

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>Confid</i> <i>(Actual Depth)</i>	Official Number	Nationality and Port of Registry	Gross Tonnage <i>9.32</i>	Date of Build	Port of Survey
Moulded Dimensions: Length <i>139.8</i> Breadth <i>22.64</i> Depth <i>9.02</i>					Date of Survey <i>21.3.47</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables <i>78 assumed</i>					Particulars of Classification

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <i>9.02</i>	(a) Where D is greater than Table depth (D-Table depth) R =	Moulded Breadth (B) <i>22.64</i>
Stringer plate ... <i>3.15</i> ... <i>03</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 5.43$
Sheathing on exposed deck	<i>(9.32 - 9.02) R = 30 \times 1.076 = 32.28</i>	Ship's Round of Beam = <i>9.50</i>
$T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures <i>Yes</i>	Difference = <i>4.07</i>
Depth for Freeboard (D) = <i>9.05</i>		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{4.07}{4} \times 1.6622 = 1.67$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>27.92</i>	<i>27.92</i>	<i>4.75</i>	<i>4.35</i>	<i>27.92</i>
„ overhang ...					<i>22.00</i>
R.Q.D. enclosed ...					
„ overhang ...	<i>8.50</i>	<i>4.25</i>			<i>4.25</i>
Bridge enclosed <i>open</i> ...	<i>6.96</i>	<i>3.48</i>	<i>6.75</i>		<i>3.48</i>
„ overhang aft ...					
„ overhang forward ...					
F'cle enclosed ...	<i>15.83</i>	<i>15.83</i>	<i>6.75</i>		<i>15.83</i>
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...	<i>52.25</i>	<i>80</i>			<i>47.80</i>
Total ...	<i>50.71</i>	<i>47.23</i>			<i>44.41</i>

Standard Height of Superstructure *6.0*

„ „ R.Q.D. *3.266*

Deduction for complete superstructure *19.98*

Percentage covered  $\frac{S}{L} = 36.27$  *37.38*

„ „  $\frac{S_1}{L} = 33.78$  *34.19*

„ „  $\frac{E}{L} = 29.82$

Percentage from Table, Line A. (corrected for absence of forecastle (if required)) *14.81* *18.56*

Percentage from Table, Line B. (corrected for absence of forecastle (if required))

Interpolation for bridge less than .2L (if required)

Deduction = *19.98*  $\times$  *1.481* = *29.6* *3.71*

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>23.98</i>	1		<i>23.98</i>	<i>44.34</i>	<i>44.75</i>	1		<i>44.75</i>
$\frac{1}{8}$ L from A.P. ...	<i>10.67</i>	4		<i>42.68</i>	<i>15.34</i>	<i>15.75</i>	4		<i>63.00</i>
$\frac{2}{8}$ L „ ...	<i>2.64</i>	2		<i>5.28</i>	<i>1.2</i>	<i>1.75</i>	2		<i>3.50</i>
Amidships ...		4					4		
$\frac{2}{8}$ L from F.P. ...	<i>5.28</i>	2		<i>10.56</i>	<i>3</i>	<i>3.0</i>	2		<i>6.00</i>
$\frac{1}{8}$ L „ ...	<i>21.34</i>	4		<i>85.36</i>	<i>20.34</i>	<i>20.75</i>	4		<i>83.00</i>
F.P. ...	<i>47.96</i>	1		<i>47.96</i>	<i>57.34</i>	<i>57.75</i>	1		<i>57.75</i>
Total ...				<i>215.82</i>					<i>258.00</i>

Mean actual sheer aft = *Excess*

Mean standard sheer aft =

Mean actual sheer forward = *Excess*

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

„ „ aft of „ = *NIL*

SHEER FORWARD

STANDARD	ACTUAL
<i>5.28</i>	<i>3.00</i>
<i>21.34</i>	<i>20.75</i>
<i>47.96</i>	<i>57.75</i>
	<i>127.82</i>

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft. *✓*

<p><b>Deduction for Tropical Freeboard.</b></p> <p><b>Addition for Winter and Winter North Atlantic Freeboard.</b></p> <p style="text-align: right;">Ft.</p> <p>Depth to Freeboard Deck = <i>9.05</i></p> <p>Summer freeboard = <i>.92</i></p> <p>Moulded draught (d) = <i>8.43</i></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = <math>\frac{d}{4}</math> inches =</p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p><b>Deduction for Fresh Water.</b></p> <p>Displacement in salt water at summer load water line</p> <p><math>\Delta =</math></p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = <math>\frac{\Delta}{40 T}</math> inches</p>	<p><b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required)</p> <p>Correction for coefficient <i>78 + 68</i> <i>1.36</i> <math>\times</math> <i>14.18</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td><i>3.71</i></td> <td></td> </tr> <tr> <td>Deduction for superstructures</td> <td><i>2.96</i></td> <td></td> </tr> <tr> <td>Sheer correction</td> <td></td> <td><i>.67</i></td> </tr> <tr> <td>Round of Beam correction</td> <td></td> <td><i>.67</i></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td><i>4.38</i></td> <td><i>-3.63</i></td> </tr> </table> <p>Summer Freeboard = <i>14.18</i> <i>15.22</i></p>		+	-	Depth Correction	<i>3.71</i>		Deduction for superstructures	<i>2.96</i>		Sheer correction		<i>.67</i>	Round of Beam correction		<i>.67</i>	Correction for Thickness of Deck amidships			Other corrections, scantlings, etc.	<i>4.38</i>	<i>-3.63</i>
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## SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

<p>SAY SUMMER MOULDED DRAUGHT = <i>8'-1 1/2"</i></p>	<p>Tropical Fresh Water Line above Centre of Disc ...</p> <p>Fresh Water Line „ „ ...</p> <p>Tropical Line „ „ ...</p> <p>Winter Line below „ „ ...</p> <p>Winter North Atlantic Line „ „ ...</p>	<p>Tropical Fresh Water Freeboard ...</p> <p>Fresh Water „ „ ...</p> <p>Tropical „ „ ...</p> <p>Winter „ „ ...</p> <p>Winter North Atlantic „ „ ...</p>
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