

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Barcelona</u>
having <u>a fore castle</u>					Date of Survey <u>5th, 7th April 1934</u>
(Type of Superstructures.)					Name of Surveyor <u>G. J. Thomas</u>
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification <u>+ 100 A1</u> <u>with freeboard.</u>
<u>CIUDAD DE BARCELONA</u>	<u>Spanish</u> <u>Palma de Mallorca</u>		<u>3946</u>	<u>1929-8</u>	
Moulded Dimensions: Length <u>100.89</u> Breadth <u>14.884</u> Depth <u>8.509</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>7490 m<sup>3</sup></u> tons					
Coefficient of fineness for use with Tables <u>.690</u>					

Depth for Freeboard (D)		Depth correction	Round of Beam correction
Moulded depth ... ..	<u>8509</u>	(a) Where D is greater than Table depth (D-Table depth) R = <u>8.33 (8574-6.726) 25.48</u>	Moulded Breadth (B) <u>14.884</u>
Stringer plate ... ..	<u>12</u>	<u>= + 392 mm</u>	Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>298</u>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <u>65 x .8019</u>	<u>53</u>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>✓</u>	Ship's Round of Beam = <u>152</u>
Depth for Freeboard (D) = <u>8574</u>		If restricted by superstructures <u>✓</u>	Difference <u>146</u>
			Restricted to
			Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{146}{4} \times .8019 = +292$

### 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 ... ..					
F'cle enclosed ... ..	<u>19.99</u>	<u>19.99</u>	<u>2.21</u>	<u>✓</u>	<u>19.99</u>
„ overhang ... ..					
Trunk aft ... ..					
„ forward ... ..					
Tonnage opening aft ... ..					
„ „ forward ... ..					
Total ... ..	<u>19.99</u>	<u>19.99</u>			<u>19.99</u>

Standard Height of Superstructure	<u>2.078</u>
„ „ R.Q.D.	<u>✓</u>
Deduction for complete superstructure	<u>950</u>
Percentage covered $\frac{S}{L} =$	<u>19.81 %</u>
„ „ $\frac{S_1}{L} =$	<u>19.81 %</u>
„ „ $\frac{E}{L} =$	<u>19.81 %</u>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<u>9.90 %</u>
Percentage from Table, Line B. <u>✓</u> (corrected for absence of forecastle (if required))	
Interpolation for bridge less than .2L (if required)	
Deduction = <u>950 x .099 = - 94.7</u>	

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	<u>1094</u>	<u>1</u>		<u>1094</u>	<u>920</u>	<u>920</u>	<u>1</u>		<u>920</u>
$\frac{1}{2}$ L from A.P. ... ..	<u>486</u>	<u>4</u>		<u>1944</u>	<u>349</u>	<u>349</u>	<u>4</u>		<u>1396</u>
$\frac{3}{8}$ L „ ... ..	<u>121</u>	<u>2</u>		<u>242</u>	<u>87</u>	<u>87</u>	<u>2</u>		<u>174</u>
Amidships ... ..	<u>✓</u>	<u>4</u>		<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>4</u>		<u>✓</u>
$\frac{3}{8}$ L from F.P. ... ..	<u>243</u>	<u>2</u>		<u>486</u>	<u>213</u>	<u>213</u>	<u>2</u>		<u>426</u>
$\frac{1}{2}$ L „ ... ..	<u>973</u>	<u>4</u>		<u>3892</u>	<u>851</u>	<u>851</u>	<u>4</u>		<u>3404</u>
F.P. ... ..	<u>2189</u>	<u>1</u>		<u>2189</u>	<u>1874</u>	<u>1874</u>	<u>1</u>		<u>1874</u>
Total ... ..				<u>9847</u>					<u>8194</u>

Mean actual sheer aft = Deficient  
Mean standard sheer aft

Mean actual sheer forward = Deficient  
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = } sheer  
„ „ aft of „ = } deficient

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{1653}{18} \left( .75 - .0997 \right) = + 60 \frac{1}{2} \%$   
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.	Deduction for Fresh Water.	TABULAR FREEBOARD (corrected for Flush Deck (if required))	<u>1302</u>
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.67 + .68}{1.36} = \frac{1.35}{1.36}$	<u>1312</u>
Depth to Freeboard Deck = <u>8586</u>	$\Delta =$	Depth Correction ... ..	<u>392</u>
Summer freeboard = <u>2714</u>	Tons per inch immersion at summer load water line	Deduction for superstructures ... ..	<u>94</u>
Moulded draught (d) = <u>5872</u>	T =	Sheer correction ... ..	<u>60</u>
Deduction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40T}$ inches	Round of Beam correction ... ..	<u>29</u>
Winter freeboard = $\frac{d - 5}{48}$ inches = <u>122 1/2</u>	<u>8586</u>	Correction for Thickness of Deck amidships ... ..	<u>12</u>
Addition for Winter North Atlantic Freeboard (if required) = <u>✓</u>	<u>2934</u>	Other corrections, scantlings, etc., to be made ... ..	<u>1223</u>
	<u>5652 ÷ 48 = 118 1/2</u>	Summer Freeboard = <u>+ 2934</u>	

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

Tropical Fresh Water Line above Centre of Disc ...	<u>118 1/2</u> = <u>4.65</u>	Tropical Fresh Water Freeboard ...	<u>2934</u> = <u>115.50</u>
Fresh Water Line „ „ ...	<u>118 1/2</u> = <u>4.65</u>	Fresh Water „ „ ...	<u>2816</u> = <u>110.85</u>
Tropical Line „ „ ...	<u>✓</u> = <u>✓</u>	Tropical „ „ ...	<u>2816</u> = <u>110.85</u>
Winter Line below „ „ ...	<u>✓</u> = <u>✓</u>	Winter „ „ ...	<u>2934</u> = <u>115.50</u>
Winter North Atlantic Line „ „ ...	<u>✓</u> = <u>✓</u>	Winter North Atlantic „ „ ...	<u>2934</u> = <u>115.50</u>



PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway	...	...	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	Sides	Thickness	Ends	Stiffeners	Stays	...	...	...	...	...
HATCH BEAMS	Number	Spacing	...	Sketch	...	...	...	...	...	...	...
FORE AND AFTERS	Bearing Surface	...	...	...	...	...	...	...	...	...	...
HATCH COVERS	Material	Thickness	How fitted	...	...	...	...	...	...	...	...
Spacing of Cleats	Number of Tarpanins	...	...	...	...	...	...	...	...	...	...
* Are wood fore and afters steel shod at all bearing surfaces ?											
Are battens and wedges efficient and in good condition ?											
Are tarpaulins in good condition and in accordance with rule requirements ?											
Are lashings provided in accordance with rule requirements ?											

Particulars of fiddle, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles :—

Particulars of Companionways :—

*previous  
See report attached for  
particulars of pages  
2, 3 and 4.*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :—

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—

Particulars of Gangway Cargo and Coaling Ports :—



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