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16 NOV 1932

Rpt. C.11.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Mch. No. 7691.

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

Port of Survey MANCHESTER.

Date of Survey 21<sup>ST</sup> SEPTEMBER 1932  
13<sup>TH</sup> OCTOBER 1932  
11<sup>TH</sup> NOVEMBER 1932

Name of Surveyor A.R. Gibbs.

Particulars of Classification + NOA1  
S.S. Mch. No. 2. 29. SHELTER DECK  
WITH FREEBOARD.

Ship's Name "OUSEL" Nationality and Port of Registry LIVERPOOL  
BRITISH. Official Number 146224 Gross Tonnage 1533  
1539 Date of Build 1. 22.

Moulded Dimensions: Length 270.00 Breadth 39.00 Depth 18.9"  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 4440 3390 tons  
Coefficient of fineness for use with Tables .404

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... .. 18.75	(a) Where D is greater than Table depth (D - Table depth) R = <u>(18.75 - 18. - ) 2.074 = 1.62</u>	Moulded Breadth (B) <u>39. -</u>
Stringer plate ... .. .03	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{9.36}{50} = 10"$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>10"</u>
Depth for Freeboard (D) = <u>18.78</u>		Difference <u>EXCEN. .64</u>
		Restricted to
		Correction = $\frac{\text{Diff.}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.64}{4} \times .0083 = \text{NIL.}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	24.08	24.08	6.75	-	24.08
" overhang ... ..	"	"	"	"	"
R.Q.D. enclosed ... ..	"	"	"	"	"
" overhang ... ..	"	"	"	"	"
Bridge enclosed ... ..	"	"	"	"	"
" overhang aft ... ..	"	"	"	"	"
" overhang forward ... ..	241.42	241.42	6.75	-	241.42
Fore enclosed ... ..	"	"	To	"	"
" overhang ... ..	"	"	"	"	"
Trunk aft ... ..	"	"	"	"	"
" forward ... ..	"	"	"	"	"
Tonnage opening aft ... ..	4.50	2.25	"	"	2.25
" forward ... ..	"	"	"	"	"
Total ... ..	270.00	267.45			267.45

Standard Height of Superstructure <u>6.20</u>	
" " R.Q.D. <u>✓</u>	
Deduction for complete superstructure <u>33.00</u>	
Percentage covered $\frac{S}{L} = 100. -$	
" " $\frac{S_1}{L} = 99.14$	
" " $\frac{E}{L} = 99.14$	
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<u>98.94</u>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = $.9894 \times 33.00 = 32.66$	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	37.00	1	37.00	29"	29	35.60	1	35.60	
1/2 from A.P. ... ..	16.44	4	65.88	10"	10.66	15.84	4	63.36	
1/2 " ... ..	4.07	2	8.14	2"	2.66	3.92	2	4.84	
Amidships ... ..	-	4	-	0"	-	-	4	-	
1/2 from E.P. ... ..	8.14	2	16.28	4"	9.02	9.15	2	19.50	
1/2 " ... ..	32.94	4	131.76	18"	36.49	39.43	4	157.72	
E.P. ... ..	74.00	1	74.00	58"	82	88.60	1	88.60	
Total			333.06						342.62

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75 - S}{2L} \right) = \frac{39.56}{18} \times .25 = 1.55$

If limited on account of midship superstructure.

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

**Correction for Tropical Freeboard.**  
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 18.78  
Summer freeboard = .48  
Moulded draught (d) = 18.30

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 4.57 4 1/2"  
Addition for Winter North Atlantic Freeboard (if required) = 2"

**Deduction for Fresh Water.**  
Displacement in salt water at summer load water line  $\Delta = 3990$   
Tons per inch immersion at summer load water line  $T = 20.25$   
Deduction =  $\frac{\Delta}{40T}$  inches = 4.93

**TABULAR FREEBOARD** corrected for Flush Deck (if required) 36.50  
Correction for coefficient  $\frac{.704 + .68}{1.36} = \frac{1.384}{1.36}$  37.23

	+	-
Depth Correction ... ..	1.62	
Deduction for superstructures ... ..		32.66
Sheer correction ... ..		.55
Round of Beam correction ... ..		
Correction for Thickness of Deck amidships ... ..		
Other corrections, scantlings, etc. ... ..		
	1.62	33.21
Summer Freeboard =		<u>5.64</u>

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, 0' 5 3/4", Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ... ..	8 3/4"
Fresh Water Line " " ... ..	5 3/4"
Tropical Line " " ... ..	3 3/4"
Winter Line below " " ... ..	4 1/2"
Winter North Atlantic Line " " ... ..	6 1/2"

Tropical Fresh Water Freeboard MINUS 0' -	
Fresh Water " " ... ..	
Tropical " " ... ..	
Winter " " ... ..	
Winter North Atlantic " " ... ..	

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## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS																
Superstructure Deck																
Freeboard Deck																
Description of Hatchway			No 1	No 2	No 3	No 4	No 5	No 1	No 2	No 3	No 4	No 5				
Dimensions of Hatchway			13'-8 1/2" x 15'-0"	27'-3" x 15'-0"	11'-9" x 14'-0"	21'-6 1/2" x 15'-0"	17'-7 1/2" x 15'-0"	13'-8 1/2" x 15'-0"	27'-5" x 15'-0"	11'-9" x 14'-0"	21'-6 1/2" x 15'-0"	17'-7 1/2" x 15'-0"				
COAMINGS	{	Height above Deck	30"	SAME AS NO 1 HATCH				9 x 3 x 44L	SAME AS NO 1 HATCH							
		Thickness { Sides	44													
		{ Ends	44													
		Stiffeners	4 x 3 L SIDES AND ENDS. NONE					NONE					4 x 3 L SIDES NONE	4 x 3 L SIDES NONE	4 x 3 L SIDES AND ENDS. NONE	
		Brackets, Stays						NONE					NONE			
HATCH BEAMS	{	Number	2	5	2	4	3	2	5	2	4	3				
		Spacing	4'-4"	4'-7"	3'-11"	4'-3 1/2"	4'-5"	4'-7"	4'-7"	3'-11"	4'-3 1/2"	4'-5"				
		Scantling and Sketch														
			ANGLES 3-3-42 12-34 ANGLES 3-3-42	12-32	11-30	12-32	12-32	ANGLES 3-3-42 12-34 ANGLES 3-3-42	3-3-42 12-34	12-30	12-34	12-34				
		Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"				
FORE AND AFTERS	{	Number	NO FORE AND AFTERS ARE FITTED													
		Spacing														
		Unsupported Lengths														
		Scantling* and Sketch														
		Bearing Surface														
HATCH COVERS	{	Material	N.P.	SAME AS NO 1 HATCH					N.P.	SAME AS NO 1 HATCH						
		Thickness	3"													
		How fitted	F.A.													
		Bearing Surface	3"													
Spacing of Cleats			24"					24 to 30"	24"	24"	24 to 30"	24 to 30"				
Number of Tarpaulins			2					2	2	2	2	2				

Are wood fore and afters steel shod at 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 - EXCEPT WHERE STATED ☒   
 Are lashings provided in accordance with rule requirements? NAILS PROVIDED AT MAIN HATCHWAYS ON S.S. DECK. ☒

HATCHWAYS.

FREEBOARD DECK:-

BUNKER HATCH:-  $8'-6" \times 15'-0" - 9" \times 3\frac{1}{2}"$  L coaming  
HATCH BEAM  $12" \times 30$  - ANGLES  $3" \times 3" \times 4\frac{1}{2}" - 3\frac{1}{2}"$  B.S. No. 3  
COVERS ~~Not complete~~ Cleats 28" apart. 1 Tarpaulin

2 COALING HATCHES:-  $6'-0" \times 8'-0" - 11" \times 3\frac{1}{2}"$  L coaming. No. 3  
covers ~~not~~ complete. Cleats 28" apart. ~~2~~ 1 Tarpaulin

SUPERSTRUCTURE DECK:-

HATCH TO FORE PEAK:-  $2'-4" \times 2'-4" - 18" \times 34$  coaming.  $2\frac{1}{2}"$   
wood covers. 2 Tarpaulins. 8 cleats. ✓

HATCH TO CHAIN LOCKER:-  $1'-10" \times 1'-10" - 18" \times 30$  COAMING.  
wood covers. 2 Tarpaulins 8 cleats. ✓

BUNKER HATCH -  $5'-5" \times 14'-0" - 30" \times 4$  coaming.  
1 Hatch beam  $5" \times 30$  - angles  $3" \times 3" \times 3\frac{1}{2}"$  B.S.  $3" \times$   
covers  $3" \times 3\frac{1}{2}"$ . 2 Tarpaulins. Cleats  $24"$  ✓

Tonnage opening Hatch:-  $4'-6" \times 15'-0" - 9" \times$  coaming  
 $3"$  wood covers - 2 Tarpaulins. ✓

Particulars of fiddley, funnel and ventilator coamings:—

Ketchikan Takings earned by Strong Angus Steel Cans  
Panned and Frying Vats. are in efficient condition  
E. R. Flylight. of Steel Strongly Constructed

Particulars of Flush Bunker 'Scuttles:—

Нолле

Particulars of Companionways :—

None

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

ON SUPERSTRUCTURE DECK.

6 Ventilators to Holes & Green Decks.	16 $\frac{1}{2}$ " dia. x 36" x 32 coaming	} Vents. closed by wood plugs and canvas covers which are not complete
2 " " Bankers.	12" " x 36" x 32 "	
1 " " Inner Recess	6" " x 36" x 25" "	
2 G.N. " " Bankers.	29" High to mouth.	

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

ON SUPERSTRUCTURE DECK

OF THE STRUCTURE DECK.

1	and facing paper to Fore Peak Tank	4"	12"	To Mouth
1	" "	No 1 D.B.	F.	$\frac{1}{2}$ " = 5"
2	" "	No 2	A.	$\frac{1}{2}$ " = 6"
2	" "	No 2	"	$\frac{1}{2}$ " = 7"
2	" "	No 5	"	$\frac{1}{2}$ " = 5"
2	" "	No 6	"	$\frac{1}{2}$ " = 19"
1	" "	Apr Peak	"	$\frac{1}{2}$ " = 8"
1	" "	"	"	$\frac{1}{2}$ " = 14"
1	" "	"	"	$\frac{1}{2}$ " = 12"

} No means of closing is provided for air pipes  
by means of wood plugs

Particulars of Gangway Cargo and Coaling Ports :—

None



Particulars of Scuppers and Sanitary Discharge Pipes:—

Scuppers from Foreboard Deck 4' 0" above deck and all fitted with brass Storm  
Valves at Ship's Side.

The deckboard scuppers originally fitted from the Shellin tween decks  
are now permanently closed at the deck and shells by riveted  
spigot-plates and the original scuppers on each side of the  
tonnage well are replaced by screws down non-return valves  
5" diameter capable of being operated from the Shellin deck

Particulars of Side Scuttles:—

All accommodation above Superstructure Deck.

Particulars of Guard Rails:—

Strong Steel Bulwarks fitted around Superstructure Deck 3' 4" high and supported by 6" 3" 5" L  
Stiffeners about 5' 6" apart.  
3 Iron Guard Rails are fitted as in sketch.

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 ... ..						
Forward Well ... ..						
<p>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.</p>						

Freeing port in tonnage well is permanently closed by riveted plate

TONNAGE WELL:—

2 Strong Steel Doors in Ships Side  
2' 5" x 10' 2" - 3' above deck. Secured on  
inside by lashings through eyebolts.

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 T.O. Fore Bulkhead T.O. Aft Bulkhead	✓	.25	3" x 2 1/2" x 30"	24" - 30"	NONE	4' 0" x 3' 0"	20"	7' 9"
Raised Quarter Deck Bulkhead	✓	.25	3" x 2 1/2" x 30"	30"	NONE	NONE	✓	7' 9"
Bridge, After Bulkhead				✓				
Bridge, Forward Bulkhead				✓				
Forecastle Bulkhead				✓				
Trunk, Aft				✓				
Trunk, Forward				✓				
Exposed Machinery Casings on Free- board or Raised Quarter Decks				✓				
Exposed Machinery Casings on Super- structure Decks	.28	.28	3" x 2 1/2" x 30"	30"	BARS TOP	5' 0" x 2' 0" - 5' 4" x 1' 11" 1/2" x 2' 2"	18"	7' 3"
Machinery Casings within Superstruc- tures fitted with Class I Closing Appliances	.34	.28	3" x 2 1/2" x 30"	30"	"	NONE	✓	6' 9"
Deckhouses on Flush Deck Ships				✓				

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead T.O. Fore Bulkhead T.O. Aft Bulkhead	2 1/2" Storm Boards, full height in Revere's Channels
Raised Quarter Deck Bulkhead	No openings
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	✓
Exposed Machinery Casings on Free- board or Raised Quarter Decks	✓
Exposed Machinery Casings on Super- structure Decks	Strong Heavy Steel Doors operated from both sides. - Fishley - Locks require repairs
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	No openings
Deckhouses on Flush Deck Ships	✓

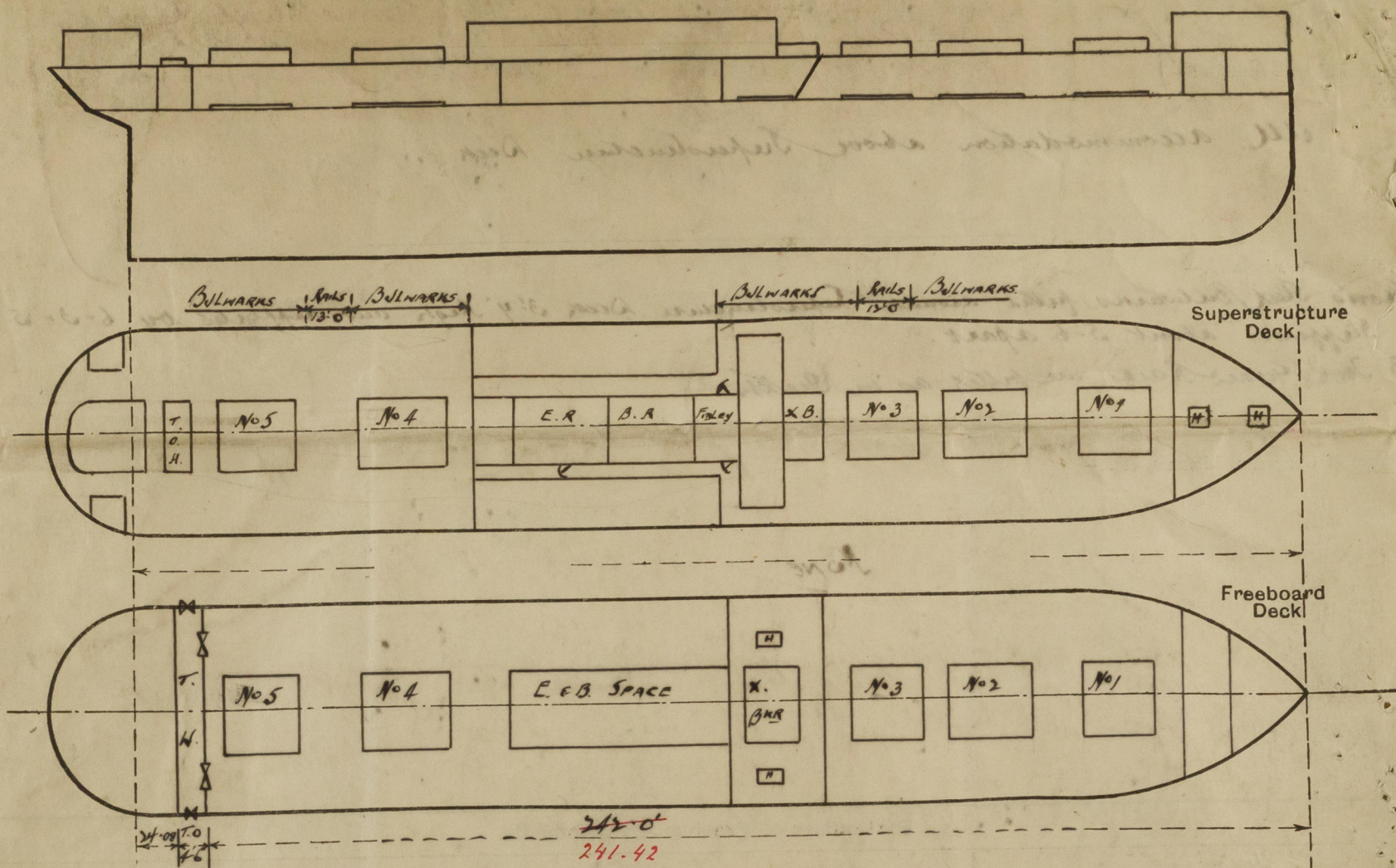


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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—



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

VESSEL SURVEYED AFLOAT FOR CONVENTION FREEBOARD REQUIREMENTS ONLY.

$$111' 0" \times 25' 50" = 21.645 = 4770$$

$$18' 33" = 3930$$

$$85 \times 18' 75" = 15.936$$

Tons per inch immersion at S.G. N.L.			
"	"	"	"
"	"	"	"
"	"	"	"
"	"	"	"
"	"	"	"

OMIT

Builder's name and yard number FERGUSON, BROS (PORT-GLASGOW) LTD — No 262.

Names of sister ships

Owners BRITISH AND CONTINENTAL S.S. CO. LTD.

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