

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

No. 100173.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Birkenhead</u>	
having <u>Raised Quarter Deck, Bridge House & Forecastle.</u>					Date of Survey <u>11-4-32 & subsequently</u>	
<u>EAST ANGLIAN SUSSEX OAK</u>					Name of Surveyor <u>A.B. Murray</u>	
<u>KYLEBANK</u> (Type of Superstructures.)					Particulars of Classification <u>+100 A1</u>	
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build		
<u>SUFFOLK COAST</u>	<u>British</u>	<u>140511</u>	<u>870</u>	<u>1917-5.</u>		
Moulded Dimensions: Length <u>198'-0"</u> Breadth <u>30'-4 1/2"</u> Depth <u>14'-5"</u>						
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>1620</u> tons						
Coefficient of fineness for use with Tables <u>.769</u>						

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	... 14'-5"	(a) Where D is greater than Table depth		Moulded Breadth (B)	<u>30'-4 1/2"</u>
Stringer plate	... 4'-2"	(D-Table depth) R = $(14.46-13.20) 1.523$		Standard Round of Beam = $\frac{B \times 12}{50}$	<u>7.28</u>
Sheathing on exposed deck	... 0'-4"	(b) Where D is less than Table depth (if allowed)		Ship's Round of Beam	<u>7 1/4"</u>
T $\left(\frac{L-S}{L}\right) =$		(Table depth-D) R =		Difference	<u>Deficient .03</u>
Depth for Freeboard (D) =	<u>14.46</u>	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L}\right)$	<u>$\frac{.03}{4} \times .2458 = \text{NIL}$</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>111'-2"</u>	<u>111.16</u>	<u>3'-8"</u>	<u>3.365</u>	<u>111.16</u>
" overhang ...	<u>.76</u>				
Bridge enclosed <u>House</u> ...	<u>13'-2"</u>	<u>13.16</u>	<u>7'-0"</u>		<u>13.16</u>
" overhang aft ...	<u>.76</u>				
" overhang forward ...	<u>23.58</u>	<u>23.58</u>	<u>7'-0"</u>		<u>23.58</u>
F'cle enclosed ...	<u>26'-0"</u>	<u>.71</u>			<u>.71</u>
" overhang ...	<u>1.42</u>				
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<u>149.32</u>	<u>148.61</u>			<u>148.61</u>

Standard Height of Superstructure 6.00" " R.Q.D. 3.653Deduction for complete superstructure 25.80Percentage covered $\frac{S}{L} = 75.42\%$ " $\frac{S_1}{L} = 75.05\%$ " $\frac{E}{L} = 75.05\%$

Percentage from Table, Line A.

(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 = $25.80 \times .6921 = -17.86$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>29.80</u>	1		<u>29.80</u>	<u>38</u>	<u>38.50</u>	1		<u>38.67</u>
L from A.P. ...	<u>13.26</u>	4		<u>53.04</u>	<u>17</u>	<u>16.78</u>	4		<u>68.84</u>
" ...	<u>3.28</u>	2		<u>6.56</u>	<u>4.5</u>	<u>4.19</u>	2		<u>8.50</u>
Amidships ...		4					4		
L from F.P. ...	<u>6.56</u>	2		<u>13.12</u>	<u>8.75</u>	<u>8.05</u>	2		<u>16.10</u>
" ...	<u>26.52</u>	4		<u>106.08</u>	<u>31.5</u>	<u>32.19</u>	4		<u>128.76</u>
F.P. ...	<u>59.60</u>	1		<u>59.60</u>	<u>68.0</u>	<u>69.00</u>	1		<u>69.00</u>
Total ...	<u>268.20</u>			<u>268.20</u>					<u>329.87</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{61.67}{18} \left(.75 - \frac{3771}{3729} \right) = -1.28$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 18'-13"

Summer freeboard = 4'-25"

Moulded draught (d) = 13'-88"

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3'-47 3/4"

Addition for Winter North Atlantic Freeboard (if

required = 2"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 1875$

Tons per inch immersion at summer load water line

T = 12.9Deduction = $\frac{\Delta}{40T}$ inches= 3'-62= 3 1/2"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.769 + .680}{1.36} = \frac{1.449}{1.36}$ Depth Correction ... 1.92Deduction for superstructures ... 17.86Sheer correction ... 1.28

Round of Beam correction ...

Correction for Thickness of Deck amidships ... 44.00

Other corrections, scantlings, etc. ...

45.92 19.14 + 2.98

Summer Freeboard = 51.03SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:Tropical Fresh Water Line above Centre of Disc ... 17"Fresh Water Line " " ... 3 1/2"Tropical Line " " ... 3 1/2"Winter Line below " " ... 3 1/2"Winter North Atlantic Line " " ... 5 1/2"

Tropical Fresh Water Freeboard ...

Fresh Water " " ...

Tropical " " ...

Winter " " ...

Winter North Atlantic " " ...

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	No. 1.	(A.R.D.) No. 2							
Dimensions of Hatchway	38'6" x 18'0"	31'10" x 18'0"							
COAMINGS									
Height above Deck	36"	30"							
Thickness	4 1/4"	4 1/4"							
Stiffeners	7 x 3 x 1/2 BA	7 x 3 x 1/2 BA							
Brackets, Stays	4	—							
HATCH BEAMS									
Number	7	6							
Spacing	50"-60"	54"							
Scantling and Sketch	plate 16 x 3/4 angle 4 x 3 x 1/4	plate 16 x 3/4 angle 4 x 3 x 1/4							
Bearing Surface	3"	3"							
FORE AND AFTERS									
Number	—	—							
Spacing	—	—							
Unsupported Lengths	—	—							
Scantling and Sketch	—	—							
Bearing Surface	—	—							
HATCH COVERS									
Material	WP	WP							
Thickness	3"	3"							
How fitted	F.A.	F.A.							
Bearing Surface	3"	3"							
Spacing of Cleats	19"	19"							
Number of Tarpaulins	3	3							

*Are wood fore and afters steel shod at all bearing surfaces? ☒
 Are battens and wedges efficient and in good condition? ☒
 Are tarpaulins in good condition and in accordance with rule requirements? ☒
 Are lashings provided in accordance with rule requirements? ☒

Particulars of fiddle, funnel and ventilator coamings:— Fiddle, Funnel and Ventilator coamings in efficient condition. Fiddle Gratings fitted with hinged steel covers. BR Skylights strongly constructed of steel with steel hinged flaps.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

None

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

4-6" Vents 18" coamings x 1/4" to Accom. on Forecastle Deck.
 2-12" Vents 38" coamings x 7/16" to Hoed on Foreboard Deck
 2-12" Vents 36" coamings x 7/16" to Hoed on R.Q. Deck.

Vents fitted with wood plugs & canvas covers.

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

1-2 1/2" Air pipe 18" high to F.P. Tank on Forecastle Deck.
 1-2 1/4" Air pipe 36" high to No. 1 R.B. Tank on Foreboard Deck.
 1-2 1/4" Air pipe 32" high to No. 2 R.B. Tank on Foreboard Deck.
 1-2 1/4" Air pipe 30" high to A.P. Tank on R.Q. Deck.

Air pipes fitted with wood plugs & canvas covers.

Particulars of Gangway Cargo and Coaling Ports:—

None

Particulars of Scuppers and Sanitary Discharge Pipes — Stringer Scuppers 4" x 3".
 All Sanitary discharge pipes fitted with storm valves at the ships side.

Particulars of Side Scuttles:—

All side scuttles fitted with hinged deadlights of substantial construction.

Particulars of Guard Rails:—

Round Forecastle Deck.
 Rails 36" high. Stanchions spaced 5'-0" (portable) 2 wires.

Particulars of Gangways, Lifelines, etc.:—

The crew are housed in the Forecastle, entering by strong steel hinged doors. Stanchions are fitted to the Hatch coaming horizontal BA Stiffener and spaced about 11'-0" apart and 3'-0" above the Hatch.
 A wire is rigged with stretching screws from the Bridge House Bulkhead to the Forecastle B.H.

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 ... R.Q.D.	111'-2"	2'-11"	3 at 2'-6" x 1'-6" 1 at 1'-7" x 1'-3"	26 } 7	25 sq ft	22.23
Forward Well	48'-8"	3'-6"	3'-3" x 1'-10"	2	11.89 sq ft	11.36

State position of each freeing port:— After Well: Bridge 26'-8" 32'-0" 21'-6"
 (F. and A. position and height above deck edge) Forward Well: Bridge 4'-0" 22'-8"
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Shutters hinged, sills 12" in Well. 8" on R.Q.D.
 Additional area where sheer is less than standard. Small port on R.Q.D. open no rail. 8" sill used for portable ash chutes.

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	✓							3'-8"
Bridge, After Bulkhead	✓	1/4"	2 brackets 3'-9" 2 brackets 7'-6"			56" x 22 1/2"	19"	3'-4"
Bridge, Forward Bulkhead	✓	3/8"	5/2 x 3 x 7/8 BA	30"	Bkt top & bottom	—	—	7'-0"
Forecastle Bulkhead	✓	3/8"	3 x 3 x 3/8 LB	36"	—	57" x 22"	21"	7'-0"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	3/8"	3 x 2 1/2 x 3/8 LB	36"	Bkt at top	6 at 57" x 22"	19"	7'-0"
Exposed Machinery Casings on Superstructure Decks	✓					2 at 55" x 22"	19"	7'-0"
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	Strong wood hinged door manipulated from both sides.
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	Strong steel hinged doors manipulated from both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	ER Casings Fiddle, Strong steel hinged doors manipulated from both sides.
Exposed Machinery Casings on Superstructure Decks	Accom + WC Strong wood hinged doors manipulated from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships	✓

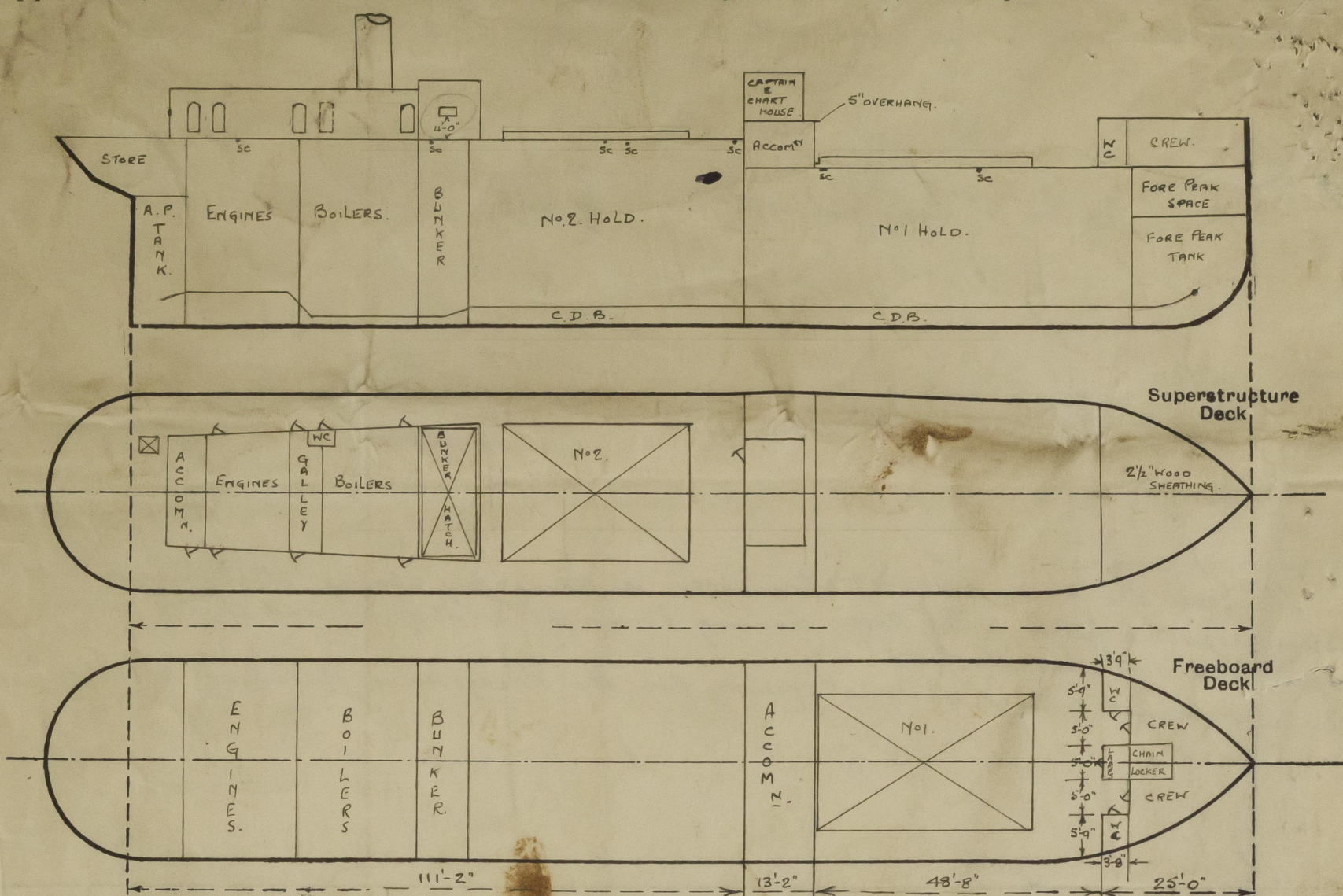
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Suffolk Coast

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:—



Bunker Hatch on top of Gidley Casings. 18'-1" x 11'-3". 3" WP Covers fitted F+A. bearing 2 1/2". Cleats spaced 31". 2 tarpaulins.
 Openings in Bunker Casings sides 18' x 15'. 2'-0" x 1'-5". sill 4'-0". sliding steel doors.
 Steel Hatch to A.P. tank. 2'-6" x 2'-6". coaming 18" x 3/4". bolted steel hinged cover 1/4" thick. 3/4" bolts pitched 3 1/2".

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

$14.42 \times 85 = 12.26 \text{ mld}$
 $= 12.4 \frac{1}{4} \text{ BK}$
 $14.54 \times 95 = 10.89$
 $= 10.10 \frac{3}{4} \text{ BK}$ $\Delta \text{ full} = 1420$
 $17 \frac{1}{2} \times 91.9 = 1608$
 $1620 \text{ Amld @ } 15 \frac{1}{2} \text{ D}$

7000
 - 5 x 375 = 1875
 1325
 2500
 1875

Builder's name and yard number *W Harkness & Son Ltd. Middlesbrough*

Names of sister ships *Avonwood*

Owners *Coast Lines Ltd*

Fee £ *6* : *16* : *0* Received by me