

# Amended computation

## Lloyd's Register of Shipping.

### SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

 Index. No. 8806  
 (For London Office only).

Ship's Name <b>MANUEL CALVO</b>	Official Number	Nationality and Port of Registry <b>Spanish, Barcelona</b>	Gross Tonnage <b>5617</b>	Date of Build <b>1892, 3mo.</b>	Port of Survey <b>Cadiz</b>
Moulded Dimensions: Length <b>128.00m</b> Breadth <b>14.56m</b> Depth <b>9.830m</b>					Date of Survey <b>February 14/41.</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					Surveyor's Signature <b>R. Langlands</b>
Coefficient of fineness for use with Tables <b>.78 assumed</b>					Particulars of Classification <b>100A1</b> <i>continued</i> <i>recalculation</i>

Depth for Freeboard (D). <b>m.</b>	Depth correction.	Round of Beam correction.
Moulded depth ... <b>9.830</b>	(a) Where D is greater than Table depth $(D - \text{Table depth}) R = 8.33 \times (9.886 - 8.535) 30 = +338 \text{ m/m}$	Moulded Breadth (B) <b>14.56m</b>
Stringer plate ... <b>.017</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 291 \text{ m/m}$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) = .3889 \times .455 = .039$	If restricted by superstructures <input checked="" type="checkbox"/>	Ship's Round of Beam = <b>305 "</b>
Depth for Freeboard (D) = <b>9.886</b>		Difference <b>14 "</b>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{14^2}{4} \times .4433 = -2 \text{ m/m}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height m/m	Height Correction	Effective Length (E)
Poop enclosed <i>Equip.</i>	<b>12.72</b>	<b>12.72</b>	<b>2134-39</b> <i>(virtual)</i>	<b>2095</b>	<b>11.64</b>
.. overhang ...					
R.Q.D. enclosed					
.. overhang					
Bridge enclosed...	<b>42.57</b>	<b>42.57</b>	<b>2290-39</b> <i>(virtual)</i>	<b>2251</b>	<b>41.85</b>
.. overhang aft	<b>.22</b>	<b>.17</b>			<b>.17</b>
.. overhang forward	<b>.21</b>	<b>.11</b>			<b>.11</b>
Fore enclosed <i>Equip.</i>	<b>14.85</b>	<b>14.85</b>	<b>2134-39</b> <i>(virtual)</i>	<b>2095</b>	<b>13.57</b>
.. overhang <i>Equip.</i>	<b>1.68</b>	<b>.84</b>			<b>.77</b>
Trunk aft					
.. forward					
Tonnage opening aft					
.. forward					
Total	<b>72.25</b>	<b>71.26</b>			<b>68.11</b>

Standard Height of Superstructure **2.290m**  
 " " R.Q.D. **1067 m/m**  
 Deduction for complete superstructure  
 Percentage covered  $\frac{S}{L} = 56.45$   
 " "  $\frac{S_1}{L} = 55.67$   
 " "  $\frac{E}{L} = 53.22$   
 Percentage from Table, Line A. **39.22**  
 (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 =  $1067 \times .3922 = -418 \text{ m/m}$

## SHEER CORRECTION.

Station	Standard Ordinate m/m	S	Product m/m	Actual Ordinate m/m	Effective Ordinate	S	Product
A.P. ...	<b>1320</b>	1	<b>1320</b>	<b>762</b>	<b>762</b>	1	<b>762</b>
$\frac{1}{2}L$ from A.P. ...	<b>587</b>	4	<b>2348</b>	<b>203</b>	<b>203</b>	4	<b>812</b>
$\frac{2}{3}L$ " ...	<b>147</b>	2	<b>294</b>	-	-	2	-
Amidships ...	-	4	-	-	-	4	-
$\frac{2}{3}L$ from F.P. ...	<b>293</b>	2	<b>586</b>	<b>317</b>	<b>317</b>	2	<b>634</b>
$\frac{1}{2}L$ " ...	<b>1173</b>	4	<b>4692</b>	<b>1029</b>	<b>1029</b>	4	<b>4116</b>
F.P. ...	<b>2640</b>	1	<b>2640</b>	<b>2692</b>	<b>2692</b>	1	<b>2692</b>
Total			<b>11880</b>				<b>9016</b>

Mean actual sheer aft = **less than 50%**  
 Mean standard sheer aft  
 Mean actual sheer forward = **Deficient**  
 Mean standard sheer forward  
 Length of enclosed superstructure forward of amidships = **Deficient**  
 " aft of " = **Deficient**  
 Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{2864 - 2822}{18} = +2.22 \text{ m/m}$   
 If limited on account of midship superstructure. ☒

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. <b>m</b> Depth to Freeboard Deck = <b>9.936</b> Summer freeboard = <b>2.160</b> Moulded draught (d) = <b>7.776</b> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48} \text{ inches} = 162 \text{ m/m}$ Addition for Winter North Atlantic Freeboard (if required) =	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40T} \text{ inches} = 162 \text{ m/m}$ $\frac{48}{48} = 162 \text{ m/m}$	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.78 + .68}{1.36} = 1.46/1.36$ <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td>338</td> <td>-</td> </tr> <tr> <td>Deduction for superstructures</td> <td>-</td> <td>418</td> </tr> <tr> <td>Sheer correction</td> <td>74</td> <td>-</td> </tr> <tr> <td>Round of Beam correction</td> <td>-</td> <td>2</td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td>50</td> <td>-</td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td>-</td> <td>-</td> </tr> <tr> <td></td> <td><b>462</b></td> <td><b>420</b></td> </tr> </table> Summer Freeboard = <b>2160 m/m</b>		+	-	Depth Correction	338	-	Deduction for superstructures	-	418	Sheer correction	74	-	Round of Beam correction	-	2	Correction for Thickness of Deck amidships	50	-	Other corrections, scantlings, etc.	-	-		<b>462</b>	<b>420</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>324 m/m</b> Fresh Water Line " " ... <b>162 "</b> Tropical Line " " ... <b>162 "</b> Winter Line below " " ... <b>162 "</b> Winter North Atlantic Line " " ... <b>162 "</b>	Tropical Fresh Water Freeboard ... <b>1836 "</b> Fresh Water " " ... <b>1998 "</b> Tropical " " ... <b>1998 "</b> Winter " " ... <b>2322 "</b> Winter North Atlantic " " ... <b>2322 "</b>
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