

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

15 JUL 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Raised Quarter Deck, Bridge & Forecastle.Port of Survey Newcastle

(Type of Superstructures.)

Date of Survey 13th July 1932

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

WILLIAM CASHBritish
London16130311861929.9.Name of Surveyor P. D. Broadacre

Moulded Dimensions: Length 225.00 Breadth 35.83 Depth 16.00
 Moulded displacement at moulded draught = 85 per cent. of moulded depth 2351 tons
 Coefficient of fineness for use with Tables .751

Particulars of Classification +100A1.

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	16.00	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	35.83
Stringer plate	.05	(16.05-15.00) 1.431 = + 1.82		Standard Round of Beam = $\frac{B \times 12}{50}$	8.6
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	9
$T \left(\frac{L-S}{L} \right) =$				Difference	.4
Depth for Freeboard (D) =	16.05	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	$-\frac{.4}{4} \times .24 = -.03$

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	127.25	127.25	3.42	3.833	113.55
„ overhang	✓				
Bridge enclosed	13.50	13.50	7.00		13.50
„ overhang aft	✓				
„ overhang forward	✓				
Forecastle enclosed	23.50	23.50	3.00	3.6	11.75
„ overhang	✓				
Trunk aft	✓				
„ forward	✓				
Tonnage opening aft	✓				
„ forward	✓				
Total	164.25	164.25			138.80

Standard Height of Superstructure	6.0
„ „ R.Q.D.	3.833
Deduction for complete superstructure	28.5
Percentage covered $\frac{S}{L} =$	43.00%
„ „ $\frac{S_1}{L} =$	43.00%
„ „ $\frac{E}{L} =$	61.692%
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	48.84%
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	28.5 x .4884 = - 13.93

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	32.50	1		32.50	22.00	22.00	1		22.00
$\frac{1}{4}$ L from A.P.	14.46	4		57.84	9.48	9.48	4		37.92
$\frac{2}{4}$ L	3.54	2		7.08	2.36	2.36	2		4.72
Amidships		4					4		
$\frac{3}{4}$ L from F.P.	7.15	2		14.30	4.93	4.93	2		9.86
$\frac{1}{4}$ L	28.93	4		115.72	19.75	19.75	4		79.00
F.P.	65.00	1		65.00	44.00	44.00	1		44.00
Total				292.50					194.50

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{98}{18} \left(.75 - \frac{365}{2 \times 225} \right) = + 2.03$

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 = 19.44
 Summer freeboard = 6.00
 Moulded draught (d) = 14.44

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.62 = 3 $\frac{1}{2}$
 Addition for Winter North Atlantic Freeboard required = 3 $\frac{1}{2}$ + 2 = 5 $\frac{1}{2}$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 2538$

Tons per inch immersion at summer load water line

T = 16.29

Deduction = $\frac{\Delta}{40 T}$ inches = 3.89

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient

	+	-
Depth Correction	1.82	
Deduction for superstructures		13.93
Sheer correction	2.03	
Round of Beam correction		.03
Correction for Thickness of Deck amidships	41.00	
Other corrections, scantlings, etc.		
	44.85	13.96

Summer Freeboard = 59.88

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

Tropical Fresh Water Line above Centre of Disc	7 $\frac{1}{2}$
Fresh Water Line	4
Tropical Line	3 $\frac{1}{2}$
Winter Line below	3 $\frac{1}{2}$
Winter North Atlantic Line	5 $\frac{1}{2}$

Tropical Fresh Water Freeboard	4' 4 $\frac{1}{2}$
Fresh Water	4' 8"
Tropical	4' 8 $\frac{1}{2}$
Winter	6' 3 $\frac{1}{2}$
Winter North Atlantic	5' 5 $\frac{1}{2}$

18 JUL 1932

MARKING FORM
18 AUG 1932
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18 JUL 1932
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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway ...			NO. 1	NO. 2	NO. 3	NO. 4	TO FORE PEAK	3 STORE HATCHES	ESCAPE HATCH	ESCAPE HATCH	2 COAL HATCHES
Dimensions of Hatchway ...			26'0" x 23'6"	23'0" x 23'6"	28'3" x 23'6"	28'3" x 23'6"	1'11" x 1'11"	1'7" x 1'10"	1'8" x 2'4"	1'10" x 2'4"	2'1" x 1'11"
COAMINGS	Height above Deck ...		4'6"	4'6"	4'6"	4'6"	32"	30"	30"	30"	30"
	Thickness { Sides ...		44"	44"	44"	44"	34"	38"	38"	38"	38"
	Stiffeners { Ends ...		44"	44"	44"	44"	34"	38"	38"	38"	38"
	Brackets, Stays, PLATE ...		S.F.E.	S.	S.F.E.	S.A.E.	-	-	-	-	-
HATCH BEAMS	Number ...		4	4	5	5					
	Spacing ...		5'2 1/2"	4'7"	4'8 1/2"	4'8 1/2"					
	Scantling and Sketch		21" x 37"	21" x 36"	21" x 38"	21" x 38"					
	Bearing Surface		3 1/2"	3 1/2"	3 1/2"	3 1/2"					
FORE AND AFTERS	Number ...										
	Spacing ...										
	Unsupported Lengths										
	Scantling* and Sketch										
HATCH COVERS	Material ...		W.P.	W.P.	W.P.	W.P.	10/T. steel cover	W.P.	W.P.	W.P.	W.P.
	Thickness ...		3"	3"	3"	3"		3"	3"	3"	3"
	How fitted ...		F.A.	F.A.	F.A.	F.A.		T.	T.	T.	F.A.
	Bearing Surface ...		3'4 1/2"	3'5"	3'5"	3'5"		2 1/2"	2 1/2"	2 1/2"	2 1/2"
Spacing of Cleats ...			24"	24"	24"	24"		12"	18"	18"	15"
Number of Tarpaulins ...			2 to each hatch								24"

*Are wood fore and afters steel shod at all bearing surfaces? *yes*
 Are battens and wedges efficient and in good condition? *yes*
 Are tarpaulins in good condition and in accordance with rule requirements? *yes*
 Are lashings provided in accordance with rule requirements? *5 lock bars to No 1, 2 & 6 bars to No 3 & 4.*

Particulars of fiddle, funnel and ventilator coamings:

*Fiddle gratings fitted with hinged steel covers.
 E.R. Skyflight steel.
 Fiddle, funnel vents good.*

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

*Bridge:— wood companion with hinged wood doors operating both sides. Sill 4 1/2". This comp. is inside teak house.
 R.Q. Deck:— entrance to crew in steel house with hinged teak door operating both sides. Sill 16".*

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

*Fore deck:— 2 G.N. 4" dia x 14" to stores (closed with canvas covers)
 Fore well:— 1 @ 15" dia to hold. Coaming 36" x 38"
 2 @ 12" " " " 30" x 38"
 Bridge:— 7 M.V. 5" dia x 6" to acc'm
 R.Q. Deck:— 2 @ 16" dia to hold. Coaming 31" x 38"
 2 @ 6" " " " 30" x 30"
 3 @ 6" " " " 19" x 30"
 2 @ 21" " " " 36" x 40"*

*The ventilators are in accordance with Rule requirements.
 Closing:— wood plugs & canvas covers.*

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

*Fore deck:— 1 @ 4" dia to fore peak x 14" to mouth.
 Fore well:— 2 @ 3 1/4" " " O.B. tank x 24"
 R.Q. Deck:— 7 @ 1 3/4" - 3 1/4" O.B. " etc x 21" - 24"*

no closing.

Air pipes closed with canvas covers

Particulars of Gangway Cargo and Coaling Ports:—

None.



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Particulars of Scuppers and Sanitary Discharge Pipes —

W.C. & bath discharges lead to M.I. Storm valves fitted. ✓

Particulars of Side Scuttles:

Slung dead lights fitted in bridge & after accom. ✓

Particulars of Guard Rails:—

Fore deck: Bulwarks 3'0" high. Stems 5½" x 3" x 38" st. 6'0" apart. ✓
Bridge " " 3'9" " " 1½" dia " 4'6" " ✓
Fore well: " " 4'0" " " 5½" x 3" x 38" " 5'6" " ✓
R.Q. bk. " " 3'3" " " 5½" x 3" x 38" " 5'6" " ✓

Particulars of Gangways, Lifelines, etc.:—

Platform laid from bridge ladder to hatch & hatch to fore ladder.

~~No permanent fittings to take life line.~~ Manilla lifeline rove through
stanchions fitted on starboard
side of No. 1 & 2 hatchways
Crew berthed aft.

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 ... R.Q.D. ...	127' 3"	3' 3"	7' 2" x 9" 11' 11" x 9" 10' 6" x 9" 8' 6" x 9"	1	28.18	25.415 sq ft
Forward Well ...	54' 0"	4' 0"	8' 6" x 9" 14' 6" x 9"	1	17.25	11.40 sq ft

State position of each freeing port ... } After Well:— 34' 6" - 47' 6" - 84' 3" & 101' 0" from bridge end.
(F. and A. position and height above deck edge) } Forward Well:— 17' 0" & 33' 6" from side house end. } 9" above deck.
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of each:—

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 ...	—	38"	4" x 3" x 40"	21"	Lugs.	None	—	
Bridge, After Bulkhead ...		also 2 webs & usual diaphragms.						
Bridge, Forward Bulkhead ...	—	38"	4½" x 3" x 42"	25"-30"	Lugs	None	—	
Forecastle Bulkhead ...	—	32"	3½" x 2½" x 36"	27"	None	None	—	
Trunk, Aft ...	✓							
Trunk, Forward ...	✓							
Exposed Machinery Casings on Fore- board or Raised Quarter Decks ...	32"	32"	3" x 2½" x 30"	48"	None	1) 4' 9" x 24"	15"	2' 7" x 6' 9"
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 ...	Intact ✓
Bridge, After Bulkhead ...	
Bridge, Forward Bulkhead ...	Intact ✓
Forecastle Bulkhead ...	Intact ✓
Exposed Machinery Casings on Fore- board or Raised Quarter Decks ...	Slung steel door - operating both sides. ✓
Exposed Machinery Casings on Super- structure Decks ...	✓
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ...	✓
Deckhouses on Flush Deck Ships ...	✓



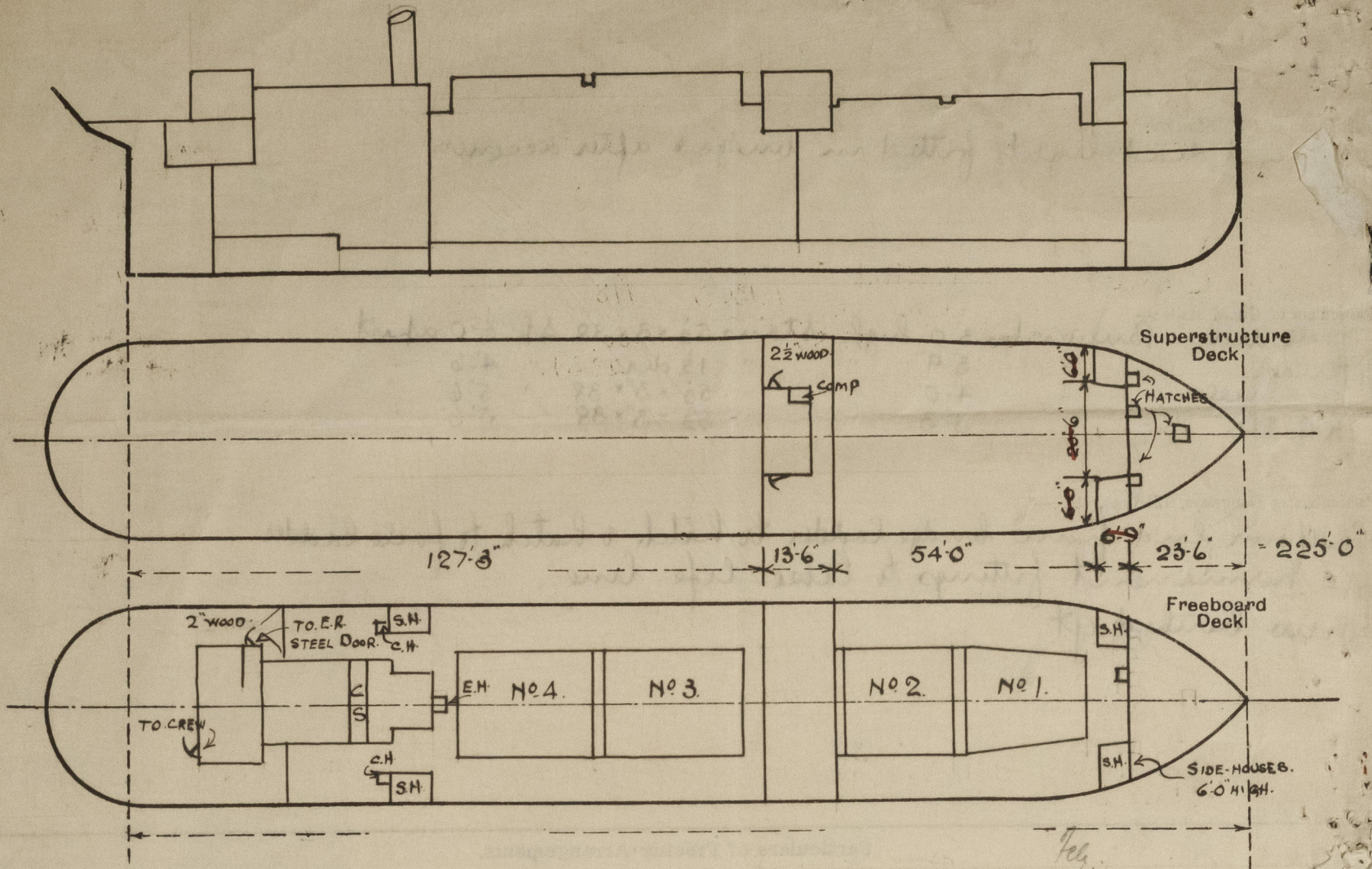
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2 1/2 SH 10

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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:—

No Timber assignment required.
Vessel examined in dry docks for damage & annual overhaul.

L. Draft	L. Dist.	T. P. I.
13'0"	2229	16.00
14'0"	2422	16.18

Builder's name and yard number Hawthorn Leslie & Co. Ltd.

Names of sister ships

Owners Stephenson Clarke & Co. Ltd.

Fee £ 8 : 10 : 0

Received by me



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