

TIMBER

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

 23 MAR 1934 13667
 Index. No. _____
 (For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker
 having poop, bridge forecastle.

Port of Survey Bilbas

Date of Survey 22nd February 1934.

Name of Surveyor R. Crawford.

Particulars of Classification 7100 M.

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>ZURRIOLA.</u>				

Moulded Dimensions: Length Breadth Depth

Moulded displacement at moulded draught = 85 per cent. of moulded depth tons

Coefficient of fineness for use with Tables 815.

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth	(a) Where D is greater than Table depth (D-Table depth) R = <u>+ 109 mm</u>	Moulded Breadth (B)
Stringer plate	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>✓</u>	Standard Round of Beam = $\frac{B \times 12}{50} =$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures <u>✓</u>	Ship's Round of Beam =
Depth for Freeboard (D) = <u>6235.</u>		Difference
		Restricted to
		Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>+ 2 mm.</u>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
„ overhang					
R.Q.D. enclosed					
„ overhang					
Bridge enclosed					
„ overhang aft					
„ overhang forward					
F'cle enclosed					
„ overhang					
Trunk aft					
„ forward					
Tonnage opening aft					
„ „ forward					
Total					

Standard Height of Superstructure _____

„ „ R.Q.D. _____

Deduction for complete superstructure 855

Percentage covered $\frac{S}{L} =$

„ „ $\frac{S_1}{L} =$

„ „ $\frac{E}{L} =$ 42.63% ✓

Percentage from Table, Line A. Timber 64.65%
 (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 = 855 × 64.65 = - 553

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.		1					1		
$\frac{1}{8}L$ from A.P.		4					4		
$\frac{2}{8}L$ „		2					2		
Amidships		4					4		
$\frac{3}{8}L$ from F.P.		2					2		
$\frac{1}{8}L$ „		4					4		
F.P.		1					1		
Total									

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) =$ - 38 mm

If limited on account of midship superstructure.

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard.
 Addition for Winter and Winter North Atlantic Freeboard.

Ft.

Depth to Freeboard Deck = 6235

Summer freeboard = 580

Moulded draught (d) = 5655

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = 118 mm

Addition for Winter North Atlantic Freeboard (if required) = $\frac{d}{36}$ inches = 157 mm

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 = $\frac{\Delta}{40T}$ inches

$\frac{d}{4} = 118$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

+	-
109	-
-	553
-	38
2	-
-	-
-	-
111	591
- 480	
Summer Freeboard = 580	

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

Tropical Fresh Water Line above Centre of Disc	<u>21.06</u> = <u>535</u>	Tropical Fresh Water Freeboard	<u>22.83</u> = <u>580</u>
Fresh Water Line	<u>16.44</u> = <u>417</u>	Fresh Water	<u>13.54</u> = <u>344</u>
Tropical Line	<u>16.44</u> = <u>417</u>	Tropical	<u>18.79</u> = <u>462</u>
Winter Line below above	<u>5.58</u> = <u>142</u>	Winter	<u>18.79</u> = <u>462</u>
Winter North Atlantic Line „below	<u>6.41</u> = <u>163</u>	Winter North Atlantic	<u>29.02</u> = <u>737</u>
			<u>41.01</u> = <u>1042</u>