " $3"$ " " $30"$ " " " " "
1 " " R.Q.DK. $4"$ " " $30"$ " " AFT PEAK TANK.

WOOD PLUGS ARE ON BOARD FOR AIR PIPES.

Particulars of Gangway Cargo and Coaling Ports:—

None



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Particulars of Scuppers and Sanitary Discharge Pipes —

All sanitary discharge pipes are fitted with storm valves.
Single scuppers 4" x 3" are cut through bulwark in fore well and on raised quarter deck, for positions see sketch on page 4.

Particulars of Side Scuttles:

No Scuttles through ship's side.

Particulars of Guard Rails:—

Rails on forecastle deck 36" high (2 rails) stanchions spaced 4'-0"

Particulars of Gangways, Lifelines, etc.:—

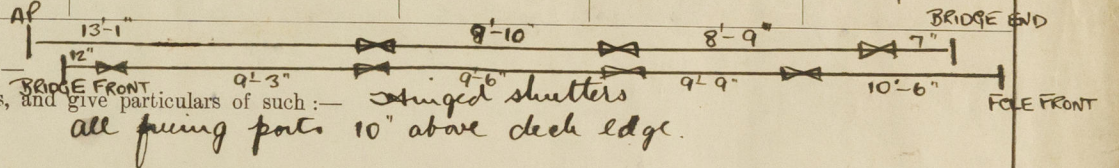
~~None~~

An efficient gangway and lifeline has been fitted in the forward well.

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
R.Q.D. After Well ...	39'-0" (6 A.P.)	39"	27" x 16" 24" x 15"	3 } 1 }	11 1/2 # 40	10.4
Forward Well ...	49'-0"	39"	27" x 16"	4	12.0	11.4

State position of each freeing port ... } After Well:—
(F. and A. position and height above deck edge) } Forward Well:—
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—
Additional area where sheer is less than standard.



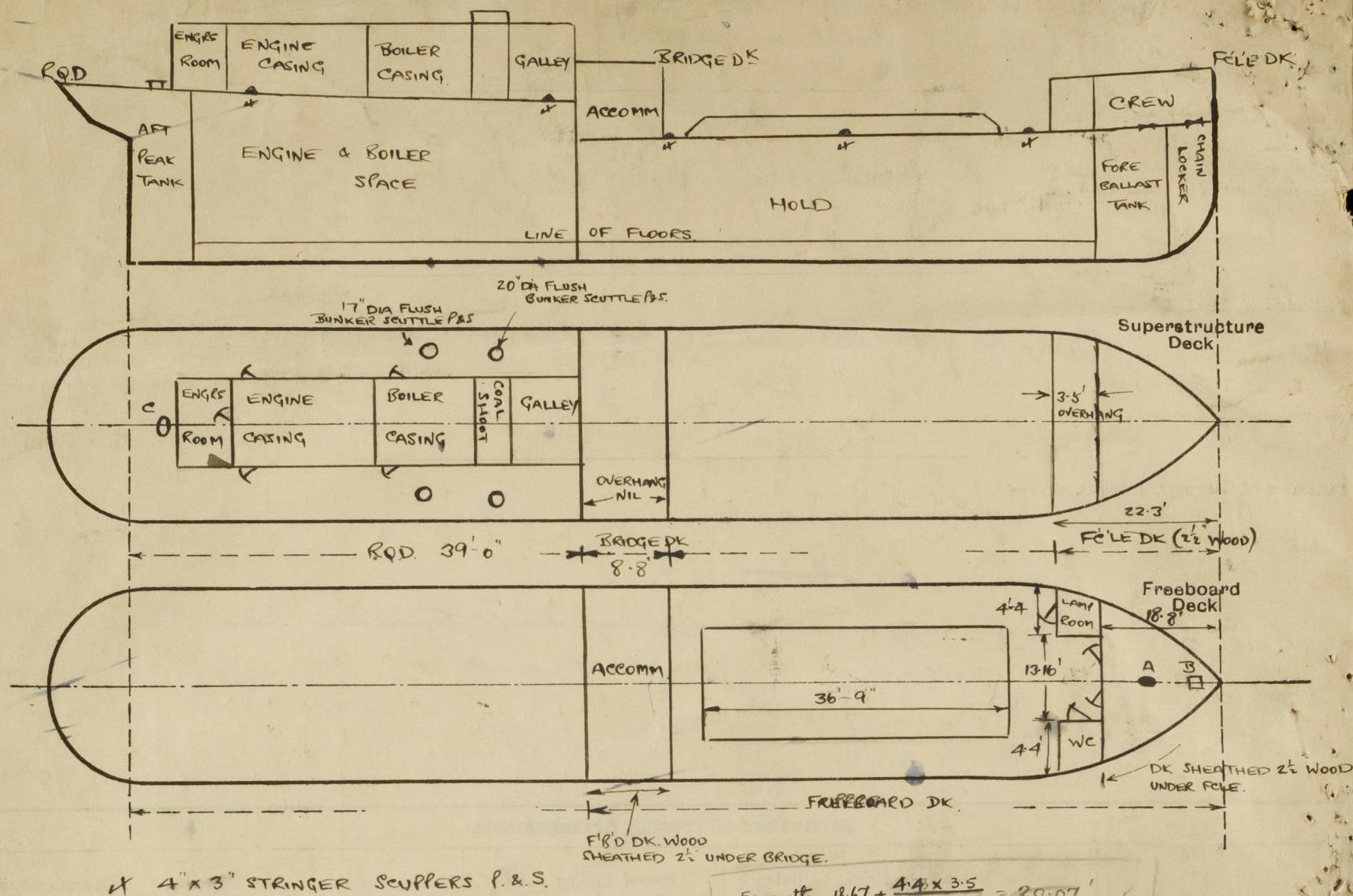
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	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 ...	PLATED VERTICALLY	.28	3 1/2 x 2 1/2 x .30 L	32"	None	None	None	7'-0"
Bridge, Forward Bulkhead30	.25	6 x 3 x .30 C	30"	LOGS TOP BRKE BOTTOM	None	None	7'-0"
Forecastle Bulkhead ...	PLATED VERTICALLY	.28	FLANGED BHP. PLATES 2 1/2"	24"	None	2 @ 54" x 22"	18"	7'-0"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Fore- board or Raised Quarter Decks28	.28	2 1/2 x 2 1/2 x .24 L	30"	Bolt top None bottom	4 @ 54" x 24" 1 @ 58" x 22"	16"	7'-0"
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 ...	✓ no openings
Bridge, Forward Bulkhead ...	✓ no openings
Forecastle Bulkhead ...	Hinged steel doors, capable of being operated both sides.
Exposed Machinery Casings on Fore- board or Raised Quarter Decks ...	4 Hinged steel doors operated both sides
Exposed Machinery Casings on Super- structure Decks ...	1 Hinged wood door operated both side (from Engineers Room to Engine Casings)
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, gangways, 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:—



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

- A.:- ACCESS TO FORE BALLAST TANK - W.T. MANHOLE COVER ON FR'BD DK UNDER FCLE. 22' x 16" BOLTS SPACED 4 1/2"
- B.:- " TO CHAIN LOCKER - 2 1/2" WOOD PLUG 21" x 18" ON FR'BD DK UNDER FCLE. - 3 1/2" ANGLE COAMING.
- C.:- " TO AFT PEAK TANK 21 1/2" x 16 1/2" x 12" COAMING - BOLTED PLATE COVER - BOLTS SPACED 6"

Builder's name and yard number *J. R. Remoldson & Sons Ltd. South Shields* N^o 290

Names of sister ships

Owners *Wilson S.S.C. Ltd. (T. W. Dixon mgr.)*

Fee £ *3 - 8 - 0*

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