

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Poop, Bridge & Forecastle

(Type of Superstructures.)

Port of Survey Newcastle-on-Tyne

Date of Survey 14th May 1932.

Name of Surveyor C. Stephenson

Particulars of Classification + 100 A1.

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
KILDALE.	<u>British</u> <u>Whitby.</u>	<u>137085</u>	<u>3877</u>	<u>1924.4.</u>

Moulded Dimensions: Length 363.0 Breadth 51.16 Depth 25.04

Moulded displacement at moulded draught = 85 per cent. of moulded depth 9995. tons

Coefficient of fineness for use with Tables .795.

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth ...	<u>25.04</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(25.04 - 24.20) 2.792</u>		Moulded Breadth (B) <u>51.16</u>	
Stringer plate ...	<u>.03</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50} = 12.28$	
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Ship's Round of Beam = <u>12.4</u>	
Depth for Freeboard (D) =	<u>25.07</u>			Difference	<u>.03</u>
				Restricted to	
				Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) = .03 \left(1 - \frac{78.71}{116} \right) = .01$	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>33.0</u>	<u>33.00</u>	<u>8'-0"</u>		<u>33.00</u>
" overhang ...			<u>0.6 B.</u>		
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed...	<u>222.25</u>	<u>222.25</u>	<u>8'-0"</u>		<u>222.25</u>
" overhang aft ...					
" overhang forward					
Fore enclosed ...	<u>30.5</u>	<u>30.50</u>	<u>8'-0"</u>		<u>30.50</u>
" overhang ...			<u>0.6 B.</u>		
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward					
Total ...	<u>285.75</u>	<u>285.75</u>			<u>285.75</u>

Standard Height of Superstructure	<u>7.13.</u>
" " R.Q.D.	
Deduction for complete superstructure	<u>39.53</u>
Percentage covered $\frac{S}{L} = 78.71$	
" " $\frac{S_1}{L} = 78.71$	
" " $\frac{E}{L} = 78.71$	
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>78.71.</u>
Interpolation for bridge less than 2L (if required)	
Deduction =	<u>29.14</u>

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	<u>46.3</u>	1	<u>46.30</u>	<u>53.5</u>	<u>53.5</u>	1	<u>53.50</u>
$\frac{1}{6}$ L from A.P. ...	<u>20.6</u>	4	<u>82.40</u>	<u>21.5</u>	<u>21.33</u>	4	<u>85.32</u>
$\frac{2}{6}$ L " ...	<u>5.10</u>	2	<u>10.20</u>	<u>5.2</u>	<u>5.33</u>	2	<u>10.66</u>
Amidships ...		4				4	
$\frac{3}{6}$ L from F.P. ...	<u>10.20</u>	2	<u>20.40</u>	<u>12</u>	<u>12.24</u>	2	<u>24.48</u>
$\frac{4}{6}$ L " ...	<u>41.2</u>	4	<u>164.80</u>	<u>49</u>	<u>48.98</u>	4	<u>195.92</u>
F.P. ...	<u>92.6</u>	1	<u>92.60</u>	<u>108.5</u>	<u>108.5</u>	1	<u>108.50</u>
Total ...			<u>416.70</u>				<u>478.38</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{61.68}{18} \left(\frac{75-39.35}{116} \right) = 1.22$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 $\frac{1}{2}$ ins. per 100 ft.

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = <u>25.07</u> Ft.</p> <p>Summer freeboard = <u>3.12</u></p> <p>Moulded draught (d) = <u>21.95</u></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>5.49</u> = <u>5$\frac{1}{2}$</u></p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line</p> <p>$\Delta = 9348.$</p> <p>Tons per inch immersion at summer load water line</p> <p>$T = 37.15.$</p> <p>Deduction = $\frac{\Delta}{40 T}$ inches = <u>6.30</u></p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient</p> <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ...</td> <td><u>2.43</u></td> <td></td> </tr> <tr> <td>Deduction for superstructures ...</td> <td></td> <td><u>29.14</u></td> </tr> <tr> <td>Sheer correction ...</td> <td></td> <td><u>1.22</u></td> </tr> <tr> <td>Round of Beam correction ...</td> <td></td> <td></td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>2.43</u></td> <td><u>30.36</u></td> </tr> <tr> <td>Summer Freeboard =</td> <td></td> <td><u>37.41</u></td> </tr> </table>		+	-	Depth Correction ...	<u>2.43</u>		Deduction for superstructures ...		<u>29.14</u>	Sheer correction ...		<u>1.22</u>	Round of Beam correction ...			Correction for Thickness of Deck amidships ...			Other corrections, scantlings, etc. ...				<u>2.43</u>	<u>30.36</u>	Summer Freeboard =		<u>37.41</u>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ...	<u>11$\frac{3}{4}$</u>	Tropical Fresh Water Freeboard ...	<u>3-1$\frac{1}{2}$</u>
Fresh Water Line " " ...	<u>6$\frac{1}{4}$</u>	Fresh Water " " ...	<u>2-1$\frac{3}{4}$</u>
Tropical Line " " ...	<u>5$\frac{1}{2}$</u>	Tropical " " ...	<u>2-8</u>
Winter Line below " " ...	<u>5$\frac{1}{2}$</u>	Winter " " ...	<u>3-7</u>
Winter North Atlantic Line " " ...		Winter North Atlantic " " ...	

17 MAY 1932

MARKING FORM

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10 APR 1932

24 JUL 1936

19 APR 1932

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

		HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS														BRIDGE DECK POOP DECK UNDER DECK			
		FILL DECK: UPPER DECK. & BRIDGE DECK. & UPPER DECK.														TO STORE. TO DECK.			
Description of Hatchway		FORE PEAK.	FORE PEAK.	No.1	No.2	No.3	No.4	No.5	No.2	No.3	No.4	ESCAPE HATCHES	BUNKERS	2 OFF	2 OFF	2 OFF	2 OFF	2 OFF	2 OFF
Dimensions of Hatchway		4'-0" x 4'-0"	2'-6" x 2'-6"	30'-3" x 30'-3"	30'-3" x 30'-3"	18'-9" x 30'-3"	30'-3" x 30'-3"	18'-9" x 30'-3"	30'-3" x 30'-3"	18'-9" x 30'-3"	30'-3" x 30'-3"	23'-0" x 23'-0"	5'-6" x 5'-6"	2'-0" x 2'-0"	10'-10" x 10'-10"	10'-9" x 10'-9"	6'-0" x 4'-0"	5'-9" x 4'-0"	5'-9" x 4'-0"
COAMINGS	Height above Deck	24"	9"	36"	30"	30"	30"	36"	10"	10"	10"	9"	9"	30"	9"	30"	27"	16"	16"
	Thickness	38"	3"	44"	44"	44"	44"	44"	32"	32"	32"	3"	3"	38"	3"	38"	26" wood	38"	38"
	Stiffeners	38"	3"	44"	44"	44"	44"	44"	32"	32"	32"	3"	3"	38"	3"	38"	26" wood	38"	38"
	Brackets, Stays	38"	3"	44"	44"	44"	44"	44"	32"	32"	32"	3"	3"	38"	3"	38"	26" wood	38"	38"
HATCH BEAMS	Number			5	5	2	5	5	2	5	5	2	5						
	Spacing			5'-0"	5'-0"	4'-7"	5'-0"	5'-0"	5'-0"	4'-7"	5'-0"								
	Scantling and Sketch			18" x 12" x 36"	18" x 12" x 36"	18" x 12" x 36"	18" x 12" x 36"	18" x 12" x 36"	18" x 12" x 36"	18" x 12" x 36"	18" x 12" x 36"								
	Bearing Surface			8"	3"	3"	3"	3"	3"	3"	3"								
FORE AND AFTERS	Number																		
	Spacing																		
	Unsupported Lengths																		
	Scantling* and Sketch																		
HATCH COVERS	Material	W.R.	W.R.	W.R.	W.R.	W.R.	W.R.	W.R.	W.R.	W.R.	W.R.	W.R.	W.R.	W.R.	W.R.	W.R.	W.R.	38" steel	38" steel
	Thickness	3"	2 1/2"	3"	3"	3"	3"	3"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
	How fitted	T.	T.	F + A.	F + A.	F + A.	F + A.	F + A.	F + A.	F + A.	F + A.	Hinged	T.	T.	T.	T.	T.	T.	T.
	Bearing Surface	3"	3"	3 1/4" x 8"	3 1/4" x 8"	3 1/4" x 8"	3 1/4" x 8"	3 1/4" x 8"	3 1/4" x 8"	3 1/4" x 8"	3 1/4" x 8"	4" toggles	3"	3"	3"	3"	3"	3"	3"
Spacing of Cleats		18"	16"	24"	24"	24"	24"	24"	21"	20"	21"		16"	16"	22"	23"	21"		
Number of Tarpaulins		3	2	3	3	3	3	3	2	2	2		2	2	2	3	3		
*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.																	

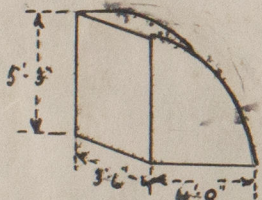
Particulars of fiddle, funnel and ventilator coamings:— Engine Room skylight of steel, strong in good condition.
 Funnel and ventilators in good condition.
 Fiddle gratings fitted with hinged steel covers.

Opening above donkey boiler on casing top. 18" x 2'-10" with 10" high coaming fitted with hinged steel cover. No grating. Secured with one toggle.

Particulars of Flush Bunker Scuttles:—

none.

Particulars of Companionways:— In steel house as sketch. Teakwood door in halves. 4'-3" x 3'-9" set above wood dk. opened from both sides. Door 1 1/2" frame, 1" panel.



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

On Forecastle deck 1 @ 6" dia 18" high 20 to Fore peak stove
 " " 2 @ 20" 36" 40 to Hold.
 " Bridge " 2 @ 20" 26" 40 " "
 " " 2 @ 20" 33" 40 " "
 " " 4 @ 20" 30" 40 " "
 " " 2 @ 6 1/2" 30" 20 to Bunkers.
 " " 2 @ 9 1/2" 18" 36" "
 On Bridge deck 4 @ 23" dia 36" high to Hold. 40.
 " " 4 @ 23" 30" 40 " "
 " " 2 @ 20" 30" 40 " "
 " Poop " 2 @ 20" 34" above wood dk 40 to hold.
 " " 1 @ 11 1/2" 18" 36 to Tunnel.
 All vents. have wood plugs and canvas covers.

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

On Forecastle deck 1 @ 2 1/2" dia 18" to mouth. to Fore peak.
 " Bridge " 2 @ 3 1/2" 13" " C.O.B.
 " " 1 @ 2 1/2" 14 1/2" " " "
 " " 6 @ 3 1/2" 25" " " "
 " " 2 @ 3 1/2" 34" " " "
 " " 1 @ 1 1/2" 10" " " "
 On Bridge deck 1 @ 2" dia 17" to mouth. to C.O.B.
 " " 1 @ 2" 14" " " "
 " Poop deck 1 @ 2 1/2" 10" " after peak.
 Canvas covers supplied for all air pipes.

Particulars of Gangway Cargo and Coaling Ports:—

none.



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Particulars of Scuppers and Sanitary Discharge Pipes — Four pipe scuppers from upper deck in Bridge space discharge overboard below upper deck. Fitted with screw down spindle fitted on upper deck for closing. Six W.C. discharges overboard below upper deck fitted with storm valves. See diagram on back page for positions.

Particulars of Side Scuttles:

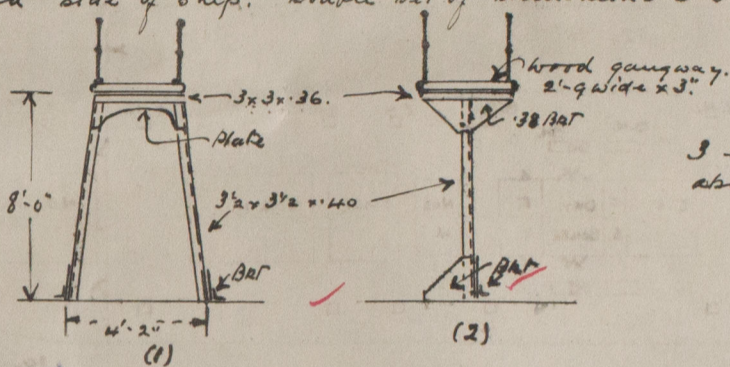
Sidelights in crew quarters aft and under fore-castle deck fitted with strong hinged headlights.

Particulars of Guard Rails:—

Rails on Fore-castle deck, 3'-3" high: 3 rods: stanchions 4'-10" apart.
" " Bridge. " 3'-6" " 3 " " 4'-10"
" " Poop. " 3'-3" " 3 rods. " 4'-9" to 5'-0" apart.

Particulars of Gangways, Lifelines, etc.:

Wood gangway fitted from Fore-castle to Bridge and from Bridge to Poop. on Starboard side of ship. Double set of stanchions 3'-0" high (with two wires) spaced 6'-0" apart.



3 supports in each well. 2 @ (1) 1 @ (2) spaced about 11'-6" apart

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 ...	38'-3"	4'-0"	3'-6" x 1'-7"	3	16.8	10.32
Forward Well ...	39'-0"	3'-11"	3'-6" x 1'-7"	3	16.8	10.4
State position of each freeing port (E. and A. position and height above deck edge) { After Well: 5'-6" : 17'-3" : 29'-3" from Bridge and Bulkhead. } 15' above deck. State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— open ports fitted with 2 horizontal rods. 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 ...	44	38	6x3x40 not available.	27"	-	2-4'-7" x 1'-10" 2-4'-3" x 1'-10"	24"	8'-0"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	38	34	3x3x36	38"	none.	2-5'-5" x 4'-1"	21"	8'-0"
Bridge, Forward Bulkhead ...	44	36	8x3x40 B.A.	28"	B.A. 7.0 B.	2-4'-7" x 3'-7"	25"	8'-0"
Fore-castle Bulkhead ...	36	32	3x3x30 not available.	36"	-	1-5'-9" x 3'-0" 3-4'-6" x 1'-10"	19"	8'-0"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks ...	38	34	4x3x30	38"	B.A. at Jap.	1-4'-7" x 2" 3-4'-3" x 22"	21" 22"	7'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	36	30	4x3x30.	31"		2-2'-0" x 22" 2-5'-7" x 5'-1" R.D. Boiler space.	27" 18"	8'-0"
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead ...	2 hinged steel doors: operated from both sides: 2 wood doors: 1 the solid lock: operated from both sides
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	Bolted steel plate: operated from one side only: Channel fitted full height for weather boards no 3 boards fitted spaced 3 1/2' apart
Bridge, Forward Bulkhead ...	Hinged steel doors: secured by close spaced bolts: operated from one side only. 5'-9" x 3'-0" opening fitted with 2 1/2" W.P. weather boards full height. 3 teakwood doors: 1 the solid: operated from both sides.
Fore-castle Bulkhead ...	
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	3 hinged steel doors: operated from both sides: At aft end 1 teakwood doors: 1 the solid: operated from both sides.
Exposed Machinery Casings on Super-structure Decks ...	2 steel hinged doors into Piddley: operated from one side only.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	2 double steel hinged doors into Donkey Boiler space operated one side only.
Deckhouses on Flush Deck Ships ...	

Ships measured afloat.

Receipt form.



Owners.

Fee £