

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

No. 100211

Computation of Freeboard for Steamer, Sailing Ship, Tanker

Having Forecastle, Bridge & Raised Quarter Deck

Port of Survey Liverpool

Date of Survey April 1932

Name of Surveyor Alfred Stoop

Particulars of Classification 100 A1

(Type of Superstructures) Belfast + B.T. 6/6/34

Ship's Name LEANDROS  
FLESWICK

Nationality and Port of Registry British  
Liverpool

Official Number 102470

Gross Tonnage 610  
648

Date of Build 1900-3

Moulded Dimensions: Length 179-0 Breadth 27-9 3/4 Depth 13-10 1/2

Moulded displacement at moulded draught = 85 per cent. of moulded depth 12 02 tons

Coefficient of fineness for use with Tables 718

Depth for Freeboard (D) 13-10 1/2

Moulded depth ... .. 13-10 1/2

Stringer plate ... .. 0.04

Sheathing on exposed deck

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

Depth for Freeboard (D) = 13.91

Depth correction

(a) Where D is greater than Table depth  
(D - Table depth) R =  $(13.91 - 11.93) 1.377$   
+ 2.73

(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) 27-9 3/4

Standard Round of Beam =  $\frac{B \times 12}{50} = 6.67$

Ship's Round of Beam = 7 1/2

Difference .83

Restricted to

Correction =  $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.83}{4} (.2265) = .05$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Peep enclosed ...					
overhang ...					
R.Q.D. enclosed ...	<u>101-0</u>	<u>101.00</u>	<u>4-0</u>		<u>101.00</u>
overhang ...	<u>NIL</u>				
Bridge enclosed ...	<u>18-33</u>	<u>10.33</u>	<u>7-0</u>		<u>10.33</u>
overhang aft ...	<u>NIL</u>				
overhang forward ...	<u>NIL</u>				
Fore enclosed ...	<u>NIL</u>				
overhang ...	<u>36-0</u>	<u>26.77</u>	<u>7-0</u>		<u>26.77</u>
Trunk aft ...					
forward ...					
Tonnage opening aft ...					
forward ...					
Total ...	<u>147.33</u>	<u>138.10</u>			<u>138.10</u>

Standard Height of Superstructure 6.00

" " R.Q.D. 3.53

Deduction for complete superstructure 23.9

Percentage covered  $\frac{S}{L} = .8232$

" "  $\frac{S_1}{L} = .7715$

" "  $\frac{E}{L} = .7715$

Percentage from Table, Line A. .7180  
(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 = 23.9  $\times .7180 = -17.16$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>27.90</u>	1		<u>27.90</u>	<u>35.5</u>	<u>36.50</u>	1		<u>27.90</u>
1/4 L from A.P. ...	<u>12.42</u>	4		<u>49.68</u>	<u>15.0</u>	<u>14.62</u>	4		<u>49.68</u>
3/4 L " ...	<u>3.07</u>	2		<u>6.14</u>	<u>3.75</u>	<u>3.65</u>	2		<u>6.14</u>
Amidships ...		4					4		
3/4 L from F.P. ...	<u>6.14</u>	2		<u>12.28</u>	<u>7.0</u>	<u>6.22</u>	2		<u>12.44</u>
1/4 L " ...	<u>24.84</u>	4		<u>99.28</u>	<u>25.5</u>	<u>24.88</u>	4		<u>99.52</u>
F.P. ...	<u>55.80</u>	1		<u>55.80</u>	<u>54.0</u>	<u>54.00</u>	1		<u>54.00</u>
Total ...				<u>251.08</u>					<u>249.68</u>

Mean actual sheer aft = Excess

Mean standard sheer aft

Mean actual sheer forward = Deficient .990

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = 12

" " aft of " = .50

Shear from

6.14 - 3 18.42 - 6.22 18.66

24.84 - 3 74.52 - 24.88 74.64

55.80 - 1 55.80 - 54.00 54.00

148.74 147.30

Height of raised quarter deck 4-0

Standard height 3-6 3/4

5.68

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{.4}{18} (.75 - .4116) = .03$

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 = 17.91 Ft.

Summer freeboard = 4.48

Moulded draught (d) = 13.43

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 3.36 3/4

Addition for Winter North Atlantic Freeboard (if required) = 2

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 1390$

Tons per inch immersion at summer load water line

$T = 9.95$

Deduction =  $\frac{\Delta}{40 T}$  inches = 3.49

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{718 + 66}{1.36} = 1.398$

Depth Correction ... .. 2.73

Deduction for superstructures ... .. 17.16

Sheer correction ... .. .03

Round of Beam correction ... .. .05

Correction for Thickness of Deck amidships ... .. 48.00

Other corrections, scantlings, etc. ... ..

50.76 17.21 + 33.55

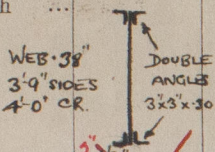
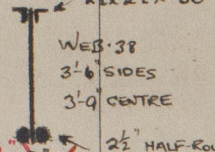

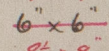
Summer Freeboard = 53.75

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

Tropical Fresh Water Line above Centre of Disc ...	<u>1 3/4</u>	Tropical Fresh Water Freeboard ...	<u>3-11</u>
Fresh Water Line " " ...	<u>3 1/2</u>	Fresh Water " " ...	<u>4-2 1/4</u>
Tropical Line " " ...	<u>3 1/2</u>	Tropical " " ...	<u>4-2 1/2</u>
Winter Line below " " ...	<u>3 1/4</u>	Winter " " ...	<u>4-1 1/4</u>
Winter North Atlantic Line " " ...	<u>5 1/4</u>	Winter North Atlantic " " ...	<u>4-1 1/4</u>



## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway			N <sup>o</sup> 1 FBD DK	N <sup>o</sup> 2 R.Q. DK			COAL HATCH TO SADDLE- BACK ON CASING TOP		
Dimensions of Hatchway			26'9" x 15'6"	28'5" x 15'6"			15'10" x 7'6"		
COAMINGS	{	Height above Deck	3'9"	3'6"			9"		
		Thickness	{	Sides	.35	.35	.30		
				Ends	.40	.35	.30		
		Stiffeners	6 x 3 L	5 x 2 1/2 L	NONE				
		Brackets, Stays	2	2			NONE		
HATCH BEAMS	{	Number	2	2					
		Spacing	129" & 109"	132"					
		Scantling and Sketch							
		Bearing Surface	3' x 1/2"	3' x 2"	2 1/2' HALF ROUNDS.				
FORE AND AFTERS	{	Number	3	3					
		Spacing	46 1/2"	47"					
		Unsupported Lengths	123 & 103"	126"					
		Scantling* and Sketch							
		Bearing Surface	3"	3"					
HATCH COVERS	{	Material	PINE	PINE			PINE		
		Thickness	2 1/2"	2 1/2"			2 1/2"		
		How fitted	ATHW.	ATHW.			F & A.		
		Bearing Surface	1 1/2"	2 1/2"			1 1/2"		
Spacing of Cleats			4	4			24"		
Number of Tarpaulins			3	3			1		

\* 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 fiddley, funnel and ventilator coamings :—

Fidley and funnel ventilators are in efficient condition.  
 Stokchold gratings covered by strong steel hinged covers.  
 Engine skylight is of teak, strongly constructed.

## Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways :—

one strong steel companion under Fcl'd dle (extending from Fbd to Fcl'd dle.) ✓  
Access to crew space on fore peak tank top. ✓  
Hinged solid wood door 60" x 24" x 13" sill operated both sides. ✓

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

- 1 VENT ON FOLE DK TO CREW ACCOMM ON FORE PEAK TOP. 9" DIA - COAMING 30' x .25"  
1 " " F.B'D " " FORE HOLD 9" DIA - COAMING 36' x .25  
1 " " R.Q. DK " AFTER " 9" " " 36' x .25

THERE ARE WOOD PLUGS & CANVAS COVERS ON BOARD FOR ALL VENTS.

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

- 1 AIR PIPE ON FB'D, DK.  $3\frac{1}{2}$ " DIA. CI ~~36"~~<sup>8</sup> HIGH LED TO FORE PEAK TANK.  
 " " " "  $3\frac{1}{2}$ " " ~~36"~~<sup>8</sup> - - DOUBLE BOTTOM TANK.  
 2 " " " R.Q., DK. 4" " ~~36"~~<sup>7</sup> " " " "  
 1 " " " " (INSIDE ENGRS. ACCOMM.)  $1\frac{1}{2}$ " DIA. CI 4" HIGH. LED TO AFT PEAK TANK.

brood plugs provided for  
closing air pipes

Particulars of Gangway Cargo and Coaling Ports :—

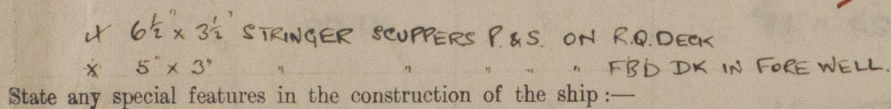
Howe







Fleswick



For each

$$\frac{L}{T_0} = \frac{17.9}{18.1} \times 99 = \frac{17.72}{9.05}$$
$$\frac{L}{T_0} = \frac{36.0}{26.77}$$

85% mld lphm •	11.89
Kul	.21
	<hr/> 12.00

~~$$\Delta \text{ at } 13' = 1318 \quad \text{TP1 } 9.9$$

$$\Delta \text{ at } 12' \quad 1210 \text{ mll.}$$


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$$1204 \text{ mll.}$$~~

Builder's name and yard number *Ailsa SBC* *Nº 85.*

Names of sister ships

Owners Belfast, Mersey & Manchester S.S. Co<sup>o</sup>/Ld. (J. J. Mack & Sons Mgrs)

Fee £ 6 : 16 : 0

Received by me