

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey	
having <u>Forecastle &amp; Bridge</u>						
(Type of Superstructures.)					Date of Survey <u>16.3.33</u>	
Ship's Name <u>WILLY</u>	Nationality and Port of Registry <u>Portuguese</u>	Official Number	Gross Tonnage <u>1242</u>	Date of Build <u>1902</u>	Name of Surveyor	
Moulded Dimensions: Length <u>76.20</u> Breadth <u>9.75</u> Depth <u>5.639</u>					Particulars of Classification	
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>2791 m<sup>3</sup></u> <u>tons</u>						
Coefficient of fineness for use with Tables <u>784</u>						

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... .. <u>5.639</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>833 (5.652 - 5.080) / 9.242</u>	Moulded Breadth (B) <u>9.75</u>
Stringer plate ... .. <u>13</u>	<u>= + 92 1/2</u>	Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>195</u>
Sheathing on exposed deck $\Psi \left( \frac{L-S}{L} \right) =$ <u>✓</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>✓</u>	Ship's Round of Beam = <u>203</u>
Depth for Freeboard (D) = <u>5.652</u>	If restricted by superstructures <u>✓</u>	Difference <u>8 excess</u>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{8}{4} \times .6755 = -1.7$

## 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 <u>1830</u>
„ overhang ... ..						„ „ R.Q.D. <u>✓</u>
R.Q.D. enclosed ... ..						Deduction for complete superstructure <u>788</u>
„ overhang ... ..						Percentage covered $\frac{S}{L} =$ <u>32.58 %</u>
Bridge enclosed ... ..	<u>16.97</u>	<u>16.97</u>	<u>2210</u>		<u>16.97</u>	„ „ $\frac{S_1}{L} =$ <u>32.45 %</u>
„ overhang aft ... ..	<u>8</u>	<u>6</u>			<u>6</u>	„ „ $\frac{E}{L} =$ <u>32.45 %</u>
„ overhang forward ... ..	<u>8</u>	<u>4</u>			<u>4</u>	Percentage from Table, Line A. (corrected for absence of forecastle (if required)) <u>✓</u>
F'cle enclosed ... ..	<u>7.62</u>	<u>7.62</u>	<u>2210</u>		<u>7.62</u>	Percentage from Table, Line B. <u>21.08 %</u>
„ overhang ... ..	<u>8</u>	<u>4</u>			<u>4</u>	(corrected for absence of forecastle (if required))
Trunk aft ... ..						Interpolation for bridge less than 2L (if required)
„ forward ... ..						Deduction = <u>788 × .2108 = -166.7</u>
Tonnage opening aft ... ..						
„ „ forward ... ..						
Total ... ..	<u>24.83</u>	<u>24.73</u>			<u>24.73</u>	

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	
A.P. ... ..	<u>889</u>	1	<u>889</u>	<u>889</u>	<u>889</u>	1	<u>889</u>	Mean actual sheer aft = <u>Deficient &gt; 75% standard</u>
1/4 L from A.P. ... ..	<u>395</u>	4	<u>1580</u>	<u>382</u>	<u>382</u>	4	<u>1528</u>	Mean actual sheer forward = <u>Excess</u>
1/2 L „ ... ..	<u>99</u>	2	<u>198</u>	<u>95</u>	<u>95</u>	2	<u>190</u>	Mean standard sheer forward
Amidships ... ..	<u>✓</u>	4	<u>✓</u>	<u>✓</u>	<u>✓</u>	4	<u>✓</u>	Length of enclosed superstructure forward of amidships = <u>&gt; 1 L</u>
3/4 L from F.P. ... ..	<u>197</u>	2	<u>394</u>	<u>200</u>	<u>200</u>	2	<u>400</u>	„ „ aft of „ = <u>&gt; 1 L</u>
1/4 L „ ... ..	<u>790</u>	4	<u>3160</u>	<u>802</u>	<u>802</u>	4	<u>3208</u>	
F.P. ... ..	<u>1777</u>	1	<u>1777</u>	<u>1829</u>	<u>1829</u>	1	<u>1829</u>	
Total ... ..			<u>7998</u>				<u>8044</u>	

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{46}{18} (.75 - .1629) = -2.$

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> <div style="text-align: right;">Ft.</div> Depth to Freeboard Deck = <u>5639</u> Summer freeboard = <u>806</u> Moulded draught (d) = <u>5833</u> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>101 1/2</u> Addition for Winter North Atlantic Freeboard (if required) =	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40 T}$ inches =	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required) Correction for coefficient $\frac{.784 + .68}{1.36}$ <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ... ..</td> <td><u>92</u></td> <td><u>-</u></td> </tr> <tr> <td>Deduction for superstructures ... ..</td> <td><u>-</u></td> <td><u>166</u></td> </tr> <tr> <td>Sheer correction ... ..</td> <td><u>-</u></td> <td><u>2</u></td> </tr> <tr> <td>Round of Beam correction ... ..</td> <td><u>-</u></td> <td><u>1</u></td> </tr> <tr> <td>Correction for Thickness of Deck amidships ... ..</td> <td><u>-</u></td> <td><u>-</u></td> </tr> <tr> <td>Other corrections, scantlings, etc. ... ..</td> <td><u>-</u></td> <td><u>-</u></td> </tr> <tr> <td></td> <td><u>92</u></td> <td><u>169</u></td> </tr> </table> Summer Freeboard = <u>806</u>		+	-	Depth Correction ... ..	<u>92</u>	<u>-</u>	Deduction for superstructures ... ..	<u>-</u>	<u>166</u>	Sheer correction ... ..	<u>-</u>	<u>2</u>	Round of Beam correction ... ..	<u>-</u>	<u>1</u>	Correction for Thickness of Deck amidships ... ..	<u>-</u>	<u>-</u>	Other corrections, scantlings, etc. ... ..	<u>-</u>	<u>-</u>		<u>92</u>	<u>169</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 ... ..	Tropical Fresh Water Freeboard ... ..
Fresh Water Line „ „ ... ..	Fresh Water „ „ ... ..
Tropical Line „ „ ... ..	Tropical „ „ ... ..
Winter Line below „ „ ... ..	Winter „ „ ... ..
Winter North Atlantic Line „ „ ... ..	Winter North Atlantic „ „ ... ..