

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

-6 APR 1932

Index No. **24943**
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

ing *Shells deck with tonnage opening with free castle*
in deck.

Port of Survey *Barry*

FLIGHT 1A NYDONIEFS (Type of Superstructures.)

Signal letters S.V.M.L

Date of Survey *April 1932*

Ship's Name

Nationality and Port of Official Number

Gross Tonnage

Date of Build

RAVENSHOE

British 9-229

139-223

4129

1916.12.

Name of Surveyor *L. McKenna*

Moulded Dimensions: Length *379.66* Breadth *51.20* Depth *26.25*

Moulded draught as moulded draught = 85 per cent. of moulded depth *4776* tons

Correction of fineness for use with Tables *789*

Particulars of Classification *1100 A1.*

with Freeboard

Depth for Freeboard (D)

Depth correction

Round of Beam correction

Moulded depth ... *26.25*

(a) Where D is greater than Table depth
(D-Table depth) R = *(26.25-25.31) 2920*
+ 2.86

Moulded Breadth (B) *51.2*

Stringer plate ... *04*

(b) Where D is less than Table depth (if allowed)
(Table depth-D) R =

Standard Round of Beam = $\frac{B \times 12}{50}$ = *12.3*

Sheathing on exposed deck

Ship's Round of Beam = *12 1/4*

$T \left(\frac{L-S}{L} \right) =$

Difference *.05*

Depth for Freeboard (D) = *26.29*

If restricted by superstructures

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$ = *.05 (0.066) Nil*

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Peep enclosed ...	<i>29.0</i>	<i>29.00</i>	<i>8'-0"</i>		<i>29.00</i>
" overhang ...	<i>1-0</i>	<i>.50</i>	<i>8'-0"</i>		<i>.50</i>
R.Q.D. enclosed ...					
" overhang ...	<i>41</i>				
Bridge enclosed ...	<i>344.4</i>	<i>344.4</i>	<i>8'-0"</i>		<i>344.41</i>
" overhang aft ...	<i>1.00</i>	<i>.75</i>	<i>8'-0"</i>		<i>.75</i>
" overhang forward ...					
Wale enclosed ...					
Trunk ...					
" war ...					
Tonnage opening aft ...	<i>4.26</i>	<i>2.50</i>	<i>8'-0"</i>		<i>2.50</i>
" forward ...					
Total ...	<i>379.66</i>	<i>377.16</i>			<i>377.16</i>

Standard Height of Superstructure *7.296*

" " R.Q.D. *-*

Deduction for complete superstructure *40.64*

Percentage covered $\frac{S}{L} = 1.000$

" " $\frac{S_1}{L} = .9934$

" " $\frac{E}{L} = .9934$

Percentage from Table, Line A. *-.9919*

(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 = *40.64 x .9919 = - 40.32*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>47.97</i>	<i>1</i>		<i>47.97</i>	<i>60</i>	<i>60.00</i>	<i>1</i>		<i>60.00</i>
1/2 L from A.P. ...	<i>21.35</i>	<i>4</i>		<i>85.40</i>	<i>26.0</i>	<i>26.07</i>	<i>4</i>		<i>121.80</i>
1/2 " ...	<i>5.27</i>	<i>2</i>		<i>10.54</i>	<i>6.67</i>	<i>6.62</i>	<i>2</i>		<i>15.06</i>
Amidships ...		<i>4</i>		<i>0</i>			<i>4</i>		
1/2 L from F.P. ...	<i>10.54</i>	<i>2</i>		<i>21.08</i>	<i>13.40</i>	<i>13.43</i>	<i>2</i>		<i>28.24</i>
1/2 " ...	<i>42.70</i>	<i>4</i>		<i>170.80</i>	<i>53.70</i>	<i>53.72</i>	<i>4</i>		<i>228.64</i>
F.P. ...	<i>95.94</i>	<i>1</i>		<i>95.97</i>	<i>129</i>	<i>120.00</i>	<i>1</i>		<i>128.44</i>
Total ...				<i>431.76</i>		<i>590.62</i>			

Mean actual sheer aft = *Exan*
Mean standard sheer aft

Mean actual sheer forward = *Exan*
Mean standard sheer forward

Length of enclosed superstructure forward of amidships =

" " aft of " =

Height of superstructure *8'-0"*

Mean standard height *7-3.56*

2 1/2 *8.44*

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{158.86}{18} \left(\frac{75-.50}{2} \right) = - 2.21$

Correction on account of mid-ship 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 = *26.29*

Summer freeboard = *2.56*

Moulded draught (d) = *23.73*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{1}{4}$ inches = *5.94*

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ *10555* *10535*

Tons per inch immersion at summer load water line

$T =$ *38.9*

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

= *6.78* *6 3/4*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{687.789}{1.36} = \frac{1469}{1.36}$

Depth Correction ... *2.86*

Deduction for superstructures ... *40.32*

Sheer correction ... *2.21*

Round of Beam correction ...

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc. ...

2.86 *42.53* *39.67*

Summer Freeboard = *30.87*

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

Tropical Fresh Water Line above Centre of Disc ... *323* *12 3/4*

Fresh Water Line " " ... *171* *6 3/4*

Tropical Line " " ... *152* *6*

Line below " " ... *152* *6*

Atlantic Line " " ... *152* *6*

Tropical Fresh Water Freeboard ... *1-6* *458*

Fresh Water " " ... *2-0* *612*

Tropical " " ... *2-0 3/4* *629*

Winter " " ... *3-0 3/4* *693*

Winter North Atlantic " " ...

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway			Superstructure Deck			Freeboard Deck			Hatchways		
Dimensions of Hatchway			No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9
COAMINGS	Height above Deck	...	30"	30"	30"	30"	30"	30"	30"	30"	30"
	Thickness	...	46"	46"	46"	46"	46"	46"	46"	46"	46"
	Stiffeners	...	46"	46"	46"	46"	46"	46"	46"	46"	46"
	Brackets, Stays	...	46"	46"	46"	46"	46"	46"	46"	46"	46"

HATCH BEAMS	Number	...	4	4	4	4	4	4	4	4	4
	Spacing	...	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"
	Scantling and Sketch	...	2"x3"x4"	2"x3"x4"	2"x3"x4"	2"x3"x4"	2"x3"x4"	2"x3"x4"	2"x3"x4"	2"x3"x4"	2"x3"x4"

	Bearing Surface	...	3	3	3	3	3	3	3	3	3
FORE AND AFTERS	Number	...	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Spacing	...	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Unsupported Lengths	...	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Scantling and Sketch	...	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Bearing Surface	...	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
HATCH COVERS	Material	...	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD
	Thickness	...	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	...	...	...	...	...	...	...	...	...	...
	Bearing Surface	...	3	3	3	3	3	3	3	3	3

Spacing of Cleats			16-24"	16-24"	16-24"	16-24"	16-24"	16-24"	16-24"	16-24"	16-24"
Number of Tarpaulins			2	2	2	2	2	2	2	2	2

Particulars of fiddle, funnel and ventilator coamings: — Fiddle and funnel coamings covered by strong steel hinged steel covers. Fiddle and funnel ventilation in efficient condition. Engine room skylights of steel strongly constructed.

Particulars of Flush Bunker Scuttles: —

NONE

Particulars of Companionways: —

One steel companion on superstructure staff passage opening 5'-7" x 2'-4" x 6'-10" leading to crew quarters, door of steel thickness of plating 28". See 13. All strongly constructed. Door capable of being manipulated from both sides.

Particulars of positions on freeboard and superstructure decks: — On superstructure deck, 70 holds 8-20 dia. 30" x 40" 1-17" dia. 2 x 38" C 30" x 10" dia. C 27" x 30" to tunnel. 30" x 40" 2-13" dia. x 32" of lower bunkers. 1-8" dia. x 30" of forepeak. All ventilators in accordance with the Rules closed with work plugs & canvas covers.

Particulars of positions on freeboard, raised quarter, or superstructure decks: — 1. Air pipe to forepeak 2 1/2" dia. 14" 3 1/2" dia. 8" high with safty hole leading to after peak. 2. 16" dia. 16" high leading to No. 5 double bottom, all fitted with manholes & closed by plugs & canvas covers. The remaining air pipes flush with deck-fitted with secured plugs.

Closing Ports: —

NONE

Particulars of Scuppers and Sanitary Discharge Pipes — Scupper pipes discharge overboard above freeboard deck. Ships side valves of closed filler & with storm valve. 1. Five scuppers each side discharge overboard below freeboard deck. Closed by wood plugs. No valves on ship's side.

Particulars of Side Scuttles: —

Side scuttles fitted in way of prop 8" dia. above 7th deck, fitted with double glass substantially constructed 5'-0" high from deck.

Particulars of Guard Rails: —

Bulwark fitted in way of side head & from saloon house to after end of the casing 3'-6" high. Railings supported. Rails fitted from side of saloon casing and from after end of the casing to stern. These rails, stanchions 3'-6" high & spaced 5'-9" apart.

Particulars of Gangways, Lifelines, etc.: —

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	6'-31"	8'-0"	18" x 18"	ONE	2'-7 1/2"	
State position of each freeing port (F. and A. position and height above deck edge)	After Well: — Central / Forward Well: —					
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: —	Closed by Hinged Steel Shutters.					
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	✓	38"	4 x 3 1/2"	30"	Brackets at Top	NONE	✓	8'-0"
Raised Quarter Deck Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead	✓	31"	4 x 3 1/2"	30"	Brackets at Bottom	5' x 3'	18"	8'-0"
Bridge, Forward Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Forecastle Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Superstructure Decks	✓	38"	3 x 3 1/2"	3'-0" to 4'-8"	NIL	5'-6" x 2'	✓	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	38"	3 1/2 x 3 1/2"	40"	NIL	4'-0" x 2'	✓	✓
Deckhouses on Flush Deck Ships	✓	✓	✓	✓	✓	✓	✓	✓

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

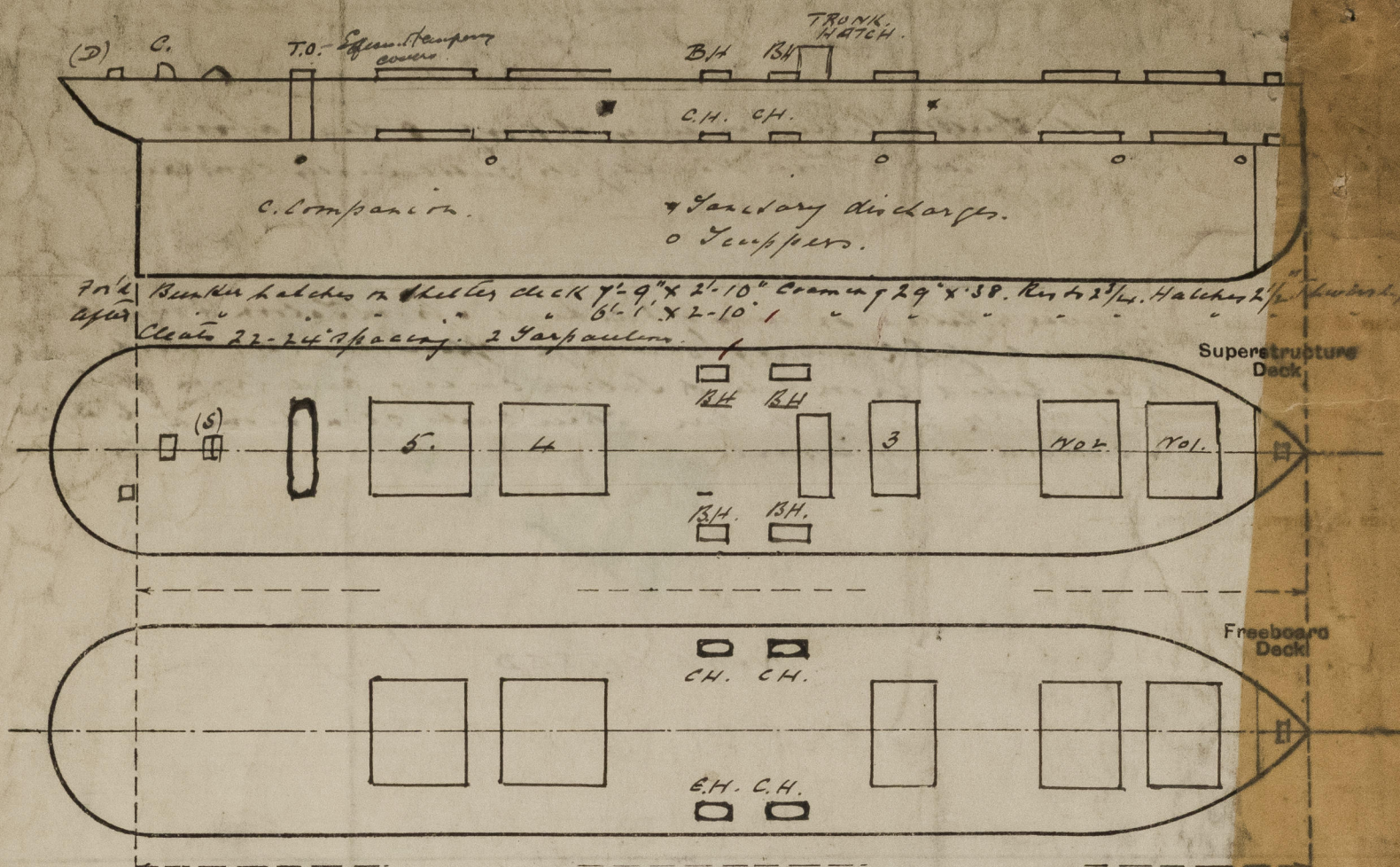
Poop Bulkhead	✓	NONE
Raised Quarter Deck Bulkhead	✓	✓
Bridge, After Bulkhead	✓	Shifting frames full height in riveted chain plates secured by cramps
Bridge, Forward Bulkhead	✓	✓
Forecastle Bulkhead	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	✓
Exposed Machinery Casings on Superstructure Decks	✓	Steel hinged doors capable of being manipulated
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	Do
Deckhouses on Flush Deck Ships	✓	✓

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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangways, and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—



7th Coaling Hatches on 7th deck 6'-4" x 8'-7" Semi circular 9" x 8 1/2 x 1/2" Pl. Coaming 10'-8" x 3'-7" after

all hatches fitted with wood covers 2 1/2" Pl. (thwartship). Cleats 24" spacing Rets 2-2 1/2". 2 Tarpaulins. 1

File hatch on 7th deck: - 3'-0" x 3'-9". Coaming 21" x 38 Pl. Covers 2 1/2" Pl. (thwartship) 1

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

Bearing surface 2 1/2" Cleats 24" spacing 2 Tarpaulins

File hatch 7th deck. 3'-0" x 3'-9". Coaming 12" x 38. Covers 2 1/2" Pl. (thwartship)

Bearing surface 2 1/2" Cleats 24" spacing 2 Tarpaulins. 1

Trimming Hatches 2' x 3' also 2'-1" x 3'-6" Coaming 6" x 48 Pl. Rets 3" Hatches 2 1/2" Pl. Cleats 18-24" spacing. Two Tarpaulins. 1

(S) Skylight to crew quarters. Coaming 9" x 31" Size 26' x 8'-9". Closed by strong wood covers. 2 Tarpaulins. Cleats 16" spacing. 1

(D) Borty hatch 2'-7" x 2'-8". C 24 Pl. x 31 Pl. Cleats 22". Closed by strong wood covers of substantial construction & 2 Tarpaulins (Good room)

Builder's name and yard number Green's T. & S. D. Co. Ltd.

Name of sister ships

Owners Ordin & Harford. S. S. Co. Ltd.

Fee £ 12 : 15 : 0.

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