

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

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

Ship's Name <i>FORT AMHERST. & FORT TOWNSHEND.</i>	Official Number <i>164573.</i>	Nationality and Port of Registry <i>British London</i>	Gross Tonnage <i>3489.</i>	Date of Build <i>1926-1.</i>	Port of Survey
Moulded Dimensions: Length <i>310.0</i> Breadth <i>45.0</i> Depth <i>19.08</i>					Date of Survey <i>24-9-44.</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>3952.</i> tons					Surveyor's Signature
Coefficient of fineness for use with Tables <i>(.611.) .68 lowest)</i>					Particulars of Classification <i>+10071 with flood.</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth <i>19.08</i>	(a) Where D is greater than Table depth (D-Table depth) R =	Moulded Breadth (B) <i>45.0</i>
Stringer plate <i>.03</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 10.80$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓	<i>(20.67-19.11) 2.384 = -3.72</i>	Ship's Round of Beam = <i>2.00</i>
Depth for Freeboard (D) = <i>19.11</i>	If restricted by superstructures	Difference <i>8.80</i>
		Restricted to <i>.0073</i>
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{8.80^2}{4} \times .9927 = 7.02$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<i>30.00</i>	<i>30.00</i>	<i>8'-0</i>	✓	<i>30.00</i>
.. overhang					
R.Q.D. enclosed					
.. overhang					
Bridge enclosed					
.. overhang aft					
.. overhang forward	<i>275.50</i>	<i>275.50</i>	<i>8'-0</i>	✓	<i>275.50</i>
F'cle enclosed					
.. overhang		<i>2.25</i>			
Trunk aft	<i>4.50</i>	<i>2.25</i>			<i>2.25</i>
.. forward					
Tonnage opening aft					
.. forward					
Total	<i>310.0</i>	<i>307.75</i>			<i>307.75</i>

Standard Height of Superstructure *6.60*

.. .. R.Q.D. ✓

Deduction for complete superstructure *36.00*

Percentage covered $\frac{S}{L} = 100$

.. .. $\frac{S_1}{L} = 99.27$

.. .. $\frac{E}{L} = 99.27$

Percentage from Table, Line A. ✓

(corrected for absence of forecastle (if required)) ✓

Percentage from Table, Line B. *99.10*

(corrected for absence of forecastle (if required)) ✓

Interpolation for bridge less than 2L (if required) *C.S.S.*

Deduction = *36.00 x .991 = -35.68*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<i>41.00</i>	1		<i>41.00</i>	<i>41.00</i>	<i>57.80</i>	1		<i>57.80</i>
$\frac{1}{4}L$ from A.P.	<i>18.24</i>	4		<i>72.96</i>	<i>18.50</i>	<i>25.72</i>	4		<i>102.88</i>
$\frac{2}{4}L$	<i>4.51</i>	2		<i>9.02</i>	<i>4.50</i>	<i>6.36</i>	2		<i>12.72</i>
Amidships	-	4		-	-	-	4		-
$\frac{2}{4}L$ from F.P.	<i>9.02</i>	2		<i>18.04</i>	<i>10.00</i>	<i>12.02</i>	2		<i>24.04</i>
$\frac{1}{4}L$	<i>36.49</i>	4		<i>145.96</i>	<i>39.75</i>	<i>48.64</i>	4		<i>194.56</i>
F.P.	<i>82.00</i>	1		<i>82.00</i>	<i>92.50</i>	<i>109.30</i>	1		<i>109.30</i>
Total				<i>368.98</i>	<i>+16.80</i>				<i>501.30</i>

Mean actual sheer aft = *Excess*

Mean standard sheer aft = *16.80*

Mean actual sheer forward = *Excess*

Mean standard sheer forward = *Excess*

Length of enclosed superstructure forward of amidships = *C.S.S.*

.. .. aft of .. = *C.S.S.*

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75-S}{2L} \right) = \frac{132.32}{18} \left(\frac{.75-.50}{.25} \right) = -1.84$

If limited on account of midship superstructure. *C.S.S.*

If limited to maximum allowance of 1 1/2 ins. per 100 ft. *No.*

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = <i>19.11</i></p> <p>Summer freeboard = <i>.40</i></p> <p>Moulded draught (d) = <i>18.71</i></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 <i>NIL</i></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><i>3.72</i></td> </tr> <tr> <td>Deduction for superstructures</td> <td></td> <td><i>35.68</i></td> </tr> <tr> <td>Sheer correction</td> <td></td> <td><i>1.84</i></td> </tr> <tr> <td>Round of Beam correction</td> <td><i>.02</i></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><i>.02</i></td> <td><i>41.24</i></td> </tr> <tr> <td>Summer Freeboard =</td> <td></td> <td><i>4.68</i></td> </tr> </table>		+	-	Depth Correction		<i>3.72</i>	Deduction for superstructures		<i>35.68</i>	Sheer correction		<i>1.84</i>	Round of Beam correction	<i>.02</i>		Correction for Thickness of Deck amidships			Other corrections, scantlings, etc.				<i>.02</i>	<i>41.24</i>	Summer Freeboard =		<i>4.68</i>
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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

= 18' - 8 1/2"

