

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

 Index. No. \_\_\_\_\_  
 (For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey _____
having <u>Complete Superstructure with Tonnage opening aft</u>					Date of Survey _____
(Type of Superstructures.)					
Ship's Name <u>M/V. TEMERAIRE</u>	Nationality and Port of Registry <u>Norwegian Lonsberg</u>	Official Number _____	Gross Tonnage _____	Date of Build <u>1927</u>	Name of Surveyor _____
Moulded Dimensions: Length <u>450.92</u> Breadth <u>59.97</u> Depth <u>30.62</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>14301</u> tons					Particulars of Classification _____
Coefficient of fineness for use with Tables <u>.711</u>					

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... .. <u>30.62</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(30.66 - 30.06) 3 = + 1.80</u>	Moulded Breadth (B) <u>59.97</u>
Stringer plate <u>53</u> ... .. <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>14.39</u>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$		Ship's Round of Beam = <u>14.00</u>
		Difference <u>Diff. .39</u>
Depth for Freeboard (D) = <u>30.66</u>	If restricted by superstructures	Restricted to
		Correction = $\frac{\text{Diff.}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.39}{4} \times .0055 = \text{Nil}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	<u>44.12</u>	<u>44.12</u>	<u>8.0</u>		<u>44.12</u>
" overhang ... ..	<u>.91</u>	<u>.45</u>			<u>.45</u>
R.Q. enclosed ... ..					
" overhang ... ..					
Bridge enclosed ... ..					
" overhang aft ... ..	<u>401.43</u>	<u>401.43</u>	<u>8.0</u>		<u>401.43</u>
" overhang forward ... ..					
" enclosed ... ..					
" overhang ... ..					
" trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..	<u>4.46</u>	<u>2.46</u>	<u>8.0</u>		<u>2.46</u>
" forward ... ..					
Total ... ..	<u>450.92</u>	<u>448.46</u>			<u>448.46</u>

Standard Height of Superstructure	<u>7.50</u>
" R.Q.D.	<u>✓</u>
Deduction for complete superstructure	<u>42.0</u>
Percentage covered $\frac{S}{L} =$	<u>100%</u>
" $\frac{S_1}{L} =$	<u>99.45</u>
" $\frac{E}{L} =$	<u>99.45</u>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B.	<u>99.32</u>
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	<u>42.00 x .9932 = 41.71</u>

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
... ..	<u>55.09</u>	<u>1</u>		<u>55.09</u>	<u>51.00</u>	<u>57.00</u>	<u>1</u>		<u>57.00</u>
from A.P. ... ..	<u>24.51</u>	<u>4</u>		<u>98.04</u>	<u>23.50</u>	<u>25.36</u>	<u>4</u>		<u>101.44</u>
" ... ..	<u>6.06</u>	<u>2</u>		<u>12.12</u>	<u>5.87</u>	<u>6.27</u>	<u>2</u>		<u>12.54</u>
amidships ... ..		<u>4</u>					<u>4</u>		
from F.P. ... ..	<u>12.12</u>	<u>2</u>		<u>24.24</u>	<u>12.05</u>	<u>13.20</u>	<u>2</u>		<u>26.40</u>
" ... ..	<u>49.03</u>	<u>4</u>		<u>196.12</u>	<u>48.19</u>	<u>53.40</u>	<u>4</u>		<u>213.60</u>
" ... ..	<u>110.18</u>	<u>1</u>		<u>110.18</u>	<u>114.00</u>	<u>120.00</u>	<u>1</u>		<u>120.00</u>
Total ... ..				<u>495.79</u>					<u>530.98</u>

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{495.79 - 530.98}{18} \left( .75 - \frac{.50}{2} \right) = - .49$$

on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft.

Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)																											
Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = <u>30.66</u> Ft. Summer freeboard = <u>4.08</u> Moulded draught (d) = <u>26.58</u> Deduction for Tropical freeboard and addition for Winter North Atlantic Freeboard (if required) = <u>6.64 = 6 3/4 = 17 1/2</u> inches Addition for Winter North Atlantic Freeboard (if required) = <u>7" = 17 1/2</u> inches	Displacement in salt water at summer load water line $\Delta =$ <u>14713</u> Tons per inch immersion at summer load water line $T =$ <u>52.76</u> Deduction = $\frac{\Delta}{40 T}$ inches $= \frac{14713}{40 \times 52.76} = 6.97$ $= 7" = 17 1/2$ inches	Correction for coefficient $\frac{.711 + .68}{1.36} = \frac{1.391}{1.36}$ <table style="width: 100%;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ... ..</td> <td><u>1.80</u></td> <td></td> </tr> <tr> <td>Deduction for superstructures ... ..</td> <td></td> <td><u>41.71</u></td> </tr> <tr> <td>Sheer correction ... ..</td> <td></td> <td><u>.49</u></td> </tr> <tr> <td>Round of Beam correction ... ..</td> <td></td> <td></td> </tr> <tr> <td>Correction for Thickness of Deck amidships ... ..</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc. ... ..</td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>1.80</u></td> <td><u>42.20</u></td> </tr> <tr> <td>Summer Freeboard =</td> <td><u>48.99</u></td> <td></td> </tr> </table>		+	-	Depth Correction ... ..	<u>1.80</u>		Deduction for superstructures ... ..		<u>41.71</u>	Sheer correction ... ..		<u>.49</u>	Round of Beam correction ... ..			Correction for Thickness of Deck amidships ... ..			Other corrections, scantlings, etc. ... ..				<u>1.80</u>	<u>42.20</u>	Summer Freeboard =	<u>48.99</u>	
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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 ... ..	<u>13 3/4" = 34 1/2</u>	Tropical Fresh Water Freeboard ... ..	<u>35.25 = 89 1/2</u>
Fresh Water Line " " ... ..	<u>7" = 17</u>	Fresh Water " " ... ..	<u>42.00 = 106 1/2</u>
Tropical Line " " ... ..	<u>6 3/4" = 17 1/2</u>	Tropical " " ... ..	<u>42.25 = 107 1/2</u>
Winter Line below " " ... ..	<u>6 3/4" = 17 1/2</u>	Winter " " ... ..	<u>55.75 = 141 1/2</u>
Winter North Atlantic Line " " ... ..	<u>-</u>	Winter North Atlantic " " ... ..	<u>-</u>

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25-0 est =	13710	52.13
26-0 "	14320	52.55
27-0 "	14990	52.97

85% DM =	26.03	26-0 =	14320
Reel.	.04		+ 51
	<u>26.07</u>		14372
			71
			<u>14301</u>

14990	52.97	F.W.
14320	52.55	
460		
14320		26.58
690		.04 Reel
	52	<u>26.62</u>
		26-0 = 14320
		.62 x 12 x 52.76 = 393
		<u>14713</u>

