

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

GLASGOW REPORT No. 52268

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Liverpool</u>	
having <u>Raised Quarter deck connected to Bridge</u> <u>and Forecastle disconnected</u>					Date of Survey <u>31. 3. 32.</u>	
(Type of Superstructures.)					Name of Surveyor <u>M. Macleod.</u>	
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification	
<u>"LADY DOROTHY."</u>	<u>British Glasgow</u>	<u>137808</u> <u>26233</u>	<u>578</u>	<u>1916/3</u>	<u>+100A1</u>	
Moulded Dimensions: Length <u>165.1</u> Breadth <u>27.0</u> Depth <u>13.41</u>						
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>1025</u> tons						
Coefficient of fineness for use with Tables <u>.706</u>						
Depth for Freeboard (D)			Depth correction		Round of Beam correction	
Moulded depth <u>13.41</u>			(a) Where D is greater than Table depth (D - Table depth) R = <u>(13.44 - 11.01) x .27 = +3.09</u>		Moulded Breadth (B) <u>27.0</u>	
Stringer plate <u>.033</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>6.48</u>	
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <u>✓</u>			If restricted by superstructures		Ship's Round of Beam = <u>9.6</u> <u>6.75</u>	
Depth for Freeboard (D) = <u>13.44</u>					Difference <u>.27</u>	
					Restricted to	
					Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>.27</u> $\left(1 - \frac{.7338}{1} \right) =$ <u>-.02</u>	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed						Standard Height of Superstructure <u>6.00</u>
" overhang						" " R.Q.D. <u>3.434</u>
R.Q.D. enclosed	<u>84.81</u>	<u>84.81</u>	<u>3.75</u>	<u>✓</u>	<u>84.81</u>	Deduction for complete superstructure <u>22.51</u>
" overhang						Percentage covered $\frac{S}{L} =$ <u>73.38</u>
Bridge enclosed	<u>13.08</u>	<u>13.08</u>	<u>7.00</u>	<u>✓</u>	<u>13.08</u>	" " $\frac{S_1}{E} =$ <u>73.38</u>
" overhang aft						" " $\frac{E}{L} =$ <u>73.38</u>
" overhang forward						Percentage from Table, Line A. <u>67.16</u>
F'cle enclosed	<u>25.38</u>	<u>23.26</u>	<u>6.75</u>	<u>✓</u>	<u>23.26</u>	(corrected for absence of forecastle (if required))
" overhang	<u>23.26</u>					Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required) <u>✓</u>
Tonnage opening aft						Deduction = <u>22.51</u> x <u>.6716</u> = <u>-15.12</u>
" " forward						
Total	<u>121.15</u>	<u>121.15</u>			<u>121.15</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	<u>26.51</u>	1		<u>26.51</u>	<u>30"</u>	<u>26.51</u>	1		<u>26.51</u>	Mean actual sheer aft = <u>excess</u> .
$\frac{1}{4}$ L from A.P.	<u>11.79</u>	4		<u>47.16</u>	<u>14"</u>	<u>11.79</u>	4		<u>47.16</u>	Mean actual sheer forward = <u>deficient</u> .
$\frac{2}{4}$ L "	<u>2.92</u>	2		<u>5.84</u>	<u>4"</u>	<u>2.92</u>	2		<u>5.84</u>	Mean standard sheer forward
Amidships	<u>-</u>	4		<u>-</u>	<u>-</u>	<u>-</u>	4		<u>-</u>	Length of enclosed superstructure forward of amidships = <u>.093L</u>
$\frac{2}{4}$ L from F.P.	<u>5.83</u>	2		<u>11.66</u>	<u>4"</u>	<u>5.28</u>	2		<u>10.56</u>	" " aft of " = <u>.500</u>
$\frac{1}{4}$ L "	<u>23.59</u>	4		<u>94.36</u>	<u>20"</u>	<u>21.13</u>	4		<u>84.52</u>	
F.P.	<u>53.02</u>	1		<u>53.02</u>	<u>48"</u>	<u>48.00</u>	1		<u>48.00</u>	
Total				<u>238.57</u>					<u>222.59</u>	
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ <u>$\frac{15.98}{18} \left(.75 - \frac{.3669}{1} \right) = +.34$</u>										
If limited on account of midship superstructure. <u>✓</u>										
If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. <u>✓</u>										

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 17.19 Ft.
Summer freeboard = 4.27
Moulded draught (d) = 12.92

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3.23 = 3 $\frac{1}{4}$ Addition for Winter North Atlantic Freeboard (if required = 2.0

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 1188

Tons per inch immersion at summer load water line

T = 8.65Deduction = $\frac{\Delta}{40T}$ inches = 3.43 = 3 $\frac{1}{2}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{706+68}{1.36} = \frac{1.386}{1.36}$

	+	-
Depth Correction	<u>3.09</u>	<u>-</u>
Deduction for superstructures	<u>-</u>	<u>15.12</u>
Sheer correction	<u>34</u>	<u>-</u>
Round of Beam correction	<u>-</u>	<u>.02</u>
Correction for Thickness of Deck amidships	<u>-</u>	<u>-</u>
Other corrections, scantlings, etc.	<u>45.00</u>	<u>-</u>
	<u>48.43</u>	<u>15.14</u>

Summer Freeboard = 51.24SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck: -

Tropical Fresh Water Line above Centre of Disc	<u>6$\frac{1}{2}$</u>
Fresh Water Line " "	<u>3$\frac{1}{2}$</u>
Tropical Line " "	<u>3$\frac{1}{2}$</u>
Winter Line below " "	<u>3$\frac{1}{2}$</u>
Winter North Atlantic Line " "	<u>5$\frac{1}{2}$</u>

Tropical Fresh Water Freeboard	<u>4' - 3$\frac{1}{2}$"</u>
Fresh Water " "	<u>3' - 8$\frac{1}{2}$"</u>
Tropical " "	<u>3' - 11$\frac{1}{2}$"</u>
Winter " "	<u>4' - 0"</u>
Winter North Atlantic " "	<u>4' - 6$\frac{1}{2}$"</u>

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		Main Deck N° 1.	R.Q.D. N° 2.	R.Q.D. N° 3.	Coal Stowage on Casings				
Dimensions of Hatchway		27' 6"	22' x 14'	4' x 5' 6"	9' x 5' 6"				
COAMINGS	Height above Deck	36"	30"	27 1/2"	30"				
	Thickness	50"	44"	30"	36"				
	Stiffeners	40"	40"	30"	36"				
	Brackets, Stays	none	none	none					
HATCH BEAMS	Number	5	4						
	Spacing	12' 3" 0.1' remainder 4' 8 1/2"	4' 33"						
FORE AND AFTERS	Scantling and Sketch	2 1/2" x 3 1/4"	Same as N° 1.	none	none				
	Bearing Surface	3 1/2"							
HATCH COVERS	Material	wood							
	Thickness	3"	3"	3"	3"				
	How fitted	3" aff.	3" aff.	3" aff.	3" aff.				
	Bearing Surface	3"	3"	2 3/4"	2 3/4"				
Spacing of Cleats		22"	24"	23"	23"				
Number of Tarpaulins		2	2	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:—

Stokehold grating covered by strong steel hinged cover. ✓
 Fiddle and Funnel vents in efficient condition. ✓
 Engine Room Skylight of wood. Strongly constructed. ✓

Particulars of Flush Bunker Scuttles:—

One on port & starboard side of Raised quarter deck of best form of heavy substantial construction 21" dia. secured by chain. ✓

Particulars of Companionways:—

None. ✓

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

1 Vent on Fore Head 8" dia. Coaming 36" x 1/4" led to G.L. Space. ✓
 2 Vents in Forward Well, on Fore Deck. 12" dia. Coamings 38" x 1/4" led to Hold. ✓
 1 Vent on R.Q.D. immediately behind Engine Casing 12" dia. Coaming 18 1/2" x 1/4" led to Hold. ✓
 1 Vent on do at aft end. 12" dia. Coaming 38 1/2" x 1/4" led to Hold. ✓
 1 Vent on do 6 1/2" dia. Coaming 36" x 1/4" led to Tunnel. ✓
 1 Swan neck Vent 3" dia. 6" high. led to Store in aft peak. — Wood plugs & canvas covers fitted. ✓

Vents constructed in accordance with Rule reqts.

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

1 C.I. air pipe on Fore Head immediately behind Stern 3" high x 3" dia. led to Fore peak Tank. ✓
 1 C.I. " " on R.Q.D. immediately behind Engine Casing 5 1/4" high x 3" dia. led to D.H. Tank. ✓
 1 C.I. " " on R.Q.D. at aft end. 30" x 2 1/2" high x 2 1/2" dia. led to aft peak Tank. ✓
 Wood plugs. canvas covers or screw taps fitted.

Particulars of Gangway Cargo and Coaling Ports:—

None.



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Particulars of Scuppers and Sanitary Discharge Pipes —

No Scuppers below Freeboard Deck ✓
2. hot. discharges pipes fitted with gunmetal N.R. Valves on ships side. ✓
(1 in Fore & 1 in R.R. along Engine Room.) ✓

Particulars of Side Scuttles:

No Scuttles below Freeboard Deck ✓
Side Scuttles above Deck fitted with hinged deadlights ✓
All Scuttles of substantial construction. ✓

Particulars of Guard Rails:—

Guard Rails on Deck 3.0" high. 2 rods. stanchions 4.9" apart. ✓
" " Bridge 3.0" 1 rod & 1 wood Rail on Top. Stanchions 4.0" apart. ✓
Bulwark on R.R.D. & Well 3.0" & 3.9" high. Stays 6.0" apart. ✓

Particulars of Gangways, Lifelines, etc.:—

Gangway on top of Hatch from Bridge to Fore ✓
Stanchions 3.0" high. 6 ft apart. 1 wire. ✓

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
			33" x 15"	1	17.13	
After Well ...	84.81	3.0"	33" x 22" 33" x 20"	1 2	5.05 17.54 9.20 14.23	17.00 φ.
Forward Well ...	41.83	3.9"	36" x 21" 36" x 22½"	1 1	5.25 5.70 } 10.95	10.70 φ.

State position of each freeing port ... { After Well:— from aft end of Bridge to fore end of ports 11.4"; 36.8" and 61.5" — 8" above deck edge. ✓
(F. and A. position and height above deck edge) { Forward Well:— from fore end of Bridge to aft end of port: 1.4" and 19.4" — 12" " " " ✓
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Shuttered and bars or rails. ✓

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

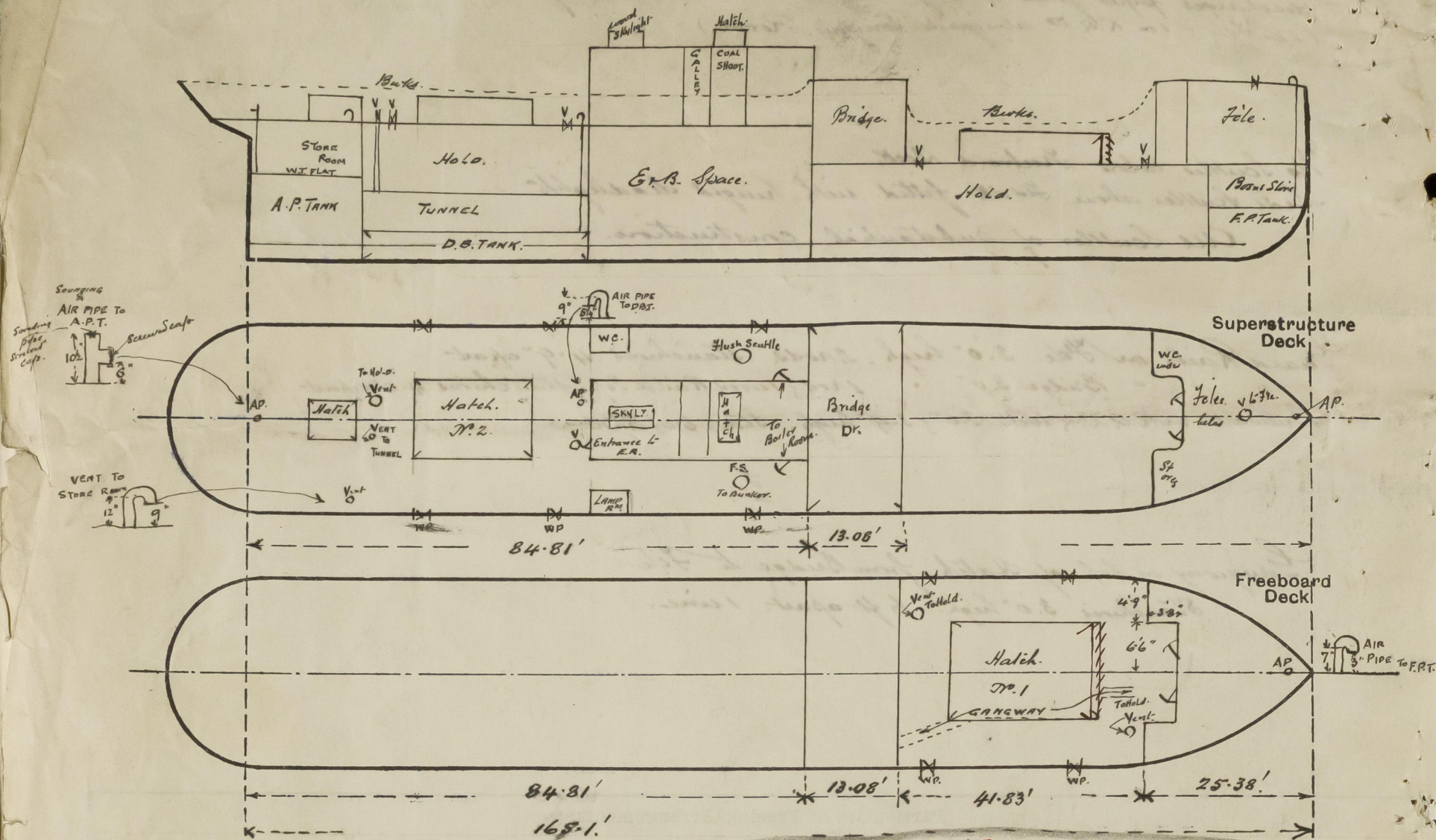
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ...								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	26	26	2 diaphragms & 2 coaks		BLK.	none		
Bridge, Forward Bulkhead ...	30	26	3½ x 3 x 40 Bq.	30"	BLK. 15 x 9½"	none		
Forecastle Bulkhead ...	26	26	3 x 2½ x 30 4.	24/28"	✓	2 off 4'0" x 23"	19½"	
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	34	26	2½ x 2½ x 25"	30"	✓	3 off 4' x 22"	19½"	6'6"
Exposed Machinery Casings on Superstructure Decks ...								
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 ...	none
Bridge, After Bulkhead ...	none
Bridge, Forward Bulkhead ...	none
Forecastle Bulkhead ...	2 hardwood hinged doors 1½" thick operated & secured from both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	3 steel hinged doors. do.
Exposed Machinery Casings on Superstructure Decks ...	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	✓
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, 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:—



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

No timber assignment.

This vessel is going this Special Survey No. 1 at this time including examination of bottom etc. Report will be forwarded in due course.

June 1936. No. 1 Hatchway has been shortened in length at fore end by 1'-10" The hatch webs remaining in original position, thus reducing the spacing of webs in forward bay by 1'-10".

Wul.

Builder's name and yard number

Names of sister ships

Owners *Nobel's Explosives Co. Ltd.*

Fee £ *6 : 16 : 0*
12.10/-

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