

For Scantling Purposes

35863

Index No. **117**
(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name ROTTERDAM DRYDOCK	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build
PROPOSED TANKER				
Moulded Dimensions: Length 434.00 Breadth 62.50 Depth 24.50				
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons				
Coefficient of fineness for use with Tables .78 (Given by Owners)				
Port of Survey _____				Date of Survey 21-10-38
Surveyor's Signature _____				Particulars of Classification 100 A.I. Carrying Petroleum in bulk. (contemplated)

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth 24.50	(a) Where D is greater than Table depth (D-Table depth) R = <input checked="" type="checkbox"/>	Moulded Breadth (B) 62.50
Stringer plate6005	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = $(28.93 - 24.55)3 = -13.14$	Standard Round of Beam = $\frac{B \times 12}{50} = 15.00$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	$\frac{7}{7.5} \times 13.14 = -12.26$ <input checked="" type="checkbox"/> 4.38	Ship's Round of Beam = 15.00
Depth for Freeboard (D) = 24.55	If restricted by superstructures <input checked="" type="checkbox"/>	Difference <input checked="" type="checkbox"/>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times (1 - \frac{S_1}{L}) =$ <input checked="" type="checkbox"/>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	107.00	107.00	7.00	$\frac{7.00}{7.5}$	99.36
.. overhang					
R.Q.D. enclosed					
.. overhang					
Bridge enclosed... ..					
.. overhang aft					
.. overhang forward					
F'cle enclosed	60.00	60.00	7.50		60.00
.. overhang					
Trunk aft }		168.12	7.00	$\frac{7.00}{7.5}$	156.90
.. forward }					
Tonnage opening aft					
.. " forward					
Total	167.00	335.12			316.76

Standard Height of Superstructure **7.50**

.. .. R.Q.D.

Deduction for complete superstructure **42.00**

Percentage covered $\frac{S}{L} = 38.48$

.. .. $\frac{S_1}{L} = 27.21$

.. .. $\frac{E}{L} = 22.98$

Percentage from Table, Line A. **66.67**
(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 = $42.00 \times 0.6667 = -28.00$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	53.40	1		27.00		1	27.00
$\frac{1}{4}L$ from A.P.		4		12.00		4	48.00
$\frac{3}{8}L$		2		4.00		2	8.00
Amidships		4				4	
$\frac{3}{8}L$ from F.P.		2		6.00		2	12.00
$\frac{1}{4}L$		4		22.00		4	88.00
F.P.	106.20	1		48.00		1	48.00
Total			480.60				231.00

Mean actual sheer aft = *Deficient*
Mean standard sheer aft = *Deficient*

Mean actual sheer forward = *Deficient*
Mean standard sheer forward = *Deficient*

Length of enclosed superstructure forward of amidships = *Deficient*
.. .. aft of .. = *Sheer*

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{249.60}{18} \left(\frac{75-192.4}{537.6} \right) = +7.73$
If limited on account of midship superstructure. If limited to maximum allowance of 1 1/2 ins. per 100 ft.

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p style="text-align: right;">Ft.</p> <p>Depth to Freeboard Deck = 24.55</p> <p>Summer freeboard = 4.64</p> <p>Moulded draught (d) = 19.91</p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches =</p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line</p> <p>$\Delta =$</p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = $\frac{\Delta}{40T}$ inches =</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient $\frac{.78 + .68}{1.36} = \frac{1.46}{1.36}$</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td></td> <td>12.26</td> </tr> <tr> <td>Deduction for superstructures</td> <td></td> <td>28.00</td> </tr> <tr> <td>Sheer correction</td> <td>7.73</td> <td></td> </tr> <tr> <td>Round of Beam correction</td> <td></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>7.73</td> <td>40.26</td> </tr> <tr> <td>Summer Freeboard =</td> <td></td> <td>55.65</td> </tr> </table>		+	-	Depth Correction		12.26	Deduction for superstructures		28.00	Sheer correction	7.73		Round of Beam correction			Correction for Thickness of Deck amidships			Other corrections, scantlings, etc.				7.73	40.26	Summer Freeboard =		55.65
	+	-																											
Depth Correction		12.26																											
Deduction for superstructures		28.00																											
Sheer correction	7.73																												
Round of Beam correction																													
Correction for Thickness of Deck amidships																													
Other corrections, scantlings, etc.																													
	7.73	40.26																											
Summer Freeboard =		55.65																											

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	Tropical
Winter Line below	Winter
Winter North Atlantic Line	Winter North Atlantic

