

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

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Ship's Name <b>JULIAN PRESA.</b> <b>EX. VIRGINIAN COAST.</b>	Official Number	Nationality and Port of Registry <b>PUERTO RICO</b> <del>LIBERTIA</del> <b>COSTA RICAN</b>	Gross Tonnage <b>1599.</b>	Date of Build	Port of Survey _____
Moulded Dimensions: Length <b>250.00</b> Breadth <b>37.0</b> Depth <b>18.50.</b>					Date of Survey <b>1.11.54.</b>
Freeboard Length _____					Surveyor's Signature _____
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>3175.</b> tons					Particulars of Classification <b>+100 A1.</b>
Coefficient of fineness for use with Tables <b>.764.</b>					

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... .. <b>18.50</b>	(a) Where D is greater than Table depth (D-Table depth) R = <b>(18.55-16.67) 1.923 = 3.63</b>	Moulded Breadth (B) <b>37.00.</b>
Stringer plate ... .. <b>.05</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>1.88</b>	Standard Round of Beam = $\frac{B \times 12}{50} = \mathbf{8.88}$
Wood Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <b>9.00</b>
Depth for Freeboard (D) = <b>18.65</b>		Difference <b>.12.</b>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.12^2 \times .2765}{4} = \mathbf{-.01.}$

## 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 ... ..	<b>140.45</b>	<b>140.45</b>	<b>4.0'</b>		<b>140.45</b>
" overhang ... ..					
Bridge enclosed ... ..	<b>15.33</b>	<b>15.33</b>	<b>8.0'</b>		<b>15.33</b>
" overhang aft ... ..					
" overhang forward ... ..					
F'cle enclosed ... ..	<b>25.00</b>	<b>25.00</b>	<b>7.0'</b>		<b>25.00</b>
" overhang ... ..	<b>21</b>	<b>10</b>			<b>10</b>
Trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..					
" " forward ... ..					
Total ... ..	<b>180.99</b>	<b>180.88</b>			<b>180.88</b>

Standard Height of Superstructure	<b>6.0</b>
" " R.Q.D.	<b>4.0.</b>
Deduction for complete superstructure	<b>31.0</b>
Percentage covered $\frac{S}{L} =$	<b>42.40</b>
" " $\frac{S_1}{L} =$	<b>42.35</b>
" " $\frac{E}{L} =$	<b>42.35</b>
Percentage from Table, Line A. <b>TIMBER.</b>	<b>82.91</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>31.00 x .8291 = 25.70</b>

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ... ..	<b>35.00</b>	1	<b>35.00</b>	<b>39.00</b>	<b>39.00</b>	1	<b>39.00</b>
$\frac{1}{8}L$ from A.P. ... ..	<b>15.54</b>	4	<b>62.16</b>	<b>17.58</b>	<b>17.58</b>	4	<b>70.32</b>
$\frac{2}{8}L$ " ... ..	<b>3.85</b>	2	<b>7.70</b>	<b>4.38</b>	<b>4.38</b>	2	<b>8.76</b>
Amidships ... ..	<b>0</b>	4	<b>0</b>	<b>0</b>	<b>0</b>	4	<b>0</b>
$\frac{3}{8}L$ from F.P. ... ..	<b>4.70</b>	2	<b>15.40</b>	<b>8.96</b>	<b>8.96</b>	2	<b>17.92</b>
$\frac{4}{8}L$ " ... ..	<b>31.15</b>	4	<b>124.60</b>	<b>35.93</b>	<b>35.93</b>	4	<b>143.72</b>
F.P. ... ..	<b>70.00</b>	1	<b>70.00</b>	<b>80.00</b>	<b>80.00</b>	1	<b>80.00</b>
Total ... ..			<b>314.78</b>				<b>359.72</b>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{44.94}{18} \left( .75 - \frac{362}{2 \times 250} \right) = \mathbf{-.94}$

If limited on account of midship superstructure.

Mean actual sheer aft = **EXCESS**  
 Mean standard sheer aft = **EXCESS**

Mean actual sheer forward = **EXCESS.**  
 Mean standard sheer forward = **EXCESS.**

Length of enclosed superstructure forward of amidships = **2.1**  
 " " aft of " = **.5**

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Ft.	Displacement in salt water at summer load water line
Depth to Freeboard Deck = <b>22.55</b>	$\Delta =$
Summer freeboard = <b>4.94</b>	Tons per inch immersion at summer load water line
Moulded draught (d) = <b>14.61</b>	T =
Keel allowance =	
Extreme draught =	
Deduction for Tropical freeboard and addition $\frac{d}{4} =$ <b>4.4042</b>	Deduction = $\frac{\Delta}{40 T}$ inches
Winter freeboard = $\frac{d}{3}$ inches = <b>5.8453</b>	<b>4 3/4</b>
Addition for Winter North Atlantic Freeboard (if required) =	

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient	+	-	Result
$\frac{764 \times .68}{1.36} = 380$			<b>32.30</b>
$\frac{1.444}{1.36} = 1.06$			<b>34.30</b>
Depth Correction ... ..	<b>3.63</b>		
Deduction for superstructures ... ..		<b>25.70</b>	
Sheer correction ... ..		<b>.94</b>	
Round of Beam correction ... ..		<b>.01</b>	
Correction for Thickness of Deck amidships ... ..	<b>48.00</b>		
Other corrections, scantlings, etc. ... ..			
	<b>51.63</b>	<b>26.68</b>	<b>+ 24.95</b>
			<b>Summer Freeboard = 59.25</b>

TINBER.

SUMMER FREEBOARD amidships from (Centre of Disc) top of Deck Line, Wood, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	15"	10 1/2"	10 1/4"	10 1/2"	10 1/4"	10 1/2"
Fresh Water Line " "						
Tropical Line " "						
Winter Line below " "						
Winter North Atlantic Line " "						