

*Computation for freeboard corresponding with subdivision moulded draught of 1949*  
**Lloyd's Register of Shipping.**

Index No. **40578**  
 (For London Office only.)

**SURVEYS FOR FREEBOARD.**  
 (COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>ASSIMINA</b> <b>ex BERNA</b>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <b>420'-8"</b> Breadth <b>56'-2"</b> Depth <b>30'-8"</b>					Date of Survey <b>16.8.49</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature _____
Coefficient of fineness for use with Tables <b>.72 assumed</b>					Particulars of Classification _____

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... .. <b>30.67</b>	(a) Where D is greater than Table depth $(D - \text{Table depth}) R = \frac{D - \text{Table depth}}{2.67} \times 3 = +8.04$	Moulded Breadth (B) <b>56.17</b>
Stringer plate ... .. <b>.03</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 13.44$
Sheathing on exposed deck <i>Tonjin</i> $T \left( \frac{L-S}{L} \right) = \frac{2.76}{12} \times .0798 = .02$	If restricted by superstructures	Ship's Round of Beam = <b>11.81</b>
Depth for Freeboard (D) = <b>30.72</b>		Difference = <b>1.63</b>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S}{L} \right) = \frac{1.63^2}{4} \times \left( 1 - \frac{56.17}{420.8} \right) = +0.3$

**DEDUCTION FOR SUPERSTRUCTURES.**

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>i</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ...						Standard Height of Superstructure <b>7'-6"</b>
<i>overhang</i> ...						"  "  R.Q.D. <b>—</b>
R.Q.D. enclosed ...	<b>332.15</b>	<b>332.15</b>	<b>7.5'</b>	<b>—</b>	<b>332.15</b>	Deduction for complete superstructure <b>42.00"</b>
<i>overhang</i> ...						Percentage covered $\frac{S}{L} = 92.02$
Bridge enclosed ...						"  " $\frac{S_i}{L} = 91.70$
"  overhang aft ...						"  " $\frac{E}{L} = 91.70$
"  overhang forward ...						Percentage from Table, Line A. <b>89.79</b>
Fore enclosed <i>Equin.</i> ...	<b>54.95</b>	<b>53.62</b>	<b>8.0</b>	<b>—</b>	<b>53.62</b>	(corrected for absence of forecastle (if required))
<i>overhang</i> ...						Percentage from Table, Line B. <b>89.79</b>
Trunk aft ...						(corrected for absence of forecastle (if required))
"  forward ...						Interpolation for bridge less than .2L (if required)
Tonnage opening aft ...						Deduction = <b>42 x .8979 = 37.72"</b>
"  "  forward ...						
Total ...	<b>387.10</b>	<b>385.77</b>			<b>385.77</b>	

**SHEER CORRECTION.**

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product	
A.P. ...	<b>52.07</b>	1	<b>52.07</b>	<b>63.0</b>	<b>63</b>	1	<b>63.00</b>	Mean actual sheer aft = <b>&lt; 1</b>
$\frac{1}{2}$ L from A.P. ...	<b>23.17</b>	4	<b>92.68</b>	<b>17.72</b>	<b>17.72</b>	4	<b>70.88</b>	Mean standard sheer aft = <b>&lt; 1</b>
$\frac{3}{4}$ L " ...	<b>5.73</b>	2	<b>11.46</b>	<b>1.97</b>	<b>1.97</b>	2	<b>3.94</b>	Mean actual sheer forward = <b>&lt; 1</b>
Amidships ...	<b>—</b>	4	<b>—</b>	<b>—</b>	<b>—</b>	4	<b>—</b>	Mean standard sheer forward = <b>&lt; 1</b>
$\frac{3}{4}$ L from F.P. ...	<b>11.46</b>	2	<b>22.92</b>	<b>5.90</b>	<b>5.90</b>	2	<b>11.80</b>	Length of enclosed superstructure forward of amidships =
$\frac{1}{2}$ L " ...	<b>46.32</b>	4	<b>185.36</b>	<b>43.31</b>	<b>43.31</b>	4	<b>173.24</b>	"  "  aft of " = <b>Deficient</b>
F.P. ...	<b>104.14</b>	1	<b>104.14</b>	<b>106.3</b>	<b>106.3</b>	1	<b>106.30</b>	"  "  " = <b>Deficient</b>
Total ...			<b>458.63</b>				<b>429.16</b>	

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{39.47}{18} \left( .75 - \frac{4601}{2899} \right) = +.64$   
 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> Depth to Freeboard Deck = <b>30.70</b> Summer freeboard = <b>10.95</b> Moulded draught (d) = <b>19.75</b> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>—</b> Addition for Winter North Atlantic Freeboard (if required) = <b>—</b>	<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 = $\frac{\Delta}{40T}$ inches = <b>4.94</b> = <b>125 m/m</b>	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required) Correction for coefficient <b>1.40/1.36</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;"></th> <th style="width: 10%;">+</th> <th style="width: 10%;">-</th> <th style="width: 30%;"></th> </tr> <tr> <td>Depth Correction</td> <td><b>8.04</b></td> <td><b>—</b></td> <td></td> </tr> <tr> <td>Deduction for superstructures</td> <td><b>—</b></td> <td><b>37.72</b></td> <td></td> </tr> <tr> <td>Sheer correction</td> <td><b>.64</b></td> <td><b>—</b></td> <td><b>A.R.</b></td> </tr> <tr> <td>Round of Beam correction</td> <td><b>.03</b></td> <td><b>—</b></td> <td><b>16.8.49</b></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td><b>.24</b></td> <td><b>-24</b></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td><b>80.31</b></td> <td><b>—</b></td> <td></td> </tr> <tr> <td><i>considered with subdivision moulded draught of 1949</i></td> <td><b>80.02</b></td> <td><b>37.96</b></td> <td><b>+51.06</b></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Summer Freeboard = <b>131.37</b></td> </tr> </table>		+	-		Depth Correction	<b>8.04</b>	<b>—</b>		Deduction for superstructures	<b>—</b>	<b>37.72</b>		Sheer correction	<b>.64</b>	<b>—</b>	<b>A.R.</b>	Round of Beam correction	<b>.03</b>	<b>—</b>	<b>16.8.49</b>	Correction for Thickness of Deck amidships	<b>.24</b>	<b>-24</b>		Other corrections, scantlings, etc.	<b>80.31</b>	<b>—</b>		<i>considered with subdivision moulded draught of 1949</i>	<b>80.02</b>	<b>37.96</b>	<b>+51.06</b>				Summer Freeboard = <b>131.37</b>
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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 <b>125</b>	Tropical Fresh Water Freeboard <b>3337 m/m</b>
Fresh Water Line " " <b>125</b>	Fresh Water " " <b>3212</b>
Tropical Line " " <b>NIL</b>	Tropical " " <b>3212</b>
Winter Line below " " <b>NIL</b>	Winter " " <b>3337</b>
Winter North Atlantic Line " " <b>NIL</b>	Winter North Atlantic " " <b>3337</b>

**23.8.1949**

