

4 MAY 1932

Index No. 19163
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

No. 100316

Computation of Freeboard for Steamer, Sailing Ship, Tugboat
having Raised P. St., Bridge House and Forecastle.

Port of Survey Liverpool

Date of Survey 27th-28th April 1932.

Name of Surveyor H.R. Howell.

Particulars of Classification 100 A1
as per Reg. No. 3-228

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>"ENID"</u>	<u>British</u> <u>Barrow</u>	<u>118501</u>	<u>250</u>	<u>1903-8</u>

Moulded Dimensions: Length 131'5" Breadth 22'3" Depth 10'0"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 481 tons

Coefficient of fineness for use with Tables .677

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>10'0"</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(10.03 - 8.44) 1.012 = + 1.28</u>	Moulded Breadth (B) <u>22'3"</u>
Stringer plate <u>4.03</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>5.34</u>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>5.40</u>
Depth for Freeboard (D) = <u>10.03</u>		Difference = <u>.16</u>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>$\frac{.16}{4} (1 - .5981) = -.02$</u>

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	<u>49'50</u>	<u>49'50</u>	<u>3'9"</u>		<u>49'50</u>
" overhang	✓	✓	✓	✓	✓
Bridge enclosed	<u>12'15</u>	<u>11'91</u>	<u>7'0"</u>		<u>11'91</u>
" overhang aft	✓	✓	✓	✓	✓
" overhang forward	✓	✓	✓	✓	✓
Forecastle enclosed	<u>12'15</u>	<u>12'69</u>	<u>7'0"</u>		<u>12'69</u>
" overhang	<u>9'10</u>	<u>4'55</u>			<u>4'55</u>
Trunk aft	✓	✓	✓	✓	✓
" forward	✓	✓	✓	✓	✓
Tonnage opening aft	✓	✓	✓	✓	✓
" forward	✓	✓	✓	✓	✓
Total	<u>83'66</u>	<u>78'65</u>			<u>78'65</u>

Standard Height of Superstructure	<u>6'0"</u>
" " R.Q.D.	<u>3'22"</u>
Deduction for complete superstructure	<u>19'15</u>
Percentage covered $\frac{S}{L} =$	<u>63.61%</u>
" " $\frac{S_1}{L} =$	<u>59.81%</u>
" " $\frac{E}{L} =$	<u>59.81%</u>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	<u>45.73%</u>
Interpolation for bridge less than 2L (if required)	
Deduction = <u>19.15 x 45.73 =</u>	<u>8.76</u>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>23'15</u>	1		<u>23'15</u>	<u>27"</u>	<u>27'00</u>	1		<u>23'15</u>
$\frac{1}{4}$ L from A.P.	<u>10'30</u>	4		<u>41'20</u>	<u>11"</u>	<u>11'85</u>	4		<u>41'20</u>
$\frac{2}{4}$ L "	<u>2'55</u>	2		<u>5'10</u>	<u>3"</u>	<u>2'46</u>	2		<u>5'10</u>
Amidships	-	4		-	0	-	4		-
$\frac{3}{4}$ L from F.P.	<u>5'09</u>	2		<u>10'18</u>	<u>5"</u>	<u>4'43</u>	2		<u>9'86</u>
$\frac{1}{4}$ L "	<u>20'60</u>	4		<u>82'40</u>	<u>20"</u>	<u>19'75</u>	4		<u>79'00</u>
F.P.	<u>46'30</u>	1		<u>46'30</u>	<u>45"</u>	<u>45'00</u>	1		<u>45'00</u>
Total				<u>208'33</u>					<u>203'31</u>

Mean actual sheer aft = <u>Excess</u>	
Mean standard sheer aft = <u>Excess</u>	
Mean actual sheer forward = <u>Deficient</u>	
Mean standard sheer forward = <u>Deficient</u>	
Length of enclosed superstructure forward of amidships = <u>2'033</u>	
" " aft of " = <u>50'467</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{5.02}{18} (.75 - .3181) = +.12$

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 = 10'03

Summer freeboard = 48

Moulded draught (d) = 9'55

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 2'39 = 2'2"

Addition for Winter North Atlantic Freeboard (if required) =

4'2"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 555

Tons per inch immersion at summer load water line

 $T =$ 5.41Deduction = $\frac{\Delta}{40T}$ inches= 2.43= 2'2"

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient

Depth Correction 1.28

Deduction for superstructures 8.76

Sheer correction12

Round of Beam correction02

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

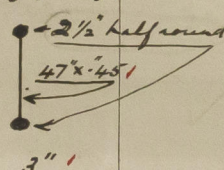
Summer Freeboard = 5'80

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

Tropical Fresh Water Line above Centre of Disc	Tropical Fresh Water Freeboard
Fresh Water Line " "	Fresh Water " "
Tropical Line " "	Tropical " "
Winter Line below " " <u>2'2"</u>	Winter " " <u>0'84</u>
Winter North Atlantic Line " " <u>4'2"</u>	Winter North Atlantic " " <u>0'104</u>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Description of Hatchway			Nº 1	Nº 2							
Dimensions of Hatchway			7'0" x 12'0"	26'4" x 13'0"							
COAMINGS	Height above Deck	...	36"	42"							
	Thickness	Sides	35"	35"							
		Ends	35"	34"							
	Stiffeners	...	none	none							
	Brackets, Stays	...	none	none							
HATCH BEAMS	Number	...		2 Web plates							
	Spacing	...		8'8" - 8'11"							
	Scantling and Sketch	...	none								
	Bearing Surface	...		3"							
FORE AND AFTERS	Number	...	3	3							
	Spacing	...	3'0"	3'3"							
	Unsupported Lengths	...	7'0"	8'4" - 8'7"							
	Scantling* and Sketch	...									
			W. wood Sides 6x5"	9"x6"							
	Bearing Surface	...	2"-2 1/2"-3"	1 3/4"-2 3/4"-3"							
HATCH COVERS	Material	...	W. Wood	W. Wood							
	Thickness	...	2 1/2"	2 1/2"							
	How fitted	...	Shoat	Shoat							
	Bearing Surface	...	1 1/2"-1 3/4"-2 1/2"	1 1/2"-2 1/2"							
Spacing of Cleats			24"-28" 25"	24"-25"							
Number of Tarpaulins			2	2							
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>Yes.</i></p> <p>Are battens and wedges efficient and in good condition? <i>Yes.</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>Yes.</i></p> <p>Are lashings provided in accordance with rule requirements? <i>Yes.</i></p>											

Particulars of fiddle, funnel and ventilator coamings:— *Fiddle funnel & ventilator coamings in efficient condition.*

Fiddle grating fitted with steel hinged covers.
Engine Room skylight strongly constructed of steel with steel hinged flaps.
Bunker hatch on Fiddle casing top 13'3" x 4'3", coaming 9"x4", W. wood covers 2 1/2" thick fitted F. & A. bearing surface 1 3/4", cleats spaced 24"-34", battens in order. 2 Tarpaulins.

Particulars of Flush Bunker Scuttles:—

none.

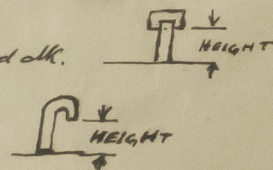
Particulars of Companionways:— *One in steel deck house within Fo'ble, to crew space, fitted with ^{Steel} ~~hardwood~~ door (4 1/2" frame) 59" x 28", sill 17" above steel dk. operated from both sides.*
One from R.O. Bt. aft. within engine casing, to crew space, fitted with hardwood door (1 1/2" frame) 54" x 21", sill 17" above wood dk.
One in steel deck house on bridge house to accommodation, fitted with hardwood door 57" x 20", sill 14 1/2".

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

- 1 - 7" dia., coaming 30" x 3" on Fo'ble dk. to crew space, measured above wood dk.
 - 1 - 12" dia., coaming 48" x 3" on Freeboard dk. to hold. *efficiently stayed*
 - 2 - 8" dia., coaming 18 1/2" x 3" on Hatch end, on Freeboard dk. to hold. *48" above Fo'ble dk. measured above steel dk.*
 - 1 - 6" dia., coaming 30" x 3" on R.O. Bt. to crew space, measured above wood dk.
- Wood plugs and canvas covers on board as reqd.*

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

- 1 - 3" dia., 18" high on Freeboard dk. (within Fo'ble) to F.P. Tank, measured above wood dk.
 - 2 - 3" dia., 39 1/2" high on Freeboard dk. to Nº 1 S.B. Tank. } measured above steel dk.
 - 2 - 3" dia., 36" high on Freeboard dk. to Nº 2 S.B. Tank. } *NO SHIFTING HOLES.*
- Efficient means of closing provided*



Particulars of Gangway Cargo and Coaling Ports:—

none.



Particulars of Scuppers and Sanitary Discharge Pipes :- *Stringer scuppers 5 1/2 x 4" ✓*
Sanitary discharges fitted with storm valves on shell about 2 ft. below lubbered dr. ✓

Particulars of Side Scuttles :- *Side scuttles fitted with inside hinged deadlights. ✓*

Particulars of Guard Rails :- *Round 7 1/2" dia. 40" high, stanchions spaced 4'0" to 5'0", 2 rails. ✓*

Particulars of Gangways, Lifelines, etc. :-
Efficient arrangement of lifelines for the protection of the crew fitted in the forward well. ✓
None fitted.

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Forward Well	49'6"	3'6"	31" x 19" 25" x 15"	2 2	13.462 721 0'	11.4
Forward Well	49'0"	3'10"	31" x 19"	3	12.270'	11.5 0'
State position of each freeing port (F. and A. position and height above deck edge) } <i>R.O.B.A. BRIDGE AFT. BULKHEAD 5'2" 21'5" 6" above deck.</i> <i>Forward Well: BRIDGE 3'0" 12'6" 12'10" 13" above deck.</i> State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :- <i>hinged shutters.</i>						
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	Vertical Plating	✓	4.7" x 3 1/2" B.A.					3'9"
Bridge, After Bulkhead			6 1/2" x 3 1/2" B.A.	29"	Brackets T & B.	None	✓	
Bridge, Forward Bulkhead			3 1/2" x 2 1/2" x 5/16"	40"	Brackets T & B.	None	✓	7'0"
Forecastle Bulkhead	✓	✓	6 1/4" x 3 1/2"			✓	✓	7'0"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Raised Quarter Decks	✓	✓	2 1/2" x 2 1/2" x 25'	2'6"	Brackets top.	4 - 56" x 24" 2 - 29" x 23"	20" above sill 36" above sill 6'6"	
Exposed Machinery Casings on Superstructure Decks	✓					To CROWN SPACE 1 - 54" x 21" CROWN SPACE TO E.R. 1 - 56" x 20"	19" above sill 20" above sill	
Machinery Casings within Superstructures 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	✓
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	✓
Exposed Machinery Casings on Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships	✓

Steel hinged doors to tidley engine room. manipulated from both sides
Handwood door to crew space, manipulated from both sides (lock).
Steel hinged door from crew space to engine room, manipulated from both sides (lock).

002427-002434-0161 3/2

STRINGER SCUPPERS

Accom.

CREW SPACE

ENGINE & BOILER SPACE

BUNKER

HOLD.

Accom.

STRINGER SCUPPERS

OPEN FLOORS

N°2 DB TANK

N°1 DB TANK

CREW SPACE

OPEN FLOORS SHEATHED 2 1/2" WOOD OVER CREW SPACE

FORE PEAK TANK.

2 1/2" WOOD SHEATHING OVER CREW SPACE

CASING TOP

BUNKER HATCH

49'6" ✓

10'9" AT SIDES

12'6" AT CENTRE

49'

22'3" ✓

Superstructure Deck

WC

WC

CHAIR LOCKER

COMPANIONWAY

STORES

N°1 HATCH

N°2 HATCH

STRONG STEEL FLAPS

COMPANIONWAY

131'5

Freeboard Deck

Skylight on R.Q. DE. 36 1/2" x 16 1/2", craning 18" x 25, fitted with strong wood flaps

$$\begin{aligned} \text{Feb} &= 22.25 \\ \frac{L}{10} &= \frac{13.18}{2 \overline{) 9.1}} \\ &= 4.58 \text{ OK} \\ \frac{L}{50} \times 9649 &= 12.69 \end{aligned}$$

Vessel examined in dry dock, S.S. 3rd No 1 proceeding.

OMIT

Names of sister ships

Owners W. W. Favian (W. Lloyd Williams, Jr.)

Fee £ 3 8 - Received by me