

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 lower</i>					Particulars of Classification <i>+100H1 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 = $\frac{B \times 12}{50} =$ <i>10.80</i>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <i>✓</i>	<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>Deficient 8.80</i>
		Restricted to <i>.0073</i>
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{8.80^2}{4} \times .9927 = +.02$

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>✓</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>✓</i>	<i>275.50</i>
F'cle enclosed					
„ overhang		<i>1/2 diff</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>	<i>1</i>		<i>41.00</i>	<i>41.00</i>	<i>57.80</i>	<i>1</i>		<i>57.80</i>
1/4 L from A.P.	<i>18.24</i>	<i>4</i>		<i>72.96</i>	<i>18.50</i>	<i>25.72</i>	<i>4</i>		<i>102.88</i>
3/8 L „	<i>4.51</i>	<i>2</i>		<i>9.02</i>	<i>4.50</i>	<i>6.36</i>	<i>2</i>		<i>12.72</i>
Amidships	-	<i>4</i>		-	-	-	<i>4</i>		-
3/8 L from F.P.	<i>9.02</i>	<i>2</i>		<i>18.04</i>	<i>10.00</i>	<i>12.02</i>	<i>2</i>		<i>24.04</i>
1/4 L „	<i>36.49</i>	<i>4</i>		<i>145.96</i>	<i>39.75</i>	<i>48.64</i>	<i>4</i>		<i>194.56</i>
F.P.	<i>82.00</i>	<i>1</i>		<i>82.00</i>	<i>92.50</i>	<i>109.30</i>	<i>1</i>		<i>109.30</i>
Total				<i>368.98</i>	<i>+16.80</i>				<i>501.30</i>

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.*

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.*

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard.	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	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient <i>NIL</i>	<i>45.90</i> <i>45.90</i>
Depth to Freeboard Deck = <i>19.11</i> Summer freeboard = <i>.40</i> Moulded draught (d) = <i>18.71</i>		Depth Correction Deduction for superstructures Sheer correction Round of Beam correction Correction for Thickness of Deck amidships Other corrections, scantlings, etc.	<i>25.90</i>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = Addition for Winter North Atlantic Freeboard (if required) =			<i>41.24</i> Summer Freeboard = <i>4.68</i>

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*