

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. _____
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

C.S.S. with T.O.

Port of Survey _____

(Type of Superstructures.)

Date of Survey *17-11-32.*

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

Name of Surveyor

Dimensions: Length *441.*

Breadth *56.0*

Depth *30.75*

Displacement at moulded draught = 85 per cent. of moulded depth

tons

Efficiency for use with Tables

.76 assumed.

Particulars of Classification

TWO OR
with Fbd.

Depth for Freeboard (D)

Moulded depth *30.75*

Stringer plate *0.4*

Sheathing on exposed deck

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

Depth for Freeboard (D) = *30.79*

Depth correction

(a) Where D is greater than Table depth

(D - Table depth) R =

$$(30.79 - 29.40) 3 = +4.17$$

(b) Where D is less than Table depth (if allowed)

(Table depth - D) R =

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) *56*

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

13.44

Ship's Round of Beam =

16

Difference

2.56

Restricted to

$$\text{Correction} = \frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right)$$

$$= \frac{2.56}{4} \left(1 - \frac{99.44}{100}\right) = \frac{2.56}{4} (1 - 0.9944) = \frac{2.56}{4} (0.0056) = 0.003584$$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Loop enclosed ...	<i>41.96</i>	<i>41.96</i>	<i>8.0</i>	<i>✓</i>	<i>41.96</i>
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...	<i>394.12</i>	<i>394.12</i>	<i>8.0</i>	<i>✓</i>	<i>394.12</i>
„ overhang aft ...					
„ overhang forward ...					
„ enclosed ...					
„ overhang ...					
„ aft ...					
„ forward ...					
„ opening aft ...	<i>4.92</i>	<i>2.46</i>			<i>2.46</i>
„ forward ...					
Total ...	<i>441.00</i>	<i>438.54</i>			<i>438.54</i>

Standard Height of Superstructure

7.6

R.Q.D.

Deduction for complete superstructure

42

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

100

$\frac{S_1}{L} =$

99.44

$\frac{E}{L} =$

99.44

Percentage from Table, Line A.

(corrected for absence of forecastle (if required))

Percentage from Table, Line B.

99.31

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

CSS

Deduction =

$$42 \times 0.9931 = 41.71$$

SHEER CORRECTION.

Position	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
... ..	<i>54.10</i>	<i>1</i>			<i>36.00</i>	<i>42.00</i>	<i>1</i>		<i>42.00</i>
„ A.P. ...		<i>4</i>				<i>18.69</i>	<i>4</i>		<i>74.76</i>
„ ...		<i>2</i>				<i>4.62</i>	<i>2</i>		<i>9.24</i>
„ Ships ...		<i>4</i>				<i>-</i>	<i>4</i>		<i>-</i>
„ om F.P. ...		<i>2</i>				<i>8.58</i>	<i>2</i>		<i>17.16</i>
„ ...		<i>4</i>				<i>34.71</i>	<i>4</i>		<i>138.84</i>
„ ...	<i>108.20</i>	<i>1</i>			<i>72.00</i>	<i>78.00</i>	<i>1</i>		<i>78.00</i>
Total ...				<i>486.90</i>					<i>360.00</i>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(0.75 - \frac{S}{2L}\right) =$

$$\frac{126.9}{18} \left(0.75 - \frac{50}{25}\right) = +1.76$$

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.

Depth to Freeboard Deck =

Ft.

Summer freeboard =

Moulded draught (d) =

Deduction for Tropical freeboard and addition for

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

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$$\frac{76+68}{136} \frac{1.44}{1.36}$$

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

+	-
<i>4.17</i>	<i>-</i>
<i>-</i>	<i>41.71</i>
<i>1.76</i>	<i>-</i>
<i>-</i>	<i>-</i>
<i>-</i>	<i>-</i>
<i>-</i>	<i>-</i>
<i>5.93</i>	<i>41.71</i>

Summer Freeboard =

84.31

89.26

-35.78

53.48

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

Tropical Fresh Water

Fresh Water Line

Tropical Line

Winter Line

Winter North Atlantic

Line above Centre of Disc

„ „ „ „ „ „

„ „ „ „ „ „

below „ „ „ „ „ „

„ „ „ „ „ „

Tropical Fresh Water Freeboard

Fresh Water

Tropical

Winter

Winter North Atlantic

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