

23 JAN 1933

Index No. 16458
(For London Office only.)

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having *Ramid quarter deck, bridge & forecastle.*

(Type of Superstructures.)

Ship's Name *Rota* Nationality and Port of Registry *BRITISH YARHOUTH* Official Number *113757* Gross Tonnage *265* Date of Build *1903-8*

Moulded Dimensions: Length *129.0* Breadth *22.32* Depth *9.6"*
Moulded displacement at moulded draught = 85 per cent. of moulded depth *429* tons
Coefficient of fineness for use with Tables *.646* *.68 Lowest in Tables*

Port of Survey *Hull*
Date of Survey *20th January 1933*
Name of Surveyor *A. B. England*
Particulars of Classification *+100A.1.*
S.S. Rules and No. 3-11.28

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	<i>9.6"</i>	(a) Where D is greater than Table depth (D-Table depth) R = <i>(9.54 - 8.60) .992 = + .93</i>		Moulded Breadth (B)	<i>22.32</i>
Stringer plate	<i>.44</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	<i>5.36</i>
Sheathing on exposed deck	<i>TABLE 5.2</i>			Ship's Round of Beam	<i>8.5"</i>
$T \left(\frac{L-S}{L} \right) =$	<i>BRIDGE DECK 4.2</i>			Difference	<i>3.14</i>
Depth for Freeboard (D) =	<i>9.54</i>	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right)$	<i>3.14 x .4112 = -.32</i>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...						Standard Height of Superstructure <i>6.00</i>
" overhang ...						" " R.Q.D. <i>3.19</i>
R.Q.D. enclosed ...	<i>41.0</i>	<i>41.00</i>	<i>2.9</i>	<i>2.75/3.19</i>	<i>35.35</i>	Deduction for complete superstructure <i>18.90</i>
" overhang ...						Percentage covered $\frac{S}{L} =$ <i>61.24</i>
Bridge enclosed ...	<i>19.0</i>	<i>19.00</i>	<i>4.6</i>		<i>19.00</i>	" " $\frac{S_1}{L} =$ <i>58.88</i>
" overhang aft ...						" " $\frac{E}{L} =$ <i>54.49</i>
" overhang forward ...						Percentage from Table, Line A. <i>38.29</i>
Forecastle enclosed ...	<i>19.0</i>	<i>15.95</i>	<i>6.6</i>		<i>15.95</i>	(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, Line B.
Trunk aft ...						(corrected for absence of forecastle (if required))
" forward ...						Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...						Deduction = <i>7.24</i>
" " forward						
Total ...	<i>79.00</i>	<i>75.95</i>			<i>70.30</i>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<i>22.90</i>	<i>1</i>		<i>22.90</i>	<i>24</i>	<i>24.0</i>	<i>1</i>		<i>24.00</i>	Mean actual sheer aft = <i>Essex</i>
$\frac{1}{2}L$ from A.P. ...	<i>10.19</i>	<i>4</i>		<i>40.76</i>	<i>10.5</i>	<i>10.66</i>	<i>4</i>		<i>42.64</i>	Mean actual sheer forward = <i>Essex</i>
$\frac{3}{4}L$ " ...	<i>2.52</i>	<i>2</i>		<i>5.04</i>	<i>2.5</i>	<i>2.66</i>	<i>2</i>		<i>5.32</i>	Mean standard sheer forward
Amidships ...		<i>4</i>					<i>4</i>			Length of enclosed superstructure forward of amidships = <i>nil</i>
$\frac{3}{4}L$ from F.P. ...	<i>5.04</i>	<i>2</i>		<i>10.08</i>	<i>5.4</i>	<i>5.23</i>	<i>2</i>		<i>10.46</i>	" " aft of " = <i>46.51</i>
$\frac{1}{2}L$ " ...	<i>20.38</i>	<i>4</i>		<i>81.52</i>	<i>21</i>	<i>20.93</i>	<i>4</i>		<i>83.72</i>	
F.P. ...	<i>45.80</i>	<i>1</i>		<i>45.80</i>	<i>48</i>	<i>48.0</i>	<i>1</i>		<i>48.00</i>	
Total ...				<i>206.10</i>					<i>214.14</i>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{8.04}{18} \left(.75 - \frac{306.2}{44.38} \right) = -.20$

If limited on account of midship superstructure. $.2 \times \frac{.0651}{.2000} = -.07$ 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	=	<i>9.54</i>
Summer freeboard	=	<i>.52</i>
Moulded draught (d)	=	<i>9.02</i>

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = $2.25 = 2\frac{1}{4}$

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$

Tons per inch immersion at summer load water line

$T =$

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

$=$

$2\frac{1}{4}$

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient *.68 Lowest in Tables*

	+	-
Depth Correction	<i>.93</i>	
Deduction for superstructures		<i>7.24</i>
Sheer correction		<i>.07</i>
Round of Beam correction		<i>.32</i>
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	<i>.93</i>	<i>7.63</i>
Summer Freeboard =		<i>6.20</i>

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	Winter	"
Winter North Atlantic Line	"	Winter North Atlantic	"

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECK									
UPPER DECK					UPPER DECK				
Description of Hatchway					Description of Hatchway				
N° 1 HATCH					N° 2 HATCH				
Dimensions of Hatchway					28'0" x 13'2"				
COAMINGS	Height above Deck	...	...	30"	NO STIFFENER fitted	42"	...	...	...
	Thickness	...	...	30"		39"	...	...	...
	Sides	...	...	30"		37"	...	...	...
	Stiffeners	...	...	NONE		2 Stays	...	...	...
	Brackets, Stays	...	...			2 Stays	...	...	...
HATCH BEAMS	Number	...	...	NIL	2 EQUAL	2	...	...	...
	Spacing	...	...			2	...	...	...
	Scantling and Sketch	...	...			2	...	...	...
Bearing Surface					3"				
FORE AND AFTERS	Number	...	...	NIL	3 EQUAL 3' 3 1/2"	3	...	...	...
	Spacing	...	...			8' 10"	...	...	...
	Unsupported Lengths	...	...			Centr 8' x 7 1/2"	...	...	...
	Scantling and Sketch	...	...			SIDE 8' x 7"	...	...	...
	Bearing Surface	...	...			Centr for & after 2' 13' 5 on cutwaters & inner	...	...	...
HATCH COVERS	Material	...	...	W.P.	W.P.	3	...	...	...
	Thickness	...	...	3"		3	...	...	...
	How fitted	...	...	THURTSIPS		THURTSIPS	...	...	...
	Bearing Surface	...	...	1/2 3		3 1/2	...	...	...
Spacing of Cleats					30"				
Number of Tarpaulins					3				
*Are wood fore and afters steel shod at all bearing surfaces?					GOOD.				
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?					WIRE Rope lashings 1/2" N° 1 lashed, 2 1/2" soft lashings 1/2" N° 2 lashed from cleats on hatch ends.				

Particulars of fiddle, funnel and ventilator coamings: — *Engine room slightly of wood good condition.*
~~Coring top of funnel & funnel around funnel & up to deck.~~ *No fiddle, opening, fitted.*
2 Engine room ventilators and 2 Machine vent. efficient. *THURTSIPS.*
Coal hatch covering top 9'0" x 10'9" Corrug 8' x 25, 2 1/2" Corrug, battens and cleats, 1 tarpaulin, heavy surface 1/2" THURTSIPS. *Centr for & after 7 1/2 x 7 1/2 steel shod, 2 1/2" heavy surface.*

Particulars of Flush Bunker Scuttles: —
None fitted.

Particulars of Companionways: — *Under forecath. leading to crew space. Hard companion of steel with wood door 4'6" x 1'10" with 9 1/2" sill. The wood door frame broken and sprung lock handle broken & inner frame and lock.*
At sea end of Main deck on port side & fully & on starboard side & bridge space accommodation.
Companion of wood, with wood door 4'10" x 1'10" P.S. 15" sill. Sprung lock and handle & repair.
has been removed & replaced with steel door & handle & repair.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:
Forecath. deck to crew space 4 1/2" dia. Corrug 15 1/2" Corrug, rusted and solder & inner
W.C. 9" dia. 3 1/2" x 5' 6" month. no plug or cover supplied.
Land Room MUSHROOM VENT 5' dia x 5' high. NO TOP. WOOD PLUG FITTED.
Upper Hold 12" DIA COUL VENT CORRIDG 3'0" x 35" WOOD PLUG AD CHAIRS COVER SUPPLIED.
Bridge Hold 12" 19' x 25"
Cabin 4 mushroom vent 8' dia x 9' high. Efficient closing provided.
W.C. 4" dia 2 1/2" dia 5 1/2" dia x 8' 6" month. no plug or cover supplied.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks: —
Upper deck under forecath. to sea fresh tank.
9" dia 1 1/2" dia x 4' 6" month. No plug or venting hole.
Efficient closing provided.

Particulars of Gangway Cargo and Coaling Ports: —
None fitted.

Particulars of Scuppers and Sanitary Discharge Pipes :-

Scuppers for mill upper deck 3 each side cut through stringer angle.
 R.Q. Deck 3
 Captains W.C. and crew stations side of bridge space 4" S.V. discharge 2' 9" below upper deck.
 Crew H.E. upper deck forward 4" " outside close

Particulars of Side Scuttles :-

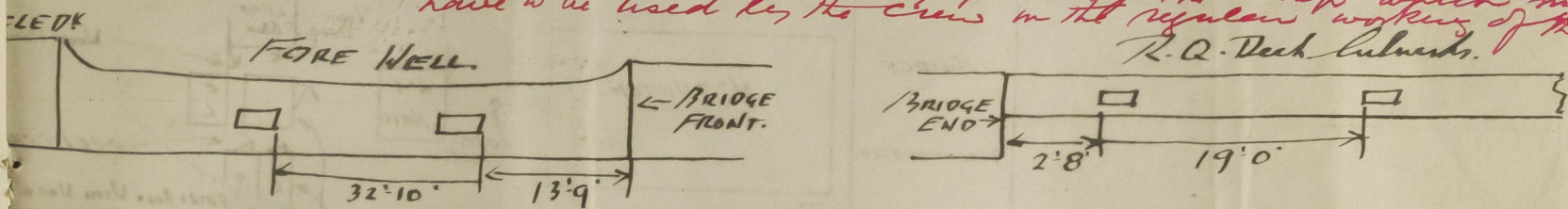
In forecath side to crew space (below upper deck) 8' dia 2P. 2S. Strong construction fitted with deadlights.
 Bridge side to cabins 9' dia. 1 after light P.S. fitted with deadlights.
 In fore end cabins no deadlights fitted. ~~Archang glass to window~~
 (Not made to take deadlights)

Particulars of Guard Rails :-

Forecath deck open rails 3' 3" high spaced 4' 6" apart 2 Nos (1-3/8" x 1 3/4" dia)
 Fore well deck steel bulwarks ~~to rail to repair then in place~~
 Bridge deck rails 3' 3" high spaced 5' 0" apart 1-3/4" Rod and hand rail top rail and also painted 3 a round bulwark on outside.
 R.Q. Deck steel bulwarks.

Particulars of Gangways, Lifelines, etc. :-

3 1/2 Manilla lifelines supplied between bridge front ladder and landed around fore mast. ~~Lifelines from bridge to fore mast and platform from fore mast to bridge~~
~~to fore mast and platform from fore mast to bridge~~
 Available provision made for rigging lifelines which are available for use in any part of the ship which might have to be used by the crew in the regular working of the ship.
 R.Q. Deck bulwarks.



Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Fore Well	44' 0"	2' 10"	2' 0" x 1' 6"	4-2	6.0 12.0	10.6
Guard Well	50' 0"	3' 7"	2' 6" x 1' 9"	2	8.75	11.5

Position of each freeing port ... After Well :-
 and A. position and height above deck edge) Forward Well :-
 Whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :-
 Additional area where sheer is less than standard.

Height clear deck 5' 0" Fore Well 9'
 Steel shutters fitted to ports.

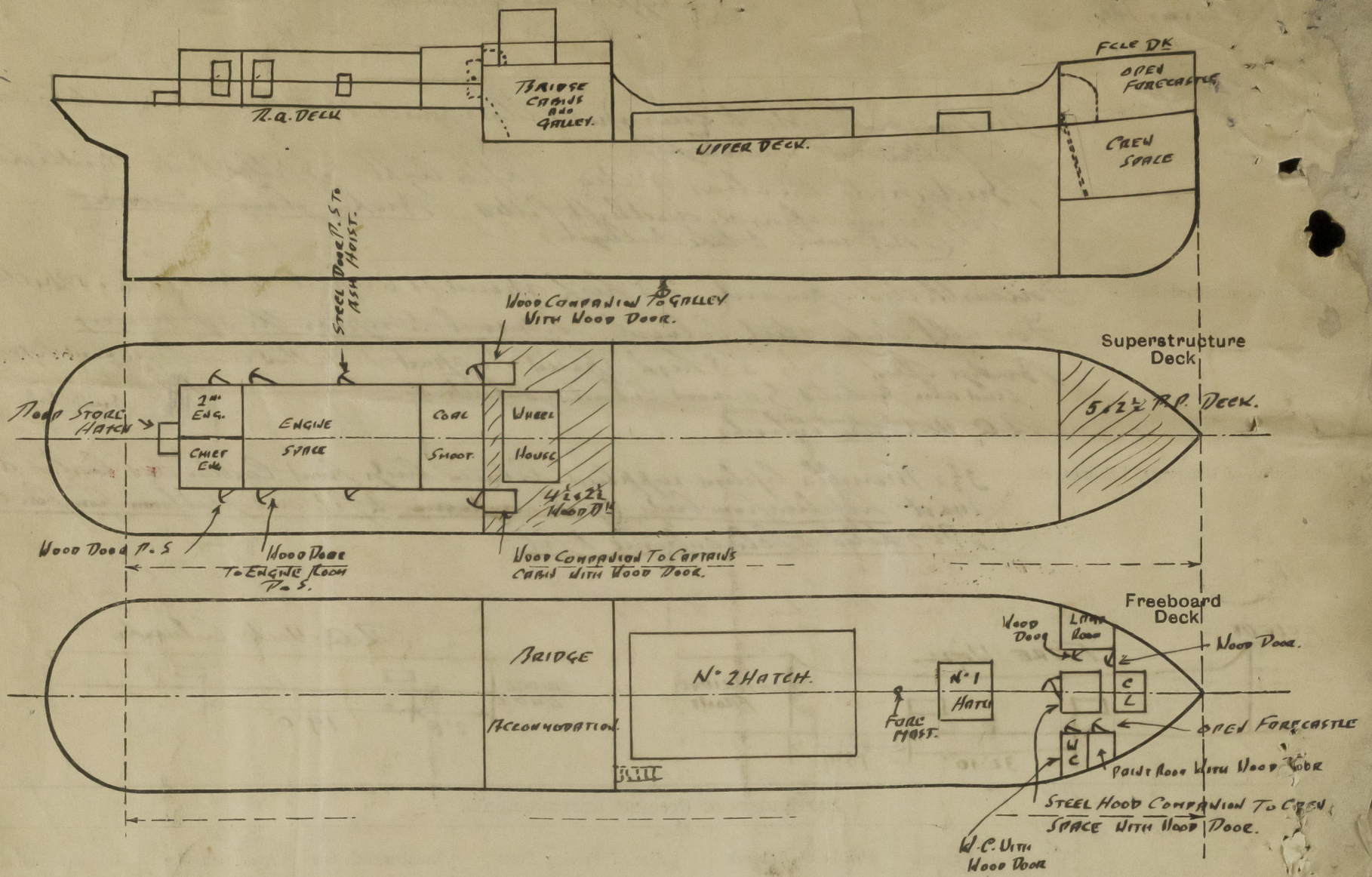
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Bulkhead	✓							
Quarter Deck Bulkhead	✓							
After Bulkhead	25	25	ALL WOOD SHEATHED CHAINS			NONE	✓	2' 9"
Forward Bulkhead	25	25	ALL WOOD PARALLEL			NONE	✓	7' 6"
Castle Bulkhead	25	25	2 1/2 x 2 1/2 x 25	2' 8"	NONE	3 Wood Doors 5' 2" x 1' 10"	8"	6' 6"
Deck, Aft	✓							
Deck, Forward	✓							
Raised Machinery Casings on Free Quarter Deck	33	30	2 1/2 x 2 1/2 x 30	2' 7"	1 Layer of Top	25 Steel Doors 2' 0" x 1' 6" 15" 2 Wood 5' 0" x 2' 0" 18" E.R. 2 5' 0" x 2' 0" 18" CROWS.		7' 0"
Machinery Casings on Superstructure Decks	✓							
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Casings on Flush Deck Ships	✓							

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

Bulkhead	✓
Quarter Deck Bulkhead	✓
After Bulkhead	✓
Forward Bulkhead	✓
Castle Bulkhead	3 Wood doors to H.C. Lamp room, paint room, spray tank and handles.
Raised Machinery Casings on Free Quarter Deck	25 Steel Doors 2' 0" x 1' 6" To Ash Hatch Hinged with 1 clip fastener.
Machinery Casings on Superstructure Decks	2 Wood 5' 0" x 2' 0" ENGINE ROOM 1 3/8 THICK with spring links & handles both sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	2 Wood 5' 0" x 2' 0" ENGINE ROOMS
Casings 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 shewn on the following sketches:—



Hatch to prop room at after end of casing 3'6" x 3'10"
 Containing 15" x 25" bottom and cleats, 3'6" x 1'0" top, 1'0" x 1'0" top, 1'0" x 1'0" top
 Bearing surface 5'6" x 1'0" but not to be used.

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

This vessel has been run aground while lying in the River Hull.
 The Owners state that the vessel has been submitted to a
 general examination recently at YARMOUTH with a view to
 procuring the special survey 3rd N. 1. which became due in November 1932.

Builder's name and yard number Graysmouth & Gravel Dockyard Co. Ltd. Graysmouth.

Names of sister ships

Owners E. E. SUTTON.

Fee £ 3 : 8 : - Received by me



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