

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

18333.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <i>Lith</i>	
having <i>Raised Quarter Deck - Short Bridge &amp; Fo'c's</i>					Date of Survey <i>while building</i>	
(Type of Superstructures.)					Name of Surveyor <i>Ern Edwards</i>	
Ship's Name <b>NORTHFIELD</b> <b>LONDON QUEEN</b>		Nationality and Port of Registry <b>UK</b> <i>"London"</i>	Official Number <b>763319</b>	Gross Tonnage <b>780</b> <i>780.61</i>	Date of Build <b>1933</b>	
Moulded Dimensions: Length <b>194.0</b> , Breadth <b>30.7</b> , Depth <b>14.6</b>					Particulars of Classification <b>+100A1.</b>	
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>14.55</b> tons						
Coefficient of fineness for use with Tables <b>708.697</b>						
Depth for Freeboard (D)			Depth correction		Round of Beam correction	
Moulded depth ... <b>14.5</b>			(a) Where D is greater than Table depth (D - Table depth) R = $\frac{194 - 194}{15} = 0$		Moulded Breadth (B) <b>30.58</b>	
Stringer plate ... <b>.03</b>			(b) Where D is less than Table depth (if allowed) (Table depth - D) R = $\frac{14.6 - 14.5}{15} = 0.0067$		Standard Round of Beam = $\frac{B \times 12}{50} = 7.34$	
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$			If restricted by superstructures <input checked="" type="checkbox"/>		Ship's Round of Beam = <b>7.38</b>	
Depth for Freeboard (D) = <b>14.53</b>					Difference <b>.04" excess</b>	
					Restricted to	
					Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.04}{4} \times .2378 = \text{NIL}$	

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	✓					Standard Height of Superstructure <b>6'-0"</b>
„ overhang ...	✓					„ „ R.Q.D. <b>3.627</b>
R.Q.D. enclosed ...	<b>110.48</b>	<b>110.48</b>	<b>3.666</b>		<b>110.48</b>	Deduction for complete superstructure <b>25.40</b>
„ overhang ...	✓					Percentage covered $\frac{S}{L} = 76.55\%$
Bridge enclosed ...	<b>14.0</b>	<b>14.0</b>	<b>7.0</b>		<b>14.0</b>	„ „ $\frac{S_1}{L} = 76.22\%$
„ overhang aft ...	✓					„ „ $\frac{E}{L} = 76.22\%$
„ overhang forward ...	✓					Percentage from Table, Line A.
F'cle enclosed <i>equi</i> ...	<b>22.75</b>	<b>22.75</b>	<b>7.0</b>		<b>22.75</b>	(corrected for absence of forecable (if required)) <b>70.65%</b>
„ overhang ...	<b>2.5</b>	<b>1.23</b>	<b>7.0</b>		<b>1.86</b>	Percentage from Table, Line B.
Trunk aft ...	<b>1.27</b>	<b>0.63</b>			<b>0.63</b>	(corrected for absence of forecable (if required))
„ forward ...	✓					Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...	✓					Deduction = <b>25.40 × .7065 = -17.94"</b>
„ „ forward ...	✓					
Total ...	<b>148.5</b>	<b>147.23</b>			<b>147.86</b>	

## SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product	
A.P. ...	<b>29.4</b>	1	<b>29.4</b>	<b>22.25</b>	<b>22.29</b>	1	<b>22.73</b>	Mean actual sheer aft = <i>Deficient</i> > 75% standard = <b>.48"</b>
1/4 L from A.P. ...	<b>13.08</b>	4	<b>52.32</b>	<b>9.615</b>	<b>9.65</b>	4	<b>38.60</b>	Mean actual sheer forward = <i>Excess</i>
1/2 L „ ...	<b>3.23</b>	2	<b>6.46</b>	<b>2.625</b>	<b>2.65</b>	2	<b>5.26</b>	Mean standard sheer forward = <i>Excess</i>
Amidships ...	✓	4	✓	0	0	4	0	Length of enclosed superstructure forward of amidships = <b>&gt; 1L</b>
3/4 L from F.P. ...	<b>6.468</b>	2	<b>12.936</b>	<b>7.875</b>	<b>7.875</b>	2	<b>15.75</b>	„ „ aft of „ = <b>.5L</b>
1/4 L „ ...	<b>26.16</b>	4	<b>104.64</b>	<b>29.375</b>	<b>29.375</b>	4	<b>117.50</b>	
F.P. ...	<b>58.8</b>	1	<b>58.80</b>	<b>66.5</b>	<b>66.5</b>	1	<b>66.5</b>	
Total ...			<b>264.56</b>				<b>265.9</b>	
Correction = $\frac{\text{Difference between sums of products}}{18} \left( \frac{75 - S}{2L} \right) = \frac{3.36}{18} \left( \frac{75 - 3827}{3673} \right) = -.06"$								
If limited on account of midship superstructure.								

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line <b>1729</b>	Correction for coefficient $\frac{.697 + .08}{1.36} = \frac{.777}{1.36}$	<b>22.08</b>
Depth to Freeboard Deck = <b>14.53</b>	Δ = <b>1729</b>	Depth Correction ... <b>2.39</b>	<b>22.36</b>
Summer freeboard = <b>4.53</b>	Tons per inch immersion at summer load water line <b>11.66</b>	Deduction for superstructures ... <b>17.94</b>	
Moulded draught (d) = <b>13.98</b>	Deduction = $\frac{\Delta}{40T}$ inches = <b>3.72"</b>	Sheer correction ... <b>.06</b>	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>3.49" = 3.2"</b>		Round of Beam correction ...	
Addition for Winter North Atlantic Freeboard (if required) = <b>2"</b>		Correction for Thickness of Deck amidships ...	
		Other corrections, scantlings, etc. ... <b>44.00</b>	
		<b>46.39</b>	
		Summer Freeboard = <b>50.75</b>	

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

Tropical Fresh Water Line above Centre of Disc ...	<b>7 1/4"</b>	Tropical Fresh Water Freeboard ...	<b>4' - 2 3/4"</b>
Fresh Water Line „ „ ...	<b>3 3/4"</b>	Fresh Water „ „ ...	<b>3' - 7 1/2"</b>
Tropical Line „ „ ...	<b>3 1/2"</b>	Tropical „ „ ...	<b>3' - 11 1/2"</b>
Winter Line below „ „ ...	<b>3 1/2"</b>	Winter „ „ ...	<b>4' - 6 1/4"</b>
Winter North Atlantic Line „ „ ...	<b>5 1/2"</b>	Winter North Atlantic „ „ ...	<b>4' - 8 1/4"</b>



London Queen

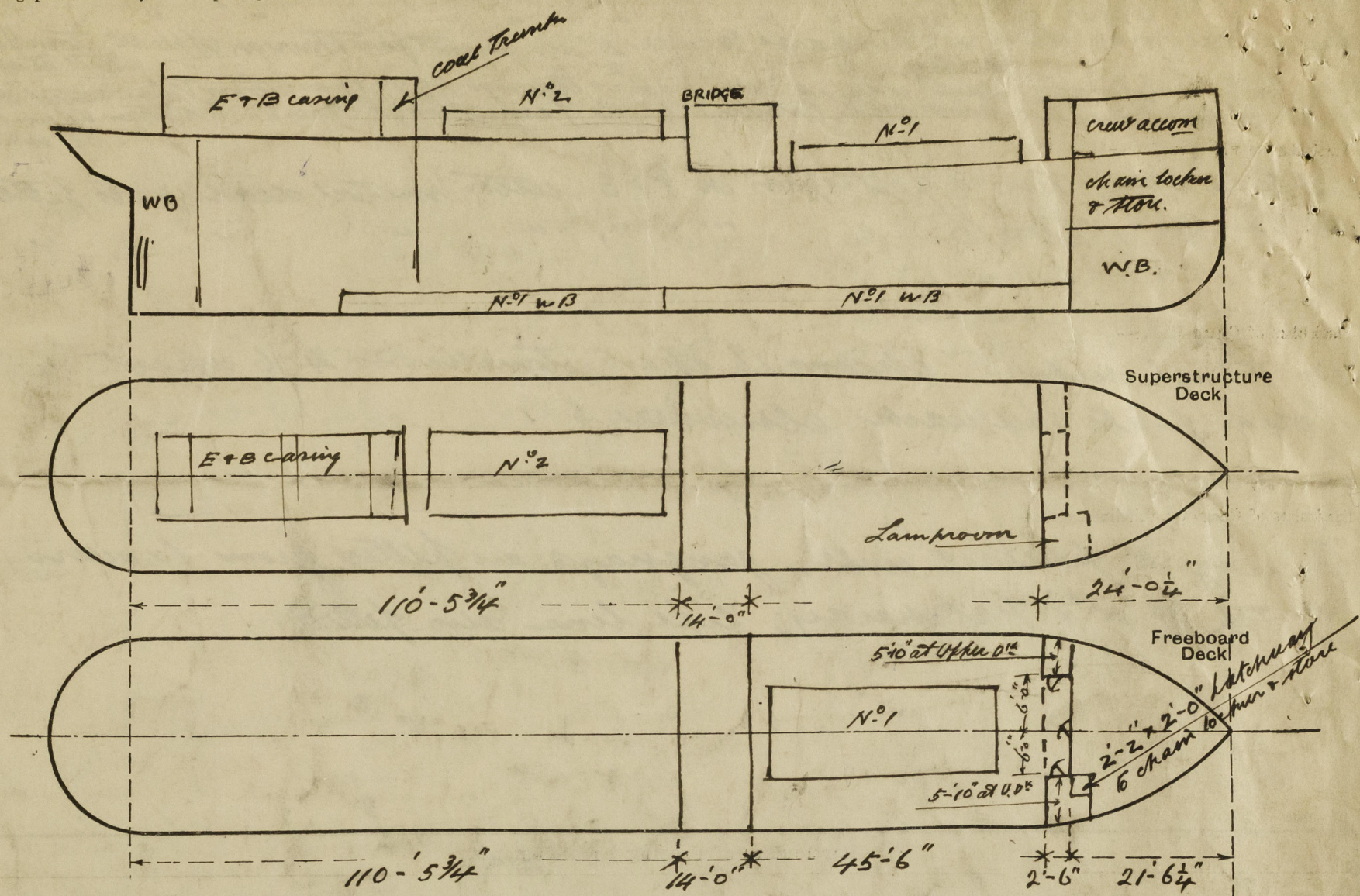
Particulars of Gangway Cargo and Coaling Ports :—

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead ... ..	✓
Raised Quarter Deck Bulkhead ... ..	✓ - <i>in tank</i>
Bridge, After Bulkhead ... ..	✓
Bridge, Forward Bulkhead ... ..	✓ - <i>in tank</i>
Forecastle Bulkhead ... ..	✓
Exposed Machinery Casings on Fore- board or Raised Quarter Decks ...	<i>Steel door to lamp room. Wood door to Focli this can be manipulated from both sides.</i>
Exposed Machinery Casings on Super- structure Decks ... ..	<i>Steel door can be manipulated from both sides.</i>
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ... ..	✓
Deckhouses on Flush Deck Ships ...	✓



London Queen

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



Fore castle 24.02  $\frac{5}{10} = 19.40$   
Recess  $\frac{12 \times 2.5}{23.66} = 1.27$  O.H.  
22.75 eqms.

State any special features in the construction of the ship:—

OMIT.

Builder's name and yard number *The Burntisland Shipbuilding Co. Ltd. N° 174*

Names of sister ships

OWNERS *The London and Channel Islands S.S. Co. Ltd (Cheeswright & Forster Mgrs)*

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