

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>HABANA.</b>	Official Number	Nationality and Port of Registry <b>Spanish Barcelona</b>	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <b>143.30m</b> Breadth <b>18.59m</b> Depth <b>10.90m</b>					Date of Survey <b>24.7.47</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>17511</b> tons					Surveyor's Signature
Coefficient of fineness for use with Tables <b>68 (actual 678)</b>					Particulars of Classification <b>+ 100A1 with freeboard</b>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... .. <b>10.900</b>	(a) Where D is greater than Table depth (D-Table depth) R = <b>8.33/10.912-9.753)30 = +290mm</b>	Moulded Breadth (B) <b>18.590</b>
Stringer plate ... .. <b>012</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>1.159</b>	Standard Round of Beam = $\frac{B \times 19}{50} = \mathbf{372 \text{ mm}}$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <b>-</b>	If restricted by superstructures	Ship's Round of Beam = <b>306</b>
Depth for Freeboard (D) = <b>10.912</b>		Difference <b>66</b>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{66}{4} \times 0.134 = \mathbf{Nil.}$

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <b>Count</b> ...	<b>8.44</b>	<b>8.44</b>	<b>2.44</b>	<b>-</b>	<b>8.44</b>
" overhang ... "	<b>.47</b>	<b>.23</b>	<b>2.44</b>	<b>-</b>	<b>.23</b>
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...	<b>.72</b>	<b>.54</b>	<b>2.74</b>	<b>-</b>	<b>.54</b>
" overhang forward ...					
Fore enclosed <b>and bridge</b>	<b>135.13</b>	<b>135.13</b>	<b>2.44</b>	<b>-</b>	<b>135.13</b>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<b>144.76</b>	<b>144.34</b>			<b>144.34</b>

Standard Height of Superstructure	<b>2.290m.</b>
" " R.Q.D.	<b>-</b>
Deduction for complete superstructure	<b>1067 mm.</b>
Percentage covered $\frac{S}{L} =$	<b>98.95</b>
" " $\frac{S_1}{L} =$	<b>98.66</b>
" " $\frac{E}{L} =$	<b>98.66</b>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<b>98.35</b>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	<b>1067 x .9835 = 1049</b>

SHEER CORRECTION.							
Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	<b>1473</b>	<b>1</b>	<b>1473</b>	<b>876</b>	<b>876</b>	<b>1</b>	<b>876</b>
$\frac{1}{8}L$ from A.P. ...	<b>654</b>	<b>4</b>	<b>2616</b>	<b>229</b>	<b>229</b>	<b>4</b>	<b>916</b>
$\frac{2}{8}L$ " ...	<b>164</b>	<b>2</b>	<b>328</b>	<b>-51</b>	<b>-51</b>	<b>2</b>	<b>-102</b>
Amidships ...	<b>-</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>-</b>
$\frac{2}{8}L$ from F.P. ...	<b>327</b>	<b>2</b>	<b>654</b>	<b>437</b>	<b>437</b>	<b>2</b>	<b>874</b>
$\frac{1}{8}L$ " ...	<b>1308</b>	<b>4</b>	<b>5232</b>	<b>1280</b>	<b>1280</b>	<b>4</b>	<b>5120</b>
F.P. ...	<b>2946</b>	<b>1</b>	<b>2946</b>	<b>2556</b>	<b>2556</b>	<b>1</b>	<b>2556</b>
Total ...			<b>13249</b>				<b>10240</b>

Mean actual sheer aft = **< 1**  
Mean standard sheer aft = **< 1**

Mean actual sheer forward = **< 1**  
Mean standard sheer forward = **< 1**

Length of enclosed superstructure forward of amidships = **Not applicable**  
aft of " = **sheer being deficient.**

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{3009(75 - .494)}{18} = \mathbf{+43 \text{ mm}}$   
If limited on account of midship superstructure. **2553** If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient <b>Nil</b>
Depth to Freeboard Deck = <b>10.912</b>	$\Delta =$	Depth Correction ... <b>290</b>
Summer freeboard = <b>2.222</b>	Tons per inch immersion at summer load water line	Deduction for superstructures ... <b>1049</b>
Moulded draught (d) = <b>5.690</b>	T =	Sheer correction ... <b>43</b>
Deduction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40 T}$ inches	Round of Beam correction ... <b>-</b>
Winter freeboard = $\frac{d}{4}$ inches =	<b>178 mm</b>	Correction for Thickness of Deck amidships ... <b>-</b>
Addition for Winter North Atlantic Freeboard (if required) =		Other corrections, scantlings, etc. <b>492</b>
		<b>825</b> <b>1049</b>
		Summer Freeboard = <b>2222</b>

*corrected with freeboard assigned by U.S. Coast Guard on behalf of the Spanish Authorities*

ALL SEASONS SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc ... <b>14.25</b>	Tropical Fresh Water Freeboard <b>18.59</b>
Fresh Water Line " " <b>7.00</b>	Fresh Water " " <b>20.41</b>
Tropical Line " " <b>Nil</b>	Tropical " " <b>24.03</b>
Winter Line below " " <b>Nil</b>	Winter " " <b>24.03</b>
Winter North Atlantic Line " " <b>Nil</b>	Winter North Atlantic " " <b>24.03</b>

**2222 mm = 87.50"**  
**2044 " = 80.50"**  
**2222 " = 87.50"**  
**2403 " = 94.75"**