

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

18 MAY 1932 No. 100394

 Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
 having **SHELTER DECK WITH TONNAGE OPENING AFT.**
Port of Survey **LIVERPOOL**

(Type of Superstructures.)

Date of Survey **MAY 1932**

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

RAVENS POINT**BRITISH
LIVERPOOL****140597****1787****1918****9 MONTHS**Name of Surveyor **S. B. Jumsden**
 Moulded Dimensions: Length **265.0** ✓ Breadth **41.2** ✓ Depth **21.0** ✓
 Moulded displacement at moulded draught = 85 per cent. of moulded depth **4101** ✓ tons
 Coefficient of fineness for use with Tables **.74**
Particulars of Classification **+100A1 SHELTER DK.
WITH FREEBOARD** ✓

11. 80.3-1.31

Depth for Freeboard (D)			Depth correction		Round of Beam correction	
Moulded depth	...	21.0	(a) Where D is greater than Table depth (D-Table depth) R =	(21.03-17.67) 2.038	Moulded Breadth (B)	41.2
Stringer plate	...	.38		3.36 x 2.038 = +6.85	Standard Round of Beam = $\frac{B \times 12}{50}$	9.84
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$			(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	= 10"
Depth for Freeboard (D) =		21.03	If restricted by superstructures		Difference	Green.
					Restricted to	
					Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L}\right)$	= $\frac{.16}{4} (1 - .9924)$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	18'0"	18.00	8'-3"		18.00
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...			9'-4" POOP		
" overhang aft ...	243'0"	243.00	7'-10" B		243.00
" overhang forward			8'-3" AFT		
Fore enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	4'-0"	2.00	8'-3"		2.00
" " forward					
Total ...	265.00	263.00			263.00

Standard Height of Superstructure **6.15**" " R.Q.D. **6.15**Deduction for complete superstructure **32.50**Percentage covered $\frac{S}{L} = \frac{265.00}{265.00} = 100.$ " " $\frac{S_1}{L} = \frac{263.00}{265.00} = 99.24$ " " $\frac{E}{L} = \frac{263.00}{265.00} = 99.24$ Percentage from Table, Line A. **99.06**
(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 = **32.50 x .9906 = 32.20**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	36.50	1	36.50	254	25.00	50.20	1	50.20	
$\frac{1}{2}$ L from A.P. ...	16.24	4	64.96	102	9.48	22.34	4	89.36	
$\frac{2}{3}$ L " ...	4.02	2	8.04	23	2.37	5.52	2	11.04	
Amidships ...	—	4	—	0	—	—	4	—	
$\frac{2}{3}$ L from F.P. ...	8.03	2	16.06	53	5.33	9.48	2	18.96	
$\frac{1}{2}$ L " ...	32.49	4	129.96	20	20.33	38.34	4	153.36	
F.P. ...	73.00	1	73.00	472	48.00	86.16	1	86.16	
Total ...			328.52			+38.16		409.08	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ If limited on account of midship superstructure. **—****80.56** $\left(.75 - \frac{.25}{50} \right) = -1.12$ 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.

 Ft.
 Depth to Freeboard Deck = **21.03**
 Summer freeboard = **.88**
 Moulded draught (d) = **20.15**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **5.04 = 5"**Addition for Winter North Atlantic Freeboard (if required) = **2"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 4670$

Tons per inch immersion at summer load water line

 $T = 20.6$ Deduction = $\frac{\Delta}{40T}$ inches**5.7**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

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

	+	-
Depth Correction	6.85	—
Deduction for superstructures	—	32.20
Sheer correction	—	1.12
Round of Beam correction	—	—
Correction for Thickness of Deck amidships	—	—
Other corrections, scantlings, etc.	—	—
	6.85	33.32

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

24 MAY 1932
 Tropical Fresh Water Line above Centre of Disc ... **10 1/4"**
 Fresh Water Line " " ... **5 1/4"**
 Tropical Line " " ... **5"**
 Winter Line below " " ... **5"**
 Winter North Atlantic Line " " ... **7"**

Tropical Fresh Water

Fresh Water

Tropical

Winter

Winter

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Lloyd's Register
FoundationMARKING FOR
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19 MAY 1932

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
FREEBOARD DECK					SUPERSTRUCTURE DECK					
Description of Hatchway	...	...	...	...	Nº1	Nº2	Nº3	Nº4		
Dimensions of Hatchway	...	...	...	...	24'0" x 12'6"	26'0" x 12'6"	22'0" x 12'6"	20'0" x 12'6"	24'0" x 12'6"	26'0" x 12'6"
COAMINGS	Height above Deck	...	...	...	9' 3 1/2" x 48"	AS	AS	AS	30"	30"
	Thickness	...	...	...	B.A. COAMING	Nº1	Nº1	Nº1	AS	AS
	Stiffeners	...	...	...	NONE				AS	AS
	Brackets, Stays	...	...	...	NONE				Nº1	Nº1
HATCH BEAMS	Number	...	...	...	4	4	4	3	4	4
	Spacing	...	...	...	4' 9 1/2"	5' 2 1/2"	4' 5"	5' 0"	4' 9 1/2"	5' 2 1/2"
	Scantling and Sketch	...	...	...	PL. 10" x 38"	PL. 10" x 38"	AS	AS	PL. 11 1/2" x 32"	AS
	Bearing Surface	...	...	...	ANGLES 3" x 3" x 40"	ANGLES 5" x 3" x 38" Top 2" x 3" x 40" Bottom	Nº1	Nº1	ANGLES 3" x 3" x 40"	Nº1
FORE AND AFTERS	Number	...	...	...			
	Spacing	...	...	...			
	Unsupport Scantling	...	...	...			
	Bearing Surface	...	...	...			
HATCH COVERS	Material	...	...	...	PINE	AS	AS	AS	PINE	AS
	Thickness	...	...	...	2 1/2"	Nº1	Nº1	Nº1	2 1/2"	Nº1
	How fitted	...	...	...	FLA				FLA	
	Bearing Surface	...	...	...	3"				3"	
Spacing of Cleats	...	...	...	...	23"	22"	22"	24"	23"	23"
Number of Tarpaulins	...	...	...	...	2	2	2	2	2	2
*Are wood fore and afters steel sheathed all bearing surfaces? 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? YES.										

Particulars of fidley, funnel and ventilator coamings :-

FUNNEL & VENTILATOR COAMINGS IN EFFICIENT CONDITION
 ENGINE ROOM SKYLIGHT OF STEEL STRONGLY CONSTRUCTED
 GRATINGS TO FIDLEY COVERED BY STEEL HINGED FLAPS.

NONE.

Particulars of hatchways :-

HOUSE AFT GIVING ACCESS TO CREW'S QUARTERS BELOW.
 TWO WOOD DOORS 4'11" x 24" CAPABLE OF BEING OPENED
 FROM BOTH SIDES. SILL 18".

Ventilators in exposed positions on freeboard and superstructure decks :-

1 - 18 1/2" DIA. COAMING 36" HIGH x 40" THK. TO Nº1 HOLD
 1 - 14" " " " 36" " x 35" THK. TO Nº2
 1 - 18 1/2" " " " 36" " x 38" THK. TO Nº3 HOLD
 1 - 14" " " " 36" " x 35" THK. TO Nº4 HOLD
 2 - 9" " " " 33" " x 30" THK. TO CREW'S QUARTERS
 ALL VENTS HAVE WOOD PLUGS & CANVAS COVERS.

Air Pipes in exposed positions on freeboard, raised quarter or superstructure decks :-

3" DIA. AIR FILLING PIPE TO FORE PEAK 4" TO LIP
 3" DIA. AIR PIPES TO Nº1 DB. TANK 4" TO LIP.
 3" DIA. AIR PIPES TO AFT PEAK 4" TO LIP.
 MEANS OF CLOSING AIR PIPES. by wood plugs + canvas covers

Sealing Ports :-

NONE.

Particulars of Scuppers and Sanitary Discharge Pipes:—

ALL SANITARY DISCHARGES ARE FITTED WITH NON-RETURN VALVES. ✓
 SCUPPERS FROM FREEBOARD DECK HAVE NON-RETURN VALVES, AND IN ADDITION HAVE
 PLATE COVERS WITH STUDS AT DECK. ✓ *been permanently closed with riveted plates*
 SCUPPERS FROM SUPERSTRUCTURE DECK ARE CUT THRO' GUNWALE BAR. ✓
 SCUPPER FROM TONNAGE SPACE IS FITTED WITH NON-RETURN VALVE. *screw down*
non return valves, 5" dia. capable of being
operated from shelter decks

Particulars of Side Scuttles:—

SIDE SCUTTLES OF STRONG CONSTRUCTION
 AND FITTED WITH DEADLIGHTS. ✓

Particulars of Guard Rails:—

ROUND SUPERSTRUCTURE DECK EXCEPT IN WAY OF MIDSHIP HOUSES
 3'-6" HIGH, 3 RODS. STANCHIONS SPACED 5'-0" 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
TONNAGE Well	4'-0" ✓	8'-3" ✓	21" x 16" ✓	1	2.32 ✓	✓
WAY OF MIDSHIP HOUSES Well	68'-0"	3'-6"	NONE	✓	✓	✓

State position of each freeing port
 F. and A. position and height above deck edge)

TONNAGE Well:— *FREEING PORT HAS HINGED PLATE COVER AND IS 8" ABOVE DK. ✓*
 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.

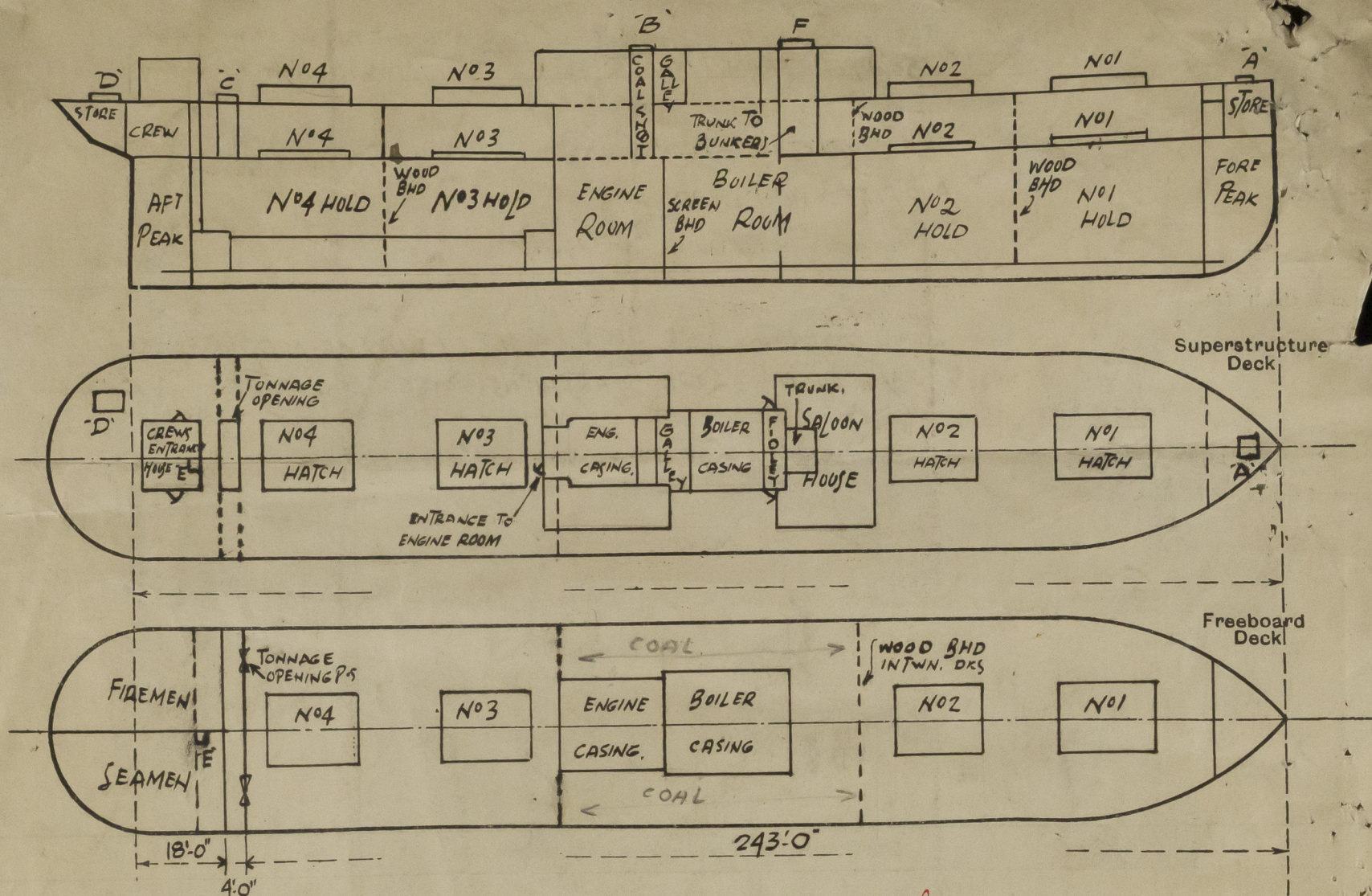
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
FT TONNAGE Bulkhead	25 ✓	25 ✓	3 1/2 x 3 x 25 ✓	3'-0" ✓	NONE ✓	NONE ✓	✓	8'-3" ✓
Raised Quarter Deck Bulkhead ...	✓	✓	✓	✓	✓	✓	✓	✓
FORD TONNAGE Bulkhead	25 ✓	25 ✓	3 1/2 x 3 x 25 ✓	3'-0" ✓	NONE ✓	2 @ 7'-2 x 3'-0 ✓	3 1/2 ✓	8'-4" ✓
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	50	32	4 1/2 x 3 x 3/8	4'-0"	to beams at top	none		
Exposed Machinery Casings on Super- structure Decks	32 ✓	25 ✓	3 1/2 x 3 x 25 ✓	3'-11" ✓	BRACKETED AT TOP	2 @ 5'-0 x 2'-0 ✓ 1 @ 5'-6 x 1'-10 ✓	18" ✓ 18" ✓	7'-9" BOILER CASING ✓ 7'-6" ENGINE -" ✓
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).

TONNAGE Bulkhead	✓
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead	
FORD TONNAGE Bulkhead	3" SHIFTING BOARDS IN PERMANENT CHANNELS FULL HEIGHT. ✓
Forecastle Bulkhead	
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	
Exposed Machinery Casings on Super- structure Decks <i>FIDLEY CASING EXPOSED</i>	2 STEEL DOORS TO FIDLEY ✓
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	1 WOOD DOOR TO ENG. ROOM ✓
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 shown on the following sketches:-



Number Hatches on Flt. Dk.

P @ 3'-10" x 2'-10" coaming 12 x 3/8 cleats 18" x 22", 2 3/4 WP covers 2 1/2" bearing 20
S @ 5'-10" x 3'-6" " 12 x 3/8 " 26" x 18" 2 3/4 " 2 1/2" " 2
19, 15 4'-0" x 4'-0" " 12 x 3/8 " 18" " 2 3/4 " 2 1/2" " 12

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

A = HATCH TO STORE 3'-0" x 2'-0"
COAMING 15" x 40", 2 1/2" WOOD COVERS ✓
2 TARPULINS ✓, CLEATS 23" APART ✓

B = HATCH ON CASING TOP TO COAL SHOOT
11'-9" x 4'-0", COAMING 9" x 32" x 48 B.A. ✓
2 3/4" 2 1/2" WOOD COVERS ✓, CLEATS 25" APART ✓, 2 TARPULINS ✓, 2 1/2" bearing ✓

C = TONNAGE OPENING 12'-6" x 4'-0" COAMING 12" x 40" ✓
3" REST BAR ✓, 2 1/2" WOOD COVERS ✓, 2 TARPULINS ✓
LOCKING BAR ✓

D = HATCH TO STORE 2'-6" x 2'-3"
9" x 3 1/2" x 48" B.A. COAMING ✓
2 1/2" WOOD COVERS ✓, CLEATS 17" APART ✓
2 TARPULINS ✓

E = ENTRANCE TO TUNNEL ESCAPE 5'-0" x 18"
SILL 16" WOOD DOOR, CAPABLE OF BEING
OPERATED FROM BOTH SIDES ✓

F = HATCH ON CASING TOP TO COAL BUNKER
11'-0" x 6'-0" COAMING 9" x 5/16 cleats 2
2 1/2" WP covers, bearing 2 1/2", 2 tarpaulins

FREBOARD SURVEY HELD
WHILE VESSEL WAS AFLOAT

Builder's name and yard number H. C. GRAYSON LTD. No 102.

Names of sister ships ✓

Owners MACANDREWS & CO. LTD.

Fee £ 9 : 7 :

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