

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

GRK REPORT NO 24564

Ship's Name "FLYING FOAM"	Official Number 137831	Nationality and Port of Registry BRITISH GLASGOW	Gross Tonnage 217	Date of Build 1917	Port of Survey GREENOCK
Moulded Dimensions: Length 115' 0" Breadth 24' 0" Depth 13' 6" (AMIDSHIPS)					Date of Survey 10/1/52
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 464 tons					Surveyor's Signature <i>Paul</i>
Coefficient of fineness for use with Tables 68 (Actual 512)					Particulars of Classification B.5* TOWING PURPOSES

DEPTH FOR FREEBOARD (D). **13.50**

Moulded depth ... **13' 6"**

Stringer plate ... **12/40"** **12/40"** **.03**

Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) = \frac{51.33}{115.0} \times \frac{2.75}{12} = .10$

Depth for Freeboard (D) = **13.63**

DEPTH CORRECTION.

(a) Where D is greater than Table depth
(D - Table depth) R = **(13.63 - 13.67) .885 = + 5.27"**

(b) Where D is less than Table depth (if allowed)
(Table depth - D) R = **5.96"**

If restricted by superstructures ☒

ROUND OF BEAM CORRECTION.

Moulded Breadth (B) **24.00'**

Standard Round of Beam = $\frac{B \times 12}{50} = \frac{24.00 \times 12}{50} = \mathbf{5.76"} \mathbf{6"} \mathbf{+ .24"}$

Ship's Round of Beam **6"**

Difference **+ .24"**

Restricted to **Diff**

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.24}{4} = \mathbf{.06"}$

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 ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...					

Standard Height of Superstructure _____

" " R.Q.D. _____

Deduction for complete superstructure _____

Percentage covered $\frac{S}{L} = \frac{S_1}{L} = \frac{E}{L} = \mathbf{N.L.}$

Percentage from Table, Line A.
(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 = **N.L.**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	21.50	1	21.50	13"	13.00	1	13.00
1/4 L from A.P. ...	9.565	4	38.26	5 1/2"	5.50	4	22.00
1/2 L " ...	2.365	2	4.73	0"	0	2	0
Amidships ...	-	4	-	0"	-	4	-
3/4 L from F.P. ...	4.73	2	9.46	6 1/2"	4.84	2	9.68
1/4 L " ...	19.13	4	76.52	24"	19.42	4	77.68
F.P. ...	43.00	1	43.00	51"	43.48	1	43.48
Total ...			193.47				165.84

Mean actual sheer aft = **Deficient 51.49**

Mean standard sheer aft =

Mean actual sheer forward = **Excess**

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = **Deficient Sheers**

" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{27.63}{18} \times .75 = \mathbf{+ 1.15"}$

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 = **13.53'**

Summer freeboard = **1.34'**

Moulded draught (d) = **11.99'**

Keel allowance = **5.42'**

Extreme draught = **12.41'**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **2.99 = 3"**

Addition for Winter North Atlantic Freeboard (if required) = **5"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line $\Delta = \mathbf{510 \text{ TONS}}$

Tons per inch immersion at summer load water line $T = \mathbf{5.1 \text{ TONS}}$

Deduction = $\frac{\Delta}{40 T}$ inches = **2.50"**

= **2 1/2"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... **5.27**

Deduction for superstructures ... **1.15**

Sheer correction ... **.06**

Round of Beam correction **Woods**

Correction for Thickness of Deck amidships ... **1.20**

Other corrections, scantlings, etc. ...

+	-	
5.27	-	13.23
-	-	13.23
1.15	-	
-	.06	
-	1.20	
-	-	
6.42	1.26	+ 5.16
		Summer Freeboard = 18.39

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

Tropical Fresh Water Line above Centre of Disc **NOT ASSIGNED.**

Fresh Water Line " " **2 1/2"**

Tropical Line " " **NOT ASSIGNED.**

Winter Line below " **3"**

Winter North Atlantic Line " " **NOT ASSIGNED.**

Tropical Fresh Water Freeboard

Fresh Water " "

Tropical " "

Winter " "

Winter North Atlantic " "

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Actual Shear aft	13.00 1	13.00 ✓	Standard Shear aft	21.50 1	21.50 ✓
	5.50 3	16.50		9.565 3	28.695 ✓
	0 3	0		2.365 3	7.095 ✓
		29.50 ✓			57.290 ✓

$$\frac{29.50}{57.29} = 51.49\%$$

$$\frac{51.49 - 50.00}{25} = \frac{1.49}{25.00} = .0596$$

Actual Shear Over	= 51.00	24.00	6.50
Standard " "	= 43.00	19.13	4.73
	8.00	4.87	1.77

$$\text{Diff} \times .0596$$

	.48	.29	.11
	43.00	19.13	4.73
	43.48	19.42	4.84

Wood D^k.

$$0-18 = 18 \times \frac{2}{12} = 31.50$$

$$- .67$$

$$30.83$$

$$30.83$$

$$58.46 = 12 \times \frac{2}{12} = 21.00$$

$$- .50$$

$$20.50$$

2 3/4"

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____



© 2021

Lloyd's Register
Foundation