

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>GEMMA.</b>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <b>117.03</b> - Breadth <b>19.050</b> - Depth <b>8.001</b> -					Date of Survey <b>22.1.51</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature
Coefficient of fineness for use with Tables <b>820</b>					Particulars of Classification <b>+100A C.P.B.</b> <b>de</b>

<b>DEPTH FOR FREEBOARD (D).</b> Moulded depth ... .. <b>8.001</b> Stringer plate ... .. <b>16</b> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <b>8.017</b>	<b>DEPTH CORRECTION.</b> (a) Where D is greater than Table depth (D-Table depth) R = <b>+53 -/-</b> (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures	<b>ROUND OF BEAM CORRECTION.</b> Moulded Breadth (B) Standard Round of Beam = $\frac{B \times 12}{50} =$ Ship's Round of Beam = Difference Restricted to Correction = $\frac{\text{Diff.}}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ <b>-5 -/-</b>
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DEDUCTION FOR SUPERSTRUCTURES.						
	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ... ..						
„ overhang ... ..						
R.Q.D. enclosed ... ..						
„ overhang ... ..						
Bridge enclosed ... ..						
„ overhang aft ... ..						
„ overhang forward ... ..						
Fore enclosed ... ..						
„ overhang ... ..						
Trunk aft ... ..						
„ forward ... ..						
Tonnage opening aft ... ..						
„ „ forward ... ..						
Total ... ..	<b>28.704</b>	<b>28.662</b>			<b>28.662</b>	

Standard Height of Superstructure	
„ „ R.Q.D.	
Deduction for complete superstructure	<b>1040 -/-</b>
Percentage covered $\frac{S}{L} =$	<b>24.53</b>
„ „ $\frac{S_1}{L} =$	<b>24.49</b>
„ „ $\frac{E}{L} =$	
Percentage from Table, Line <b>A. TANKER.</b>	<b>17.14</b>
(corrected for absence of forecastle (if required))	
Percentage from Table, Line B.	
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = <b>1040 x 17.14 =</b>	<b>-178 -/-</b>

SHEER CORRECTION.									
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..		1					1		
$\frac{1}{2}L$ from A.P. ... ..		4					4		
$\frac{2}{3}L$ „ ... ..		2					2		
Amidships ... ..		4					4		
$\frac{2}{3}L$ from F.P. ... ..		2					2		
$\frac{1}{2}L$ „ ... ..		4					4		
F.P. ... ..		1					1		
Total ... ..				<b>11058</b>					<b>2500</b>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) =$  **+298 -/-**

If limited on account of midship superstructure.

If limited to maximum allowance of  $1\frac{1}{2}$  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>8.017</b> Summer freeboard = <b>2.530</b> Moulded draught (d) = <b>5.487</b> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = <b>114 -/-</b> Addition for Winter North Atlantic Freeboard (if required) = <b>114 -/- + 96 = 210 mm</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 = $\frac{\Delta}{40 T}$ inches = <b>11 mm.</b>	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required) Correction for coefficient <b>1.50/1.36</b> <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td><b>53</b></td> <td></td> </tr> <tr> <td>Deduction for superstructures</td> <td></td> <td><b>178</b></td> </tr> <tr> <td>Sheer correction</td> <td><b>298</b></td> <td></td> </tr> <tr> <td>Round of Beam correction</td> <td></td> <td><b>5</b></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc. to summer moulded draught of 18.0</td> <td><b>712</b></td> <td></td> </tr> <tr> <td></td> <td><b>1063</b></td> <td><b>183</b></td> </tr> </table> Summer Freeboard = <b>2530</b>		+	-	Depth Correction	<b>53</b>		Deduction for superstructures		<b>178</b>	Sheer correction	<b>298</b>		Round of Beam correction		<b>5</b>	Correction for Thickness of Deck amidships			Other corrections, scantlings, etc. to summer moulded draught of 18.0	<b>712</b>			<b>1063</b>	<b>183</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	22 mm.	Tropical Fresh Water Freeboard	253 mm.
Fresh Water Line „ „	11 mm.	Fresh Water „ „	242 mm.
Tropical Line „ „	11 mm.	Tropical „ „	242 mm.
Winter Line below „ „	11 mm.	Winter „ „	264 mm.
Winter North Atlantic Line „ „	21 mm.	Winter North Atlantic „ „	274 mm.