

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

 Index No. 19278
 (For London Office only).

Ship's Name <u>"Viking"</u>	Official Number <u>118604</u>	Nationality and Port of Registry <u>British</u> <u>Douglas S.M.</u>	Gross Tonnage	Date of Build <u>1905</u>	Port of Survey
Moulded Dimensions: Length <u>350.0</u> Breadth <u>41.83</u> Depth <u>25.29</u> (See over.)					Date of Survey <u>21.1.44</u>
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature _____
Coefficient of fineness for use with Tables <u>.68 (lower)</u>					Particulars of Classification <u>A1</u> <u>British ship with full load</u> <u>British Channel service</u>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth <u>25.29</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(25.54 - 23.33) × 2.692 = + 5.95</u>	Moulded Breadth (B) <u>41.83</u>
Plating on exposed deck $T \left(\frac{L-S}{L} \right) = 2.5$	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>2.21</u>	Standard Round of Beam = $\frac{B \times 12}{50} = 10.04$
Depth for Freeboard (D) = <u>25.54</u>	If restricted by superstructures	Ship's Round of Beam = <u>10.00</u>
		Difference = <u>.04</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.04}{4} = -.01$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Top enclosed ...					
Overhang ...					
Q.D. enclosed ...					
Overhang ...					
Bridge enclosed ...					
Overhang aft ...					
Overhang forward ...					
Deck enclosed ...					
Overhang ...					
Deck aft ...					
Forward ...					
Deck opening aft ...					
Forward ...					
Total ...					

Flush Deck

Standard Height of Superstructure _____
 " " R.Q.D. _____
 Deduction for complete superstructure _____
 Percentage covered $\frac{S}{L} =$ _____
 " " $\frac{S_1}{L} =$ Nil
 " " $\frac{E}{L} =$ _____
 Percentage from Table, Line A.
 (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 = Nil

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
... ..	<u>45.00</u>	1		<u>45.00</u>	<u>25.00</u>	<u>25.00</u>	1		<u>25.00</u>
... ..	<u>20.25</u>	4		<u>80.10</u>	<u>7.50</u>	<u>7.50</u>	4		<u>30.00</u>
... ..	<u>4.95</u>	2		<u>9.90</u>	<u>1.00</u>	<u>1.00</u>	2		<u>2.00</u>
... ..		4					4		
... ..	<u>9.90</u>	2		<u>19.80</u>	<u>5.50</u>	<u>5.50</u>	2		<u>11.00</u>
... ..	<u>40.05</u>	4		<u>160.20</u>	<u>20.50</u>	<u>20.50</u>	4		<u>82.00</u>
... ..	<u>90.00</u>	1		<u>90.00</u>	<u>45.00</u>	<u>45.00</u>	1		<u>45.00</u>
Total ...				<u>405.00</u>					<u>195.00</u>

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 " = Nil

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{210}{18} \times .75 = + 8.75$
 Limited on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft.

Correction for Tropical Freeboard. Correction for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = <u>25.54</u> Summer freeboard = <u>11.71</u> Moulded draught (d) = <u>13.83</u>	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 <u>$d/4 = 3.46 = 3\frac{1}{2}$</u>	TABULAR FREEBOARD corrected for Flush Deck (if required) <u>61.75</u> Correction for coefficient <u>Nil</u> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>+</th> <th>-</th> </tr> </thead> <tbody> <tr><td>Depth Correction</td><td><u>5.95</u></td><td></td></tr> <tr><td>Deduction for superstructures</td><td></td><td></td></tr> <tr><td>Sheer correction</td><td><u>8.75</u></td><td></td></tr> <tr><td>Round of Beam correction</td><td></td><td><u>.01</u></td></tr> <tr><td>Correction for Thickness of Deck amidships</td><td></td><td></td></tr> <tr><td>Other corrections, scantlings, etc.</td><td><u>64.06</u></td><td></td></tr> <tr><td><u>78.76</u></td><td><u>.01</u></td><td><u>+ 78.75</u></td></tr> </tbody> </table> Summer Freeboard = <u>140.50</u>		+	-	Depth Correction	<u>5.95</u>		Deduction for superstructures			Sheer correction	<u>8.75</u>		Round of Beam correction		<u>.01</u>	Correction for Thickness of Deck amidships			Other corrections, scantlings, etc.	<u>64.06</u>		<u>78.76</u>	<u>.01</u>	<u>+ 78.75</u>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line.

Tropical Fresh Water Line above Centre of Disc	<u>Nil assumed</u>	Tropical Fresh Water Freeboard ...	<u>11'-8½"</u>
Fresh Water Line	" "	Fresh Water	<u>11'-5"</u>
Tropical Line	" "	Tropical	<u>11'-8½"</u>
Winter Line below	" "	Winter	
Winter North Atlantic Line	" "	Winter North Atlantic	

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A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Increase in Depth due to Tumble-home.

$$B/2 = \frac{41.83}{2} = 20.915 \checkmark$$

$$T.H. = .5 \checkmark ; 20.915 - .5 = 20.415 \checkmark$$

$$R. \& B. = 10'' \checkmark$$

$$10 \times \left(\frac{20.415}{20.915} \right)^2 = \frac{10.04 \checkmark}{.48 \checkmark} = .04 \checkmark$$

$$\therefore \text{CW Depth to Gun Deck} = \begin{array}{r} 17'-3'' \checkmark \\ + 8'-0'' \checkmark \\ + \frac{1}{2}'' \checkmark \\ \hline 25'-3\frac{1}{2}'' \checkmark \end{array}$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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