

Comp.).

Index. No. 23651
(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>Lucashire</i>	Official Number <i>140529</i>	Nationality and Port of Registry <i>British Liverpool</i>	Gross Tonnage <i>9557</i>	Date of Build <i>1917-2</i>	Port of Survey
Dimensions: Length <i>481.5</i> Breadth <i>57.0</i> Depth <i>35.37</i>					Date of Survey <i>27-3-45</i>
displacement at moulded draught = 85 per cent. of moulded depth <i>17746</i> tons					Surveyor's Signature
Degree of fitness for use with Tables <i>753</i>					Particulars of Classification <i>+ 100 AT</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Depth ... <i>35.37</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(35.50 - 32.10) x 3 = +10.20</i>	Moulded Breadth (B) <i>57</i>
Table ... <i>35.50</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>-</i>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{57 \times 12}{50} = 13.68$
on exposed deck $\frac{S}{L} = .29 \times 2293 = .07$	If restricted by superstructures <i>-</i>	Ship's Round of Beam = <i>9.00</i>
Depth for Freeboard (D) = <i>35.50</i>		Difference <i>4.68</i>
		Restricted to <i>-</i>
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S}{L}\right) = \frac{4.68}{4} \times .3144 = +.37$

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)	
Enclosed ... <i>48.00</i>	<i>48.00</i>	<i>8.25</i>	<i>-</i>	<i>48.00</i>	Standard Height of Superstructure <i>7.5</i>
Overhang ... <i>3.08</i>	<i>1.54</i>	<i>-</i>	<i>-</i>	<i>1.54</i>	" " R.Q.D. <i>-</i>
Enclosed ...					Deduction for complete superstructure <i>42</i>
Overhang ...					Percentage covered $\frac{S}{L} = \frac{77.07}{100}$
Enclosed ... <i>193.00</i>	<i>193.00</i>	<i>8.25</i>	<i>-</i>	<i>193.00</i>	" " $\frac{S_i}{L} = \frac{68.56}{100}$
Overhang aft ...					" " $\frac{E}{L} = \frac{68.56}{100}$
Overhang forward ... <i>42.00</i>	<i>21.00</i>	<i>-</i>	<i>-</i>	<i>21.00</i>	Percentage from Table, Line A. <i>-</i>
Enclosed ... <i>85.00</i>	<i>48.15</i>	<i>8.0</i>	<i>-</i>	<i>48.15</i>	(corrected for absence of forecastle (if required))
Overhang ... <i>18.42</i>	<i>18.42</i>	<i>-</i>	<i>-</i>	<i>18.42</i>	Percentage from Table, Line B. <i>60.55</i>
Enclosed ...					(corrected for absence of forecastle (if required))
Overhang ...					Interpolation for bridge less than 2L (if required) <i>-</i>
Enclosed ...					Deduction = <i>42 x .6055 = -25.43</i>
Overhang ...					
Enclosed ... <i>371.08</i>	<i>330.11</i>			<i>330.11</i>	

SHEER CORRECTION.

Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
... <i>58.15</i>	<i>1</i>	<i>58.15</i>	<i>42.00</i>	<i>42.00</i>	<i>1</i>	<i>42.00</i>			Mean actual sheer aft = <i>38.77</i>
P. ... <i>25.88</i>	<i>4</i>	<i>103.52</i>	<i>9.00</i>	<i>9.00</i>	<i>4</i>	<i>36.00</i>			Mean actual sheer forward = <i>21.00</i>
... <i>6.39</i>	<i>2</i>	<i>12.78</i>	<i>-3.00</i>	<i>-3.00</i>	<i>2</i>	<i>-6.00</i>			Mean standard sheer forward
... <i>-</i>	<i>4</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>4</i>	<i>-</i>			Length of enclosed superstructure forward of amidships = <i>8</i>
E.P. ... <i>12.79</i>	<i>2</i>	<i>25.58</i>	<i>16.50</i>	<i>12.79</i>	<i>2</i>	<i>25.58</i>			aft of " = <i>8</i>
... <i>57.76</i>	<i>4</i>	<i>207.04</i>	<i>51.00</i>	<i>57.76</i>	<i>4</i>	<i>207.04</i>			
... <i>116.30</i>	<i>1</i>	<i>116.30</i>	<i>114.00</i>	<i>116.30</i>	<i>1</i>	<i>116.30</i>			
Total ... <i>523.37</i>						<i>420.92</i>			

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - S}{2L} \right) = \frac{102.45}{18} \left(\frac{75 - 38.53}{2} \right) = +2.07$

If limited on account of midship superstructure.

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

Correction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD	96.75
Correction for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Corrected for Plush Deck (if required)	101.95
Depth to Freeboard Deck = <i>35.73</i>	$\Delta =$	Correction for coefficient $\frac{753 + .68}{1.36} = \frac{1.433}{1.36}$	
Summer freeboard = <i>9.08</i>	Tons per inch immersion at summer load water line	Depth Correction ... <i>10.20</i>	
Moulded draught (d) = <i>26.65</i>	T =	Deduction for superstructures ... <i>25.43</i>	
Correction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>6.66 = 6 3/4</i>	Deduction = $\frac{\Delta}{40T}$ inches = <i>6 3/4</i>	Sheer correction ... <i>2.07</i>	
Addition for Winter North Atlantic Freeboard (if required) = <i>-</i>		Round of Beam correction ... <i>.37</i>	
		Correction for Thickness of Deck amidships ... <i>2.66</i>	
		Other corrections, scantlings, etc. <i>17.18</i>	
		Summer Freeboard = <i>109.00</i>	

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

Tropical Fresh Water Line above Centre of Disc ... <i>6 3/4</i>	Tropical Fresh Water Freeboard ... <i>9-1"</i>
Fresh Water Line " " ... <i>6 3/4</i>	Fresh Water " " ... <i>8-6 1/4"</i>
Tropical Line " " ... <i>N.L.</i>	Tropical " " ... <i>9-1"</i>
Winter Line below " " ... <i>N.L.</i>	Winter " " ... <i>9-1"</i>
Winter North Atlantic Line " " ... <i>-</i>	Winter North Atlantic " " ... <i>-</i>

002157-002164-0085