

# Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Langesund</u>
having <u>Poop, Bridge &amp; S'cle</u>					Date of Survey <u>30/11/32</u>
(Type of Superstructures.)					Name of Surveyor
Ship's Name <u>"S.T. THERESE"</u>	Nationality and Port of Registry <u>Norwegian</u> <u>Tonsberg</u>	Official Number	Gross Tonnage <u>2280</u>	Date of Build <u>1928</u> <u>/3</u>	Particulars of Classification <u>+ 100. A.1.</u>
Moulded Dimensions: Length <u>292</u>		Breadth <u>44</u>	Depth <u>21.5</u>		
Moulded displacement at moulded draught = 85 per cent. of moulded depth		<u>5192</u> tons			
Coefficient of fineness for use with Tables		<u>.774</u>			

<b>Depth for Freeboard (D)</b> Moulded depth ... .. Stringer plate ... .. Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <u>21.56</u>	<b>Depth correction</b> (a) Where D is greater than Table depth (D - Table depth) R = <u>+ 4.70"</u> (b) Where D is less than Table depth (if allowed) (Table depth - D) R = If restricted by superstructures	<b>Round of Beam correction</b> Moulded Breadth (B) Standard Round of Beam = $\frac{B \times 12}{50} =$ Ship's Round of Beam = Difference Restricted to Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ <u>+ .01"</u>
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## 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 ... ..						
" overhang ... ..						
Trunk aft ... ..						
" forward ... ..						
Tonnage opening aft ... ..						
" forward ... ..						
Total ... ..						

Standard Height of Superstructure

" " R.Q.D. 34.80

Deduction for complete superstructure

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

" "  $\frac{S_1}{L} =$

" "  $\frac{E}{L} =$  43.49%

Percentage from Table, Line A.  
(corrected for absence of forecastle (if required))

Percentage from Table, ~~Line B~~ **TIMBER** 65.18%  
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = 34.80 x .6518 = - 22.68"

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	
A.P. ... ..		1				1		
$\frac{1}{4}L$ from A.P. ... ..		4				4		
$\frac{2}{4}L$ " ... ..		2				2		
Amidships ... ..		4				4		
$\frac{3}{4}L$ from F.P. ... ..		2				2		
$\frac{1}{4}L$ " ... ..		4				4		
F.P. ... ..		1				1		
Total ... ..								

Mean actual sheer aft =

Mean standard sheer aft =

Mean actual sheer forward =

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

" " aft of " =

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$  - .58"

If limited on account of midship superstructure.

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

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Depth to Freeboard Deck = <u>21.56</u> Ft. Summer freeboard = <u>2.14</u> Moulded draught (d) = <u>19.42</u> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>4.85</u> Addition for Winter North Atlantic Freeboard (if required) = $\frac{d}{3} = 6.47 = 6\frac{1}{2} = 165\%$	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta = 5588$ Tons per inch immersion at summer load water line $T = 26.1$ Deduction = $\frac{\Delta}{40T}$ inches = <u>5.35</u> $= 5\frac{1}{4} = 133\%$	<b>TABULAR FREEBOARD corrected for Flush Deck (if required)</b> Correction for coefficient $\frac{.774 + .68}{1.36} = \frac{1.454}{1.36}$ <table border="1"> <thead> <tr> <th></th> <th>+</th> <th>-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction ... ..</td> <td>4.70</td> <td>✓</td> </tr> <tr> <td>Deduction for superstructures ... ..</td> <td>22.68</td> <td>✓</td> </tr> <tr> <td>Sheer correction ... ..</td> <td>.58</td> <td>✓</td> </tr> <tr> <td>Round of Beam correction ... ..</td> <td>.01</td> <td>✓</td> </tr> <tr> <td>Correction for Thickness of Deck amidships ... ..</td> <td></td> <td>✓</td> </tr> <tr> <td>Other corrections, scantlings, etc. ... ..</td> <td></td> <td>✓</td> </tr> <tr> <td></td> <td>4.71</td> <td>23.26</td> </tr> </tbody> </table> Summer Freeboard = <u>25.80</u>		+	-	Depth Correction ... ..	4.70	✓	Deduction for superstructures ... ..	22.68	✓	Sheer correction ... ..	.58	✓	Round of Beam correction ... ..	.01	✓	Correction for Thickness of Deck amidships ... ..		✓	Other corrections, scantlings, etc. ... ..		✓		4.71	23.26
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-		
TIMBER	<u>21 3/4</u> = 552 7/8	Tropical Fresh Water Freeboard ... ..
"	<u>17</u> = 431 1/2	Fresh Water ... ..
"	<u>16 1/2</u> = 419 7/8	Tropical ... ..
"	<u>5 1/4</u> = 133 1/4	Winter ... ..
"	<u>5</u> = 127 1/2	Winter North Atlantic ... ..
"	<u>11 3/4</u> = 298 3/4	

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