

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index No. 37762  
(For London Office only).

Hd 5647

Ship's Name <b>EMPIRE FULHAM.</b>	Official Number <b>168887.</b>	Nationality and Port of Registry <b>British Liverpool.</b>	Gross Tonnage <b>222.17</b>	Date of Build <b>1944</b>	Port of Survey <b>Northchurch</b>
Moulded Dimensions: Length <b>98'-4 1/4"</b> Breadth <b>23'-0"</b> Depth <b>10'-4"</b>					Date of Survey <b>Whilst building</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>416</b> tons					Surveyor's Signature <b>Harry S. Newton</b>
Coefficient of fineness for use with Tables <b>.733</b>					Particulars of Classification <b>+100 A1 Water Carrier.</b>

<b>Depth for Freeboard (D).</b> Moulded depth ... .. <b>10.33</b> Stringer plate ... .. <b>.04</b> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <b>None.</b> Depth for Freeboard (D) = <b>10.37</b>	<b>Depth correction.</b> (a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $(10.37 - 6.56) \times .757 = +2.88$ <b>3.81</b> (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ <b>✓</b> If restricted by superstructures <b>✓</b>	<b>Round of Beam correction.</b> Moulded Breadth (B) <b>23.00'</b> Standard Round of Beam = $\frac{B \times 12}{50} =$ <b>5.52</b> Ship's Round of Beam = <b>6.00"</b> Difference <b>.48</b> Restricted to $\text{Correction} = \frac{\text{Diff.}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.48}{4} \times .4448 = -.05$
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## 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 ... ..	<b>41.04</b>	<b>41.04</b>	<b>3'-0"</b>	<b>-</b>	<b>41.04</b>
" overhang ... ..					
Bridge enclosed... ..					
" overhang aft ... ..					
" overhang forward ... ..					
Fore enclosed ... ..	<b>13.56</b>	<b>13.56</b>	<b>4'-6"</b>	<b>x 4 5/6</b>	<b>10.17</b>
" overhang ... ..					
Trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..					
" " forward ... ..					
Total ... ..	<b>54.60</b>	<b>54.60</b>			<b>51.21</b>

  

Standard Height of Superstructure	<b>6.0</b>
" " R.Q.D.	<b>3.0</b>
Deduction for complete superstructure	<b>15.83</b>
Percentage covered $\frac{S}{L} =$	<b>55.52</b>
" " $\frac{S_1}{L} =$	<b>52.06</b>
Percentage from Table, Line A.	<b>34.88</b>
(corrected for absence of forecastle (if required))	<b>✓</b>
Percentage from Table, Line B.	
(corrected for absence of forecastle (if required))	<b>✓</b>
Interpolation for bridge less than .2L (if required)	
Deduction =	<b>15.83 x 34.88 = -5.52</b>

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	<b>19.835</b>	<b>1</b>		<b>19.835</b>	<b>16.00</b>	<b>16.00</b>	<b>1</b>		<b>16.00</b>
1/4 L from A.P. ... ..	<b>8.83</b>	<b>4</b>		<b>35.32</b>	<b>3.625</b>	<b>3.625</b>	<b>4</b>		<b>14.50</b>
1/2 L " ... ..	<b>2.18</b>	<b>2</b>		<b>4.36</b>	<b>.50</b>	<b>.50</b>	<b>2</b>		<b>1.00</b>
Amidships ... ..	<b>-</b>	<b>4</b>		<b>-</b>	<b>✓</b>	<b>-</b>	<b>4</b>		<b>-</b>
3/4 L from F.P. ... ..	<b>4.36</b>	<b>2</b>		<b>8.72</b>	<b>2.00</b>	<b>2.00</b>	<b>2</b>		<b>4.00</b>
1/4 L " ... ..	<b>17.65</b>	<b>4</b>		<b>70.60</b>	<b>12.50</b>	<b>12.50</b>	<b>4</b>		<b>50.00</b>
F.P. ... ..	<b>39.67</b>	<b>1</b>		<b>39.67</b>	<b>36.00</b>	<b>36.00</b>	<b>1</b>		<b>36.00</b>
Total ... ..				<b>178.51</b>					<b>121.50</b>

  

Mean actual sheer aft = **Deficient**  
 Mean standard sheer aft = **Deficient**

Mean actual sheer forward = **Deficient**  
 Mean standard sheer forward = **Deficient**

Length of enclosed superstructure forward of amidships = **Deficient**  
 " " aft of " = **Deficient**

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{.2L} \right) = \frac{57.01}{18} \left( \frac{.75 - .2776}{.4724} \right) = +1.50$   
 If limited on account of midship superstructure. **✓**

If limited to maximum allowance of 1 1/2 ins. per 100 ft. **✓**

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Depth to Freeboard Deck = <b>10.37</b> Summer freeboard = <b>.75</b> Moulded draught (d) = <b>9.62</b> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>2.40 = 2 1/2</b> Addition for Winter North Atlantic Freeboard (if required) =	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta =$ <b>446 462</b> Tons per inch immersion at summer load water line $T =$ <b>44.5</b> Deduction = $\frac{\Delta}{40T}$ inches = <b>2.57</b> <b>= 2 1/2</b>	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required) Correction for coefficient $\frac{.733 + .68}{1.36} = \frac{1.413}{1.36} =$ <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ... ..</td> <td><b>2.88</b></td> <td><b>-</b></td> </tr> <tr> <td>Deduction for superstructures ... ..</td> <td><b>-</b></td> <td><b>5.52</b></td> </tr> <tr> <td>Sheer correction ... ..</td> <td><b>1.50</b></td> <td><b>-</b></td> </tr> <tr> <td>Round of Beam correction... ..</td> <td><b>-</b></td> <td><b>.05</b></td> </tr> <tr> <td>Correction for Thickness of Deck amidships ... ..</td> <td><b>-</b></td> <td><b>-</b></td> </tr> <tr> <td>Other corrections, scantlings, etc. ... ..</td> <td><b>-</b></td> <td><b>-</b></td> </tr> <tr> <td></td> <td><b>4.38</b></td> <td><b>5.57</b></td> </tr> </table> Summer Freeboard = <b>9.02</b>		+	-	Depth Correction ... ..	<b>2.88</b>	<b>-</b>	Deduction for superstructures ... ..	<b>-</b>	<b>5.52</b>	Sheer correction ... ..	<b>1.50</b>	<b>-</b>	Round of Beam correction... ..	<b>-</b>	<b>.05</b>	Correction for Thickness of Deck amidships ... ..	<b>-</b>	<b>-</b>	Other corrections, scantlings, etc. ... ..	<b>-</b>	<b>-</b>		<b>4.38</b>	<b>5.57</b>
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## SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:-

Tropical Fresh Water Line above Centre of Disc ... ..	<b>2 1/2</b>	Tropical Fresh Water Freeboard ... ..	<b>0'-6 1/2"</b>
Fresh Water Line <b>NA assigned</b> ... ..	<b>2 1/2</b>	Fresh Water " ... ..	<b>0'-11 1/2"</b>
Tropical Line <b>NA assigned</b> ... ..	<b>2 1/2</b>	Tropical " ... ..	<b>0'-11 1/2"</b>
Winter Line <b>below</b> ... ..	<b>2 1/2</b>	Winter " ... ..	<b>0'-11 1/2"</b>
Winter North Atlantic Line <b>NA assigned</b> ... ..	<b>2 1/2</b>	Winter North Atlantic " ... ..	<b>0'-11 1/2"</b>