

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *Open Forecastle*

(Type of Superstructures.)

Ship's Name *OROVA* Nationality and Port of Registry *British* Official Number Gross Tonnage Date of Build

Moulded Dimensions: Length *525'* Breadth *62.5'* Depth *43.95'*

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

Coefficient of fineness for use with Tables *.78 assumed*

Port of Survey

Date of Survey *11/11/38*

Name of Surveyor

Particulars of Classification

Depth for Freeboard (D)

Moulded depth ... *43.95'*

Stringer plate ... *.04'*

Sheathing on exposed deck

$T \left(\frac{L-S}{L} \right) =$

Depth for Freeboard (D) = *43.99'*

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R = *(43.99 - 35.00) 3.00 = 26.37'*

(b) Where D is less than Table depth (if allowed)
(Table depth - D) R = *8.79'*

If restricted by superstructures ☒

Round of Beam correction

Moulded Breadth (B) *62.5'*

Standard Round of Beam = $\frac{B \times 12}{50} = 15''$

Ship's Round of Beam = *12''*

Difference *3''*

Restricted to

Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{3}{4} (.925) = .70$

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 ...					
Fore enclosed <i>open</i> ...	<i>54.5'</i>	<i>38.07</i>	<i>8.5</i>	<i>✓</i>	<i>38.07</i>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<i>54.5</i>	<i>38.07</i>			<i>38.07</i>

Standard Height of Superstructure	<i>7.50'</i>
" " R.Q.D.	<i>42'</i>
Deduction for complete superstructure	
Percentage covered $\frac{S}{L} =$	<i>10.33</i>
" " $\frac{S_1}{L} =$	<i>7.25</i>
" " $\frac{E}{L} =$	<i>7.25</i>
Percentage from Table, Line A.	<i>3.62</i>
(corrected for absence of forecastle (if required))	<i>✓</i>
Percentage from Table, Line B.	<i>✓</i>
(corrected for absence of forecastle (if required))	<i>✓</i>
Interpolation for bridge less than 2L (if required)	<i>✓</i>
Deduction =	<i>42 \times 0.362 = -1.52</i>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>62.50</i>	<i>1</i>	<i>✓</i>	<i>62.50</i>	<i>36"</i>	<i>36.00</i>	<i>1</i>	<i>✓</i>	<i>36.00</i>
$\frac{1}{2}$ L from A.P. ...	<i>29.81</i>	<i>4</i>	<i>✓</i>	<i>119.24</i>	<i>9.6"</i>	<i>9.60</i>	<i>4</i>	<i>✓</i>	<i>38.40</i>
$\frac{3}{8}$ L " ...	<i>6.845</i>	<i>2</i>	<i>✓</i>	<i>13.75</i>	<i>-2"</i>	<i>-2.00</i>	<i>2</i>	<i>✓</i>	<i>-4.00</i>
Amidships ...	<i>✓</i>	<i>4</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>4</i>	<i>✓</i>	<i>✓</i>
$\frac{3}{8}$ L from F.P. ...	<i>15.75</i>	<i>2</i>	<i>✓</i>	<i>27.50</i>	<i>11.4"</i>	<i>11.40</i>	<i>2</i>	<i>✓</i>	<i>22.80</i>
$\frac{1}{2}$ L " ...	<i>55.62</i>	<i>4</i>	<i>✓</i>	<i>222.52</i>	<i>38.0"</i>	<i>38.00</i>	<i>4</i>	<i>✓</i>	<i>152.00</i>
F.P. ...	<i>125.0</i>	<i>1</i>	<i>✓</i>	<i>125.00</i>	<i>87.0"</i>	<i>87.00</i>	<i>1</i>	<i>✓</i>	<i>87.00</i>
Total ...				<i>562.51</i>					<i>332.20</i>

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} = \frac{230.31}{18} = 12.79$$

If limited on account of midship superstructure.

$$\text{Mean actual sheer aft} = \text{Defn } \checkmark$$

$$\text{Mean actual sheer forward} = \text{Defn } \checkmark$$

$$\text{Length of enclosed superstructure forward of amidships} =$$

$$\text{aft of " } =$$

$$\text{Sheer " Forward" Standard}$$

$$\text{Actual} = .906 \checkmark$$

$$\text{Standard}$$

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

$$\text{Depth to Freeboard Deck} = \text{Ft. } \checkmark$$

$$\text{Summer freeboard} = \text{Ft. } \checkmark$$

$$\text{Moulded draught (d)} = \text{Ft. } \checkmark$$

Deduction for Tropical freeboard and addition for

$$\text{Winter freeboard} = \frac{d}{4} \text{ inches} =$$

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

$$T =$$

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$$1.36$$

$$1.36$$

$$1.36$$

$$1.36$$

$$1.36$$

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$$1.36$$

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

Tropical Fresh Water Line above Centre of Disc ...	...
Fresh Water Line " " ...	...
Tropical Line " " ...	...
Winter Line below " " ...	...
Winter North Atlantic Line " " ...	...

Tropical Fresh Water Freeboard ...	...
Fresh Water " " ...	...
Tropical " " ...	...
Winter " " ...	...
Winter North Atlantic " " ...	...