

WRECK SECTION

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. **50838**

(For London Office only.)

140
15 AUG 1932

GLASGOW REPORT No. 52782

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *Raised quarter deck connected to bridge and fore-castle disconnected.*

(Type of Superstructures.)

Ship's Name *"Lady Anstruther"* Nationality and Port of Registry *British Glasgow* Official Number *146285* Gross Tonnage *527* Date of Build *1922-2.*

Moulded Dimensions: Length *167'* Breadth *26.5'* Depth *12.9 1/4"*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *990* tons

Coefficient of fineness for use with Tables *7/9*

Port of Survey *Shorn*Date of Survey *5. 8. 32*Name of Surveyor *M. Macleod.*Particulars of Classification *+100 A1.*

S.S. Inv. No. 2-30.

Depth for Freeboard (D) *12.81*

Moulded depth ... *12.81*

Stringer plate ... *0.3*

Leathing on exposed deck

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

Depth for Freeboard (D) = *12.84*

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R = $(12.84 - 11.13) \cdot 1.284 = + 2.196$

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

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) *26.5*

Standard Round of Beam = $\frac{B \times 12}{50} = 6.36$

Ship's Round of Beam = *7*

Difference *0.64*

Restricted to

Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.64^2}{4} (1 - .7932) = .024$

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 ...	<i>93.98</i>	<i>93.98</i>	<i>4'0"</i>		<i>93.98</i>
overhang ...					
Bridge enclosed ...	<i>9.16</i>	<i>10.49</i>	<i>7'6"</i>		<i>10.49</i>
overhang aft ...	<i>10.49</i>				
overhang forward ...	<i>24.87</i>	<i>41</i>			
Fore-castle enclosed ...	<i>31.06</i>	<i>24.87</i>	<i>6'9"</i>		<i>24.87</i>
overhang ...	<i>6.1935</i>	<i>3.09</i>			<i>3.09</i>
Trunk aft ...					
forward ...					
Tonnage opening aft ...					
forward ...					
Total ...	<i>135.53</i>	<i>132.35</i>			<i>132.35</i>

Standard Height of Superstructure *6.0*

 " " R.Q.D. *3.45*

Deduction for complete superstructure *22.70*

Percentage covered $\frac{S}{L} = 81.16$

 " " $\frac{S_1}{L} = 79.32$

 " " $\frac{E}{L} = 79.32$

Percentage from Table, Line A. *74.46*

(corrected for absence of fore-castle (if required))

Percentage from Table, Line B.

(corrected for absence of fore-castle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = $22.70 + .7446 = -16.98$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>26.70</i>	<i>1</i>		<i>26.70</i>	<i>36</i>	<i>36.0</i>	<i>1</i>		<i>36.0</i>
1/4 L from A.P. ...	<i>11.88</i>	<i>4</i>		<i>47.52</i>	<i>15 1/4</i>	<i>15.8</i>	<i>4</i>		<i>63.2</i>
1/2 L " ...	<i>2.94</i>	<i>2</i>		<i>5.88</i>	<i>4</i>	<i>3.94</i>	<i>2</i>		<i>7.88</i>
Amidships ...		<i>4</i>					<i>4</i>		
3/4 L from F.P. ...	<i>5.87</i>	<i>2</i>		<i>11.74</i>	<i>6 1/4</i>	<i>6.30</i>	<i>2</i>		<i>12.60</i>
1/4 L " ...	<i>23.77</i>	<i>4</i>		<i>95.08</i>	<i>25 1/4</i>	<i>25.28</i>	<i>4</i>		<i>101.12</i>
F.P. ...	<i>53.40</i>	<i>1</i>		<i>53.40</i>	<i>58 1/2</i>	<i>58.50</i>	<i>1</i>		<i>58.50</i>
Total ...				<i>240.32</i>					<i>300.04</i>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - S}{2L} \right) = \frac{240.32 - 300.04}{18} \left(\frac{75 - 4.058}{2 \cdot 167} \right) = -1.14$

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 = *16.84*Summer freeboard = *4.21*Moulded draught (d) = *12.63*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *3.16* = *3 1/4*Addition for Winter North Atlantic Freeboard (if required) = *2"*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ *1176*

Tons per inch immersion at summer load water line

 $T =$ *8.77*Deduction = $\frac{\Delta}{40T}$ inches $=$ *3.35* $=$ *3 1/4*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{719 + .68}{1.36} = 1.399$ $\frac{1.36}{1.36} = 1$ Depth Correction ... *2.29*Deduction for superstructures ... *16.92*Sheer correction ... *1.14*Round of Beam correction ... *.03*Correction for Thickness of Deck amidships ... *48.00*

Other corrections, scantlings, etc. ...

Summer Freeboard = $50.20 + 18.075 + 32.135 = 100.41$ SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, *Wood, Steel, Deck*:-

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

Fresh Water Line " " ... *3 1/4*

Tropical Line " " ... *2 1/2* LIMITED

Winter Line below " " ... *3 1/4*

Winter North Atlantic Line " " ... *5 1/4*

Tropical Fresh Water Freeboard ... *4 - 2 1/2*

Fresh Water " " ... *3 - 10 3/4*

Tropical " " ... *3 - 11 1/4*

Winter " " ... *4 - 2* LIMITED

Winter North Atlantic " " ... *4 - 5 3/4*

Winter North Atlantic " " ... *4 - 7 3/4*

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MARKING FORM

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A hand-drawn diagram showing a box and its side profile. The box is a simple rectangle with a small square on top. To its right, a vertical arrow indicates a height of $7\frac{1}{2}$ ". Below the box, a side profile of the box is drawn. It shows a vertical line on the left, a horizontal line at the top, and a diagonal line sloping down to the right. A vertical arrow to the left of the vertical line indicates a height of $1'-6"$. A horizontal arrow pointing to the top edge of the vertical line is labeled $12"$ girders. The diagonal line is labeled Slack Side.

Stokehold grating covered by strong steel hinged covers.
Fiddley and Bunnel Ventilators in efficient condition.
Engine room skylight of steel strongly constructed

None.

Steel deck house on Bridge deck. Entrance to officers quarters in Inland Bridge from deckhouse. 4'-8" x 4'-11" 16" coaming. 1 1/2" hardened hinged doors operated from both sides.

Ventilators constructed in accordance with rule requirements.
word plugs and canvas covers supplied.

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

1-C.S. air pipe	on Fore deck. immediately behind Stem.	6½" high. x 3" dia.	led to Fore peak Tank.
1. C.S. "	on Fore deck. under Fore.	36" high. 3½"	led to No 1 D.B. Tank.
2. C.S. "	on R. Q. deck.	26½" high. 3"	led to No 2 D.B. Tank.
1 C.S. "	" " " "	36" high. 2½"	" " A.P. Tank.
wood plugs and covers supplied.			

None.

Particulars of Scuppers and Sanitary Discharge Pipes:—

No Scuppers under Freeboard deck.
Sanitary discharges from spaces above Freeboard deck fitted with gunmetal storm valves on ships side.

Particulars of Side Scuttles:—

Side Scuttles below Freeboard deck fitted with hinges dead-light.
Side Scuttles in Fore & Bridge space. no deadlights.

Particulars of Guard Rails:—

Guard rails on Fore 3.0' high - 2 rails - Stanchions 5' apart.
Bridge. Steel Deck. 34" high apparently supported.
Well and Raised 2' deck Bulwarks apparently supported.
(4.5" & 3.0" high)

Particulars of Gangways, Lifelines, etc.:—

Gangway & lifeline fitted from Bridge to Forecastle.
Top of Hatch forming gangway stanchions 3.0' above Hatch top. 9ft apart.
fitted into permanent sockets riveted to Hatch side girders.
Life line with lashings at each end.

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	93.98.	3.0"	3.0" x 1.6" door 3.3" x 1.6" " 2.0" x 6" slot	3 1 1	19.375	19.18.8
Forward Well	32.80.	4.5"	3.3" x 1.7" door	2	10.24	10.9.78

State position of each freeing port After Well:— 7.6" 18.0" 34.0" 39.0" 76.6" from aft end of Bridge to fore side of post. 48" tall.
(E. and A. position and height above deck edge) Forward Well:— 1.3" - 12.0" from fore end of Bridge to aft end of post. 9" tall.
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Balanced hinges doors.

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

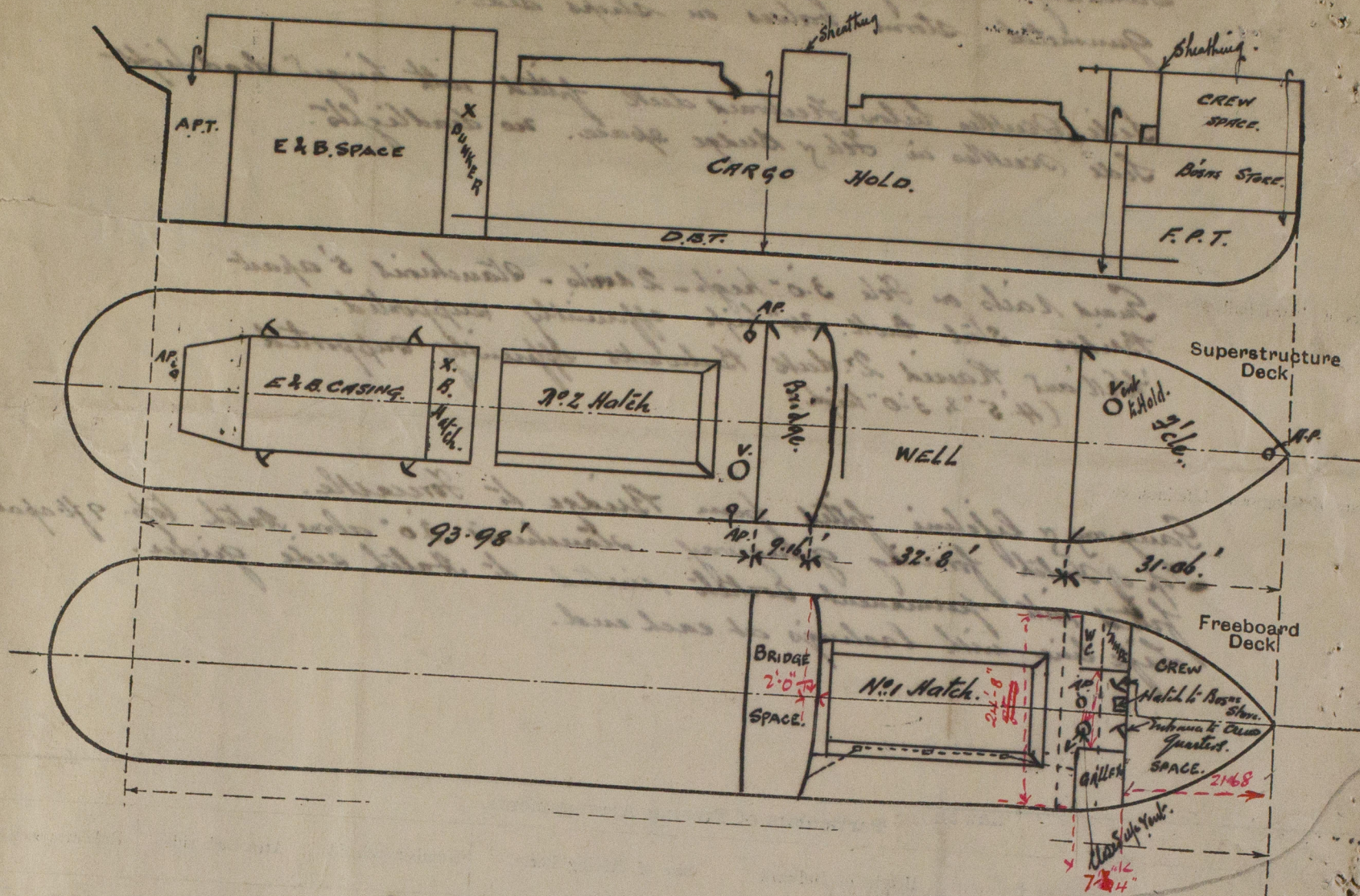
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead								
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	Not available.							
Bridge, Forward Bulkhead	28"	24"	3 x 3 x .32" 2 1/2 x 2 1/2 x .32"	24"	Stk's	none.		
Forecastle Bulkhead	6 1/2"	5 1/2"	2 1/2 x 2 1/2 x 5/16	24"	none	22 4.6 x 2.0"	18"	-
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	4/16	5/16	2 1/2 x 2 1/2 x 5/16	30"	none	Deck side 4.6 x 1.11"	18"	7.0"
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 no openings
Bridge, After Bulkhead	None
Bridge, Forward Bulkhead	" no openings
Forecastle Bulkhead	Two hardwood hinged doors. 1 1/2" thick. Operated & secured from both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Two steel hinged doors on each side. 3/16" thick, operated & secured from both sides.
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships	

Lady Anstruther

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:-



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

General Trade. Coasting & Continental
 Timber freeboard not required.
 Survey held in Dry dock - & confirmed to examination
 of the means of closing the openings in deck & sides of
 vessel.

The following Particulars Supplied by Builder this Local Surveyor
 Moulded displ. at a moulded draft = 85% ND = 990 tons.
 External displ. at 13 ft extreme draft = 1152 tons. - Tons per inch 8.75.
 " " 12 ft. " = 1047 tons. - " " 8.65.

Builder's name and yard number *Dublin Shipbuilders. Ltd. Dublin.*

Names of sister ships

Owners *Nobels Explosives Co. Ltd.*

Fee £ *6 : 16 : 9.* Received by me

Expenses. *10/-*



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