

1-MAY 1942

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>"EMPIRE FAIRY"</b>	Official Number <b>168783</b>	Nationality and Port of Registry <b>BRITISH</b> <b>GOOLE</b>	Gross Tonnage <b>176.66</b>	Date of Build <b>1942</b>	Port of Survey <b>Hull</b>
Moulded Dimensions: Length <b>105'-0"</b> Breadth <b>26'-6"</b> Depth <b>13'-0"</b>					Date of Survey <b>During construction</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>504</b> tons					Surveyor's Signature <b>J. Macleod</b>
Coefficient of fineness for use with Tables <b>.68</b> ( <b>.574 actual</b> )					Particulars of Classification <b>* 100 A-1.</b> <b>"FOR TOWING SERVICES".</b> <b>(CONTEMPLATED).</b>

Depth for Freeboard (D).		Depth correction.		Round of Beam correction.	
Moulded depth ...	<b>13'-0"</b>	(a) Where D is greater than Table depth	<b>(13.03 - 7.0) x .808 = +4.87"</b>	Moulded Breadth (B)	<b>26'-5"</b>
Stringer plate ...	<b>35"</b>	(b) Where D is less than Table depth (if allowed)	<b>(Table depth - D) R =</b>	Standard Round of Beam = $\frac{B \times 12}{50}$	<b>6'-36"</b>
Sheathing on exposed deck	<b>✓</b>	If restricted by superstructures	<b>✓</b>	Ship's Round of Beam	<b>7'-2"</b>
$T \left( \frac{L-S}{L} \right) =$	<b>3'</b>			Difference	<b>1'-14"</b>
Depth for Freeboard (D) =	<b>13'-03"</b>			Restricted to	<b>✓</b>
				Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$	<b>= <math>\frac{1.14}{4} = -.29"</math></b>

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	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 $\frac{S}{L} =$	
„ „ $\frac{S_1}{L} =$	✓
„ „ $\frac{E}{L} =$	
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 =	<b>Nil.</b>

SHEERS MEASURED FROM TOP OF KEEL  
TO DECK AT SIDE.

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual shear aft	Mean standard shear aft
A.P. ...	<b>20.50</b>	1		<b>20.50</b>	<b>36.00</b>	<b>36.00</b>	1		<b>36.00</b>	<b>Excess.</b>	
$\frac{1}{8}$ L from A.P. ...	<b>9.12</b>	4		<b>36.48</b>	<b>17.50</b>	<b>17.50</b>	4		<b>70.00</b>		
$\frac{2}{8}$ L „ ...	<b>2.255</b>	2		<b>4.51</b>	<b>6.00</b>	<b>6.00</b>	2		<b>12.00</b>	<b>Excess.</b>	
Amidships ...	<b>-</b>	4		<b>-</b>	<b>-</b>	<b>-</b>	4		<b>-</b>		
$\frac{3}{8}$ L from F.P. ...	<b>4.51</b>	2		<b>9.02</b>	<b>4.25</b>	<b>4.25</b>	2		<b>8.50</b>	Length of enclosed superstructure forward of amidships =	aft of „ =
$\frac{4}{8}$ L „ ...	<b>18.25</b>	4		<b>73.00</b>	<b>24.00</b>	<b>24.00</b>	4		<b>96.00</b>		
F.P. ...	<b>41.00</b>	1		<b>41.00</b>	<b>60.00</b>	<b>60.00</b>	1		<b>60.00</b>	} <b>Flush deck.</b>	
Total ...				<b>184.51</b>					<b>282.50</b>		

  

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{97.99}{18} \times 75 = -4.08"$

If limited on account of midship superstructure. **No, flush deck.**

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft. **Yes, -1.58"**

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **13.03**

Summer freeboard = **1.25**

Moulded draught (d) = **11.78**

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **2.94 = 3"**Addition for Winter North Atlantic Freeboard (if required) = **5"**

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$  **555**

Tons per inch immersion at summer load water line

 $T =$  **5.29**Deduction =  $\frac{\Delta}{40T}$  inches = **2.62**

MEAN DRAFT	EXT. DISP.	TONS PER 1"
<b>12'-0"</b>	<b>532</b>	<b>5.22</b>
<b>11'-0"</b>	<b>468</b>	<b>5.03</b>
<b>10'-0"</b>	<b>408</b>	<b>4.84</b>

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

+	-
<b>4.87</b>	<b>-</b>
<b>-</b>	<b>-</b>
<b>-</b>	<b>1.58</b>
<b>-</b>	<b>.29</b>
<b>-</b>	<b>-</b>
<b>-</b>	<b>-</b>
<b>4.87</b>	<b>1.87</b>

Summer Freeboard = **15.07**

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

Tropical Fresh Water Line above Centre of Disc	<b>5 1/2"</b>
Fresh Water Line	<b>2 1/2"</b>
Tropical Line	<b>3"</b>
Winter Line below	<b>3"</b>
Winter North Atlantic Line	<b>5"</b>

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.

Trade of ship "FOR TOWING SERVICES".

Names of sister ships ✓

Builder's name and yard number Messrs Lochrane & Sons Ltd - Yard No 1243.

Owners The Admiralty.

Fee £ To be charged with first entry.



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Foundation