

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker				Port of Survey _____
having _____				Date of Survey _____
(Type of Superstructures.)				Name of Surveyor _____
Ship's Name  <div style="font-size: 1.2em; font-family: cursive;">M.V CALDERGATE</div>	Nationality and Port of Registry	Official Number	Gross Tonnage  <div style="font-size: 1.2em; font-family: cursive;">138.</div>	Date of Build  <div style="font-size: 1.2em; font-family: cursive;">1926.</div>
Moulded Dimensions: Length <div style="font-size: 1.2em; font-family: cursive;">97.0</div> Breadth <div style="font-size: 1.2em; font-family: cursive;">17.125</div> Depth <div style="font-size: 1.2em; font-family: cursive;">8.54.</div>				Particulars of Classification <div style="font-size: 1.2em; font-family: cursive;">7100A 1</div>
Moulded displacement at moulded draught = 85 per cent. of moulded depth				tons
Coefficient of fineness for use with Tables <div style="font-size: 1.2em; font-family: cursive;">.75 assumed.</div>				

  

<div style="text-align: center; font-weight: bold;">Depth for Freeboard (D)</div> <div style="margin-top: 10px;">           Moulded depth    ...    ...    ...    ...            Stringer plate    ...    ...    ...    ...            Sheathing on exposed deck  <math>T \left( \frac{L-S}{L} \right) =</math>              Depth for Freeboard (D) = <div style="border: 1px solid black; padding: 2px; display: inline-block; font-size: 1.2em; font-family: cursive;">8.56.</div> </div>	<div style="text-align: center; font-weight: bold;">Depth correction</div> <div style="margin-top: 10px;">           (a) Where D is greater than Table depth                  (D—Table depth) R = <div style="float: right; font-size: 1.2em; font-family: cursive;">+1.56.</div>              (b) Where D is less than Table depth (if allowed)                  (Table depth—D) R =              If restricted by superstructures         </div>	<div style="text-align: center; font-weight: bold;">Round of Beam correction</div> <div style="margin-top: 10px;">           Moulded Breadth (B)            Standard Round of Beam = <math>\frac{B \times 12}{50} =</math>            Ship's Round of Beam =            Difference            Restricted to            Correction = <math>\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) =</math> </div>
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## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>i</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed... ..					
„ overhang aft ...					
„ overhang forward					
Fore enclosed ... ..					
„ overhang ... ..					
Trunk aft ... ..					
„ forward ... ..					
Tonnage opening aft ...					
„ „ forward					
Total ... ..					

Standard Height of Superstructure .....

„ „ R.Q.D. ....

Deduction for complete superstructure 15.7

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

„ „  $\frac{S_i}{L} =$

„ „  $\frac{E}{L} = 47.28$

Percentage from Table, Line A. 29.68  
(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 = 15.7 × .2968 = 4.66

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
P. ...		1				1	
from A.P. ...		4				4	
" ...		2				2	
midships ...		4				4	
from F.P. ...		2				2	
" ...		4				4	
P. ...		1				1	
Total ...							

$$\frac{\text{Mean actual sheer aft}}{\text{Mean standard sheer aft}} =$$
$$\frac{\text{Mean actual sheer forward}}{\text{Mean standard sheer forward}} =$$
$$\frac{\text{Length of enclosed superstructure}}{L} \text{ forward of amidships} =$$

" " aft of " =

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{8}{24} \right) =$$

If limited on account of midship superstructure.

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

<p><b>Deduction for Tropical Freeboard.</b></p> <p><b>Addition for Winter and Winter North Atlantic Freeboard.</b></p> <p>Depth to Freeboard Deck = <u>8.56</u> Ft.</p> <p>Summer freeboard = <u>.65</u></p> <p>Moulded draught (d) = <u>7.91</u></p> <p><b>Deduction for Tropical freeboard and addition for Winter freeboard = <math>\frac{d}{4}</math> inches = <u>1.98 - 2</u></b></p> <p><b>Addition for Winter North Atlantic Freeboard (if required) =</b></p>	<p><b>Deduction for Fresh Water.</b></p> <p>Displacement in salt water at summer load water line</p> <p><math>\Delta =</math></p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = <math>\frac{\Delta}{40 T}</math> inches</p> <p>=</p>	<p><b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required)</p> <p>Correction for coefficient</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">+</th> <th style="text-align: center;">-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction ... ..</td> <td style="text-align: center;">1.56</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Deduction for superstructures ... ..</td> <td style="text-align: center;">-</td> <td style="text-align: center;">4.66</td> </tr> <tr> <td>Sheer correction ... ..</td> <td style="text-align: center;">.67</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Round of Beam correction ... ..</td> <td style="text-align: center;">-</td> <td style="text-align: center;">.02</td> </tr> <tr> <td>Correction for Thickness of Deck amidships ... ..</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Other corrections, scantlings, etc. ... ..</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td></td> <td style="text-align: center;"><u>2.23</u></td> <td style="text-align: center;"><u>4.68</u></td> </tr> </tbody> </table> <p style="text-align: right;">Summer Freeboard = <u>7.75</u></p>		+	-	Depth Correction ... ..	1.56	-	Deduction for superstructures ... ..	-	4.66	Sheer correction ... ..	.67	-	Round of Beam correction ... ..	-	.02	Correction for Thickness of Deck amidships ... ..	-	-	Other corrections, scantlings, etc. ... ..	-	-		<u>2.23</u>	<u>4.68</u>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck :

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

Life from 1906.

$\begin{cases} S = +4^4 \\ W = +4^{\frac{1}{2}} \end{cases}$  as a ~~steamer~~