

# Provisional freeboard with Class 2 appliances at Bridge front

## Lloyd's Register of Shipping.

### SURVEYS FOR FREEBOARD.

 Index. No. 28110  
 (For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Port of Survey

(Type of Superstructures.)

Date of Survey 16.5.35

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

FrederikaSwedish  
Stockholm57511904

Name of Surveyor

Moulded Dimensions: Length

265.0

Breadth

38.0

Depth

19.75

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

3820

tons

Coefficient of fineness for use with Tables

.791Particulars of Classification 100M

Depth for Freeboard (D)

Moulded depth ... .. 19.75Stringer plate ... .. .04

Sheathing on exposed deck

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

Depth for Freeboard (D) =

19.79

Depth correction

(a) Where D is greater than Table depth  
(D - Table depth) R =

$$(19.79 - 17.67) \times 2.038 = +4.34$$

(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) 38'

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 9.12$$

$$\text{Ship's Round of Beam} = 9.50$$

Difference .38

Restricted to

$$\text{Correction} = \frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.38}{4} \times .3812 = .04$$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>14.50</u>	<u>14.50</u>	<u>7.5</u>	-	<u>14.50</u>
" overhang ...					
R.Q.D. enclosed ...	<u>59.00</u>	<u>59.00</u>	<u>4.0</u>	<u>4.0/4.2</u>	<u>56.20</u>
" overhang ...					
Bridge enclosed ...	<u>67.00</u>	<u>65.98</u>	<u>7.5</u>	-	<u>65.98</u>
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	<u>24.50</u>	<u>24.50</u>	<u>7.5</u>	-	<u>24.50</u>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	<u>165.00</u>	<u>163.98</u>			<u>161.18</u>

Standard Height of Superstructure 6.15" " R.Q.D. 4.20Deduction for complete superstructure 32.5Percentage covered  $\frac{S}{L} = 62.27$ " "  $\frac{S_1}{L} = 61.88$ " "  $\frac{E}{L} = 60.82$ Percentage from Table, Line A. 47.39

(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 = 32.5 x 47.39 = 15.40

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	<u>36.5</u>	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	
$\frac{4}{8}L$ " ...		4				4	
F.P. ...		1				1	
Total ...			<u>328.46</u>				<u>364.94</u>

Mean actual sheer aft =  
Mean standard sheer aftMean actual sheer forward =  
Mean standard sheer forwardLength of enclosed superstructure forward of amidships = .03" " aft of " = .50

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{36.48}{18} \left( \frac{.75 - .3113}{2} \right) = -.89$$

If limited on account of midship superstructure.

$$.89 \times \frac{13}{20} = -.58$$

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 = 19.75Summer freeboard = 2.22Moulded draught (d) = 17.53

Correction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = 4.38

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

$$= \frac{4.38}{40 \times 111} = .0097$$

$$d/u = 4.38 \times .0097 = .042$$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$$\frac{.791 + .68}{1.36} = \frac{1.471}{1.36}$$

Depth Correction ... .. 4.32Deduction for superstructures ... .. 15.40Sheer correction ... .. 0.58Round of Beam correction ... .. 0.04

Correction for Thickness of Deck amidships ... ..

Other corrections, scantlings, etc. ... ..

Summer Freeboard = 26.64SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, W, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ...

.222

Fresh Water Line " "

.111

Tropical Line " "

.111

Winter Line below " "

.111

Winter North Atlantic Line " "

.161

Tropical Fresh Water Freeboard ...

455

Fresh Water " "

566

Tropical " "

566

Winter " "

788

Winter North Atlantic " "

838



0160 1/2

Total length of after superstructure 14.50 ✓  
 52.00 ✓  
 62.00 ✓  
140.50 ✓

$$\frac{140.50}{265.0} = .5302 \checkmark$$

.5 ..... 1002 ✓  
 .7 ..... 902 ✓  
.2 ..... 102

$$10 \times \frac{.0302}{.2000} = \frac{100.00}{98.49} \checkmark$$

$$67 \times .9849 = 65.98 \checkmark$$



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