

9 APR 1935

15 OCT 1935

Rpt. C.11.

Index. No. 34604
(For London Office only.)Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

15386

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey	MIDDLESBROUGH.
having <u>RAISED 9th DK. BRIDGE & FORECASTLE</u>					Date of Survey	WHILE BUILDING
<u>ELYSIAN COAST.</u>					Name of Surveyor	J. B. Richman
(Type of Superstructures.)					Particulars of Classification	+100 A.I. CONTEMPLATED.
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build		
<u>FURNESS S.B. CO'S</u> <u>Nº 245</u>	<u>BRITISH</u> <u>Stockton-on-Tees</u>	<u>149158</u>	<u>495.93</u>	<u>1935</u> <u>CONTEMPLATED</u>		
Moulded Dimensions: Length <u>160' 0"</u> Breadth <u>27' 6"</u> Depth <u>12' 0"</u>						
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>930.5</u> tons						
Coefficient of fineness for use with Tables <u>.725.726</u>						

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	12	(a) Where D is greater than Table depth (D - Table depth) R = $(12.025 - 10.66) \times 1.23 = +1.67$		Moulded Breadth (B)	27.5
Stringer plate	.025	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	6.6
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Ship's Round of Beam	6.5
Depth for Freeboard (D) =	12.025			Difference	.1
				Restricted to	$\frac{1}{4} \times 5052$
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	NIL + .01

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 ...	36.66	36.66	3.5		36.66
" overhang ...	✓				
Bridge enclosed ...	27.50	27.50	7.0		27.50
" overhang aft ...	✓				
" overhang forward ...	✓				
F'cle enclosed ...	15.16	15.16	6.0		15.16
" overhang ...	✓				
Trunk aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	✓				
" forward ...	✓				
Total ...	79.32	79.32			79.32

Standard Height of Superstructure	6' 0"
" " R.Q.D.	3.4 FT.
Deduction for complete superstructure	19.45 FT. 22"
Percentage covered $\frac{S}{L} =$	49.57%
" " $\frac{S_1}{L} =$	49.57% 48
" " $\frac{E}{L} =$	49.57% 48
Percentage from Table, Line A.	31.55
(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)	.94
Deduction = $19.45 \times .3155 =$	-6.85

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	26	1	26	26.12	26.12	26.12	1	26	26.00
$\frac{1}{4}L$ from A.P. ...	11.57	4	46.28	11.87	11.87	11.87	4	46.28	46.28
$\frac{2}{4}L$ " ...	2.86	2	5.72	3.25	3.25	3.25	2	5.72	5.72
Amidships ...	0	4	0.0	0	0	0	4	0	0
$\frac{3}{4}L$ from F.P. ...	5.72	2	11.44	5.37	5.37	5.37	2	10.74	10.74
$\frac{1}{4}L$ " ...	23.14	4	92.56	23	23	23	4	92	92
F.P. ...	52	1	52	52	52	52	1	52	52
Total ...			234.0					234.84	232.74

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{126.84}{18} \left(.75 - \frac{.75}{2} \right) = +.04$

If limited on account of midship superstructure.

Mean actual sheer aft =	Excess
Mean standard sheer aft	
Mean actual sheer forward =	.989 Standard.
Mean standard sheer forward	
Length of enclosed superstructure forward of amidships	
" " aft of "	
Standard	Actual
5.72 3 17.16	5.37 3 16.11
23.14 3 69.42	23.00 3 69.00
52.00 1 52.00	52.00 1 52.00
138.58	137.11

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Ft.
Depth to Freeboard Deck = 12.025
Summer freeboard = 1.02
Moulded draught (d) = 11.00

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

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 1021 \text{ TONS}$

Tons per inch immersion at summer load water line

$T = 9 \text{ TONS}$

Deduction = $\frac{\Delta}{40T}$ inches = $2 \frac{3}{4}$ "

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	1.67	.94
Deduction for superstructures	8	6.83
Sheer correction	0.04	.02
Round of Beam correction	0.01	
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.	1.73	6.94

Summer Freeboard = 12.226

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

Tropical Fresh Water Line above Centre of Disc	5 1/2"	Tropical Fresh Water Freeboard	12 1/4"
Fresh Water Line	2 3/4"	Fresh Water	6 3/4"
Tropical Line	2 3/4"	Tropical	9 1/2"
Winter Line below	2 3/4"	Winter	15"
Winter North Atlantic Line	4 3/4"	Winter North Atlantic	17"

MARKING FORM
123 MAY 1939
RECEIVED

MARKING FORM
15 OCT 1935
RECEIVED

MARKING FORM
2 MAY 1935
RECEIVED

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

PARTICULARS OF PROPOSED			
HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS			
Description of Hatchway	...	...	MAIN DECK HATCH.
Dimensions of Hatchway	...	...	65'-6" x 15'-6"
COAMINGS	Height above Deck	...	41"
	Thickness	...	4" PLATE + BR.
	Stiffeners	...	8 x 3 x 4 B.R.
	Brackets, Stays	...	SKETCH PLATE STAYS 7'-4" APART
HATCH BEAMS	Number	...	11-6
	Spacing	...	5'-6"
	Scantling and Sketch	...	13 1/2" TO 7 1/4" x .34 ANGLES 3 1/2" x 3" x .42
	Bearing Surface	...	
FORE AND AFTERS	Number	...	
	Spacing	...	
	Unsupported Lengths	...	
	Scantling* and Sketch	...	NONE
HATCH COVERS	Material	...	W.W.
	Thickness	...	2 1/2"
	How fitted	...	F & A STEEL SHOES ON ENDS
	Bearing Surface	...	3"
Spacing of Cleats	...	...	2'-0"
Number of Tarpaulins	...	...	THREE
*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? YES.			

Particulars of fiddley, funnel and ventilator coamings:—

STOKEHOLD GRATINGS COVERED BY STRONG STEEL HINGED COVERS.
FIDLEY & FUNNEL VENTILATORS IN EFFICIENT CONDITION. ✓
ENGINE SKYLIGHT OF STEEL STRONGLY CONSTRUCTED. ✓

Particulars of Flush Bunker Scuttles:—

Two 18" DIA. CAST IRON SCUTTLES ON BRIDGE DK. TO BUNKERS
FITTED WITH BAYONET JOINTS & ATTACHED BY CHAIN. ✓

Particulars of Companionways:—

None.

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

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

ONE YENT ON WINCH PLATFORM FOR 15" DIA. COAM.	36" x 36" LED TO HOLD
TWO YENTS ON BRIDGE DK. I.P.I.S. 6" DIA.	36" x 25" LED TO BUNKERS.
TWO MUSHROOM YENTS ON BR. DK. I.P.I.S. 5" DIA.	30" x 3" ACC.
TWO " " " R. Q. DK. I.P.I.S. 6" " "	30" x 3" " TRANSON SPACE (SPORE)
ONE C.I. GOOSENECK YENT ON R. Q. DK.	6" " " " "
ALL YENTS. CONSTRUCTED IN ACCORDANCE WITH RULES & COAMINGS CLOSED WITH WOOD PLUGS & CANVAS COVER.	

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

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

ONE C.I. AIR PIPE	ON FLYING DK.	2" DIA.	36" HIGH	FROM FORE PEAK TANK.
"	"	"	"	"
ONE C.I. AIR PIPE	UPPER DK.	3½" "	36" HIGH	FROM DOUBLE BOTTOM TANK.
ONE C.I. "	"	"	"	"
FOUR C.I. AIR PIPES (2 P. 2 S)	ON UPPER DK.	2½" DIA.	36" HIGH	FROM D.B. TANKS
"	"	"	"	"
TWO " " PIPE (1 P. 1 S)	ON BRIDGE DK.	2" DIA.	18" "	"
ONE " " "	ON RAISED 9½ DK.	2½" DIA.	30" "	"
ONE " " "	ON RAISED 9½ DK.	2½" "	30" "	"
ONE " " "	"	"	"	"
ALL AIR PIPES CLOSED WITH WOOD PLUGS & CANVAS COVERS.				

Particulars of Gangway Cargo and Coaling Ports:—

NONE.

Particulars of Scuppers and Sanitary Discharge Pipes :—

These are all from spaces above the Superstructure deck.

Particulars of Side Scuttles:—

ALL SIDE SCUTTLES FITTED WITH HINGED DEADLIGHTS. ✓
ALL SCUTTLES OF SUBSTANTIAL CONSTRUCTION.

Particulars of Guard Rails :—

STEEL BULWARK ON FREEBOARD DK. 3'-9" HIGH x .25 EFFICIENTLY CONSTRUCTED & SUPPORTED.
GUARD RAIL ON BRIDGE & F'GLE DKs 3'-6" HIGH HAVING 3 RODS STANCHIONS 5'-0" APART.
STEEL BULWARK ON RAISED 9th DK. 3'-6" HIGH x .25 EFFICIENTLY CONSTRUCTED & SUPPORTED.

Particulars of Gangways, Lifelines, etc.:—

LIFELINE ALONG HATCH SIDE (PORT SIDE) FROM BRIDGE TO F'GLE.
1/2" STEEL WIRE ROPE STANCHIONS 3'-0" HIGH.
EFFICIENTLY CONSTRUCTED

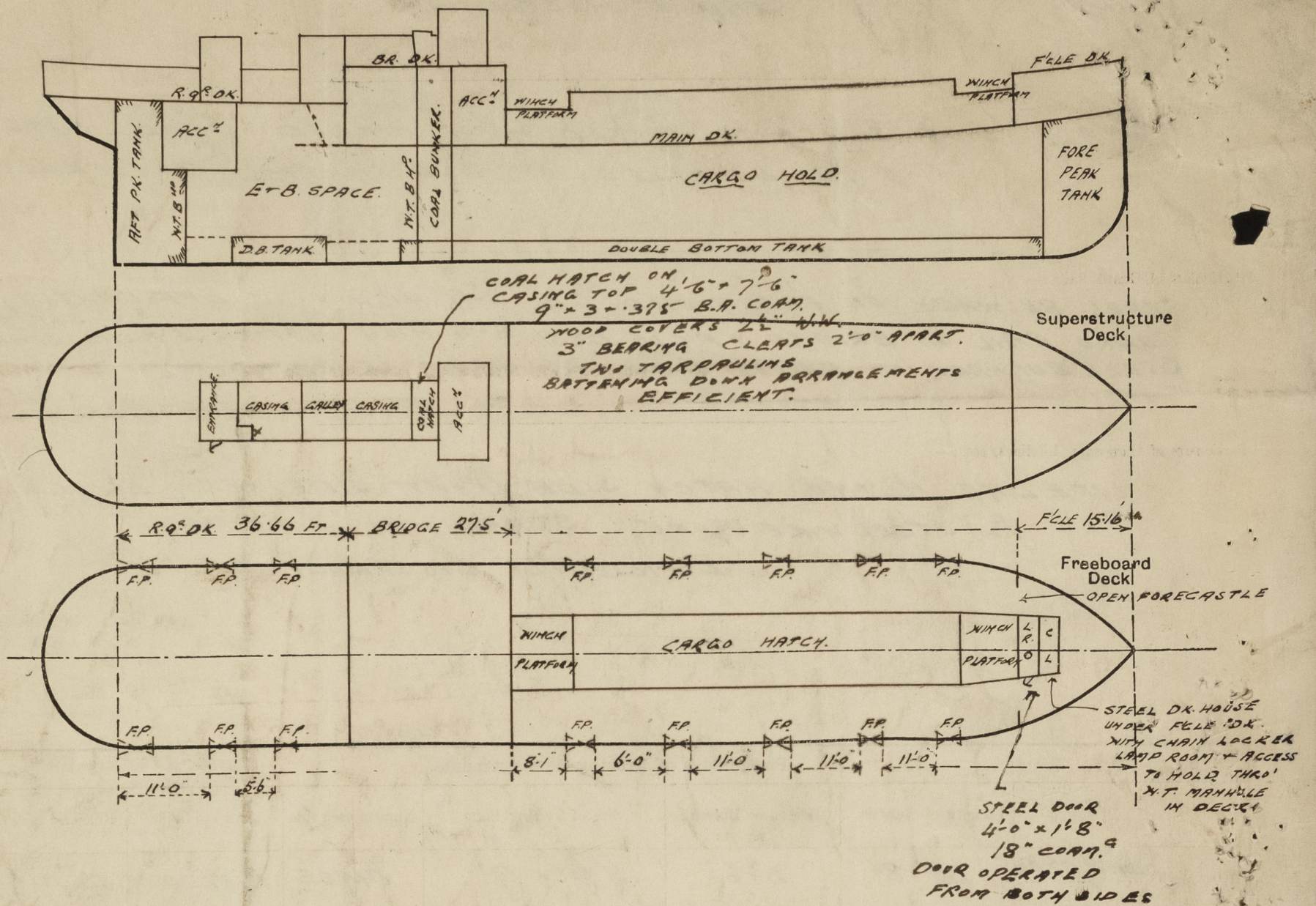
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓							
Raised Quarter Deck Bulkhead } Bridge, After Bulkhead ... }	✓							
Bridge, Forward Bulkhead	PLATED .24	3x2½x.28L	21"	NONE	NONE	✓	3'-6"	
Forecastle Bulkhead ... IN CEN. ...	" 3 TO .28	5½x3x.34 B.A. AT NHLS 23' APART LUGS	5x2½x.38	" - CEN. 30" "	TOP & BTM.	NONE	✓	7'-0"
Trunk, Aft	PLATED .3	3" FLANGE	YCR. 3'-6"	NONE	NONE	✓	6'-0"	
Trunk, Forward	WEBS AT SIDE 15"x.3. FLANGED 3"	STEERED BY SWIMON PLATING.						
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	3'-6"x.28	.28	3x2½x.26L	28"	BRACKETS AT TOP	NONE	✓	3'-6"
Exposed Machinery Casings on Superstructure Decks	PLATED .28	3x2½x.26L	27" TO 24"	BRACKETS AT TIP	NONE	✓	3'-6"	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships ...	PLATED .24	3x2½x.3L	26"	NONE	STEEL DOOR 5'-0"x2'-0"	18"	7'-0"	
" " MAIN DECK.	" 3 TO .24	3x2½x.3L	22"	NONE	STEEL DOOR 4'-0"x2'-0"	18"	6'-0"	

Particulars of Closing Appliances (state if ...)

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	✓
Raised Quarter Deck Bulkhead ...	✓ <i>No openings</i>
Bridge, After Bulkhead	NO OPENINGS
Bridge, Forward Bulkhead	NO OPENINGS
Forecastle Bulkhead	OPEN AT SIDES (SEE SKETCH)
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	NO OPENINGS
Exposed Machinery Casings on Superstructure Decks	NO OPENINGS
Machinery Casings within Superstructure not fitted with Class I Closing Appliances	✓
Doors on Flush Deck Ships ...	STEEL HINGED & CLIPPED DOOR OPERATED FROM BOTH SIDES.
" " MAIN DECK	DOOR OPERATED FROM BOTH SIDES

Cragside

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:—

Builder's name and yard number *FURNESS S.B. CO. YARD N° 245.*

Names of sister ships

Owners *FREE TRADE WHARF CO. LD.*

Fee £ *6* : *0* : *0*

Received by me



© 2020
Lloyd's Register
Foundation