

Actual Ship (Geometrical draught)
Particulars measured from plans
Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Index No. 34974
 (For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having _____

(Type of Superstructures.)

Ship's Name <i>Cannell Lane</i>	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<i>No 1023 + 24</i>				

Moulded Dimensions: Length *486* Breadth *62.00* Depth *35.00*

Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons

Coefficient of fineness for use with Tables *76 (assumed)*

Port of Survey _____

Date of Survey *26.6.36*

Name of Surveyor _____

Particulars of Classification *100 M with 60 (Contemplated)*

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... <i>35.00</i> Stringer plate ... <i>0.04</i> Sheathing on exposed deck $T \left(\frac{L+S}{L} \right) =$ Depth for Freeboard (D) = <i>35.04</i>	(a) Where D is greater than Table depth <i>35.04</i> $(D - \text{Table depth}) R = (35.04 - 32.40) \times 3 = +7.92$ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = If restricted by superstructures	Moulded Breadth (B) <i>62.00</i> Standard Round of Beam = $\frac{B \times 12}{50} = 14.88$ Ship's Round of Beam = <i>15.50</i> Difference <i>5.62</i> Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{5.62}{4} \times 0.234 = -0.33$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>75.50</i>	<i>75.50</i>	<i>8'-6"</i>	<i>1</i>	<i>75.50</i>
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...	<i>350.50</i>	<i>350.50</i>	<i>8'-6"</i>	<i>1</i>	<i>350.50</i>
„ overhang forward ...					
F'cle enclosed ...					
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	<i>426.00</i>	<i>426.00</i>			<i>426.00</i>

Standard Height of Superstructure *7'-6"*

„ „ R.Q.D. *✓*

Deduction for complete superstructure *42.00*

Percentage covered $\frac{S}{L} = 87.66\%$

„ „ $\frac{S_1}{L} = 87.66\%$

„ „ $\frac{E}{L} = 87.66\%$

Percentage from Table, Line A. *87.80%*
 (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 *0.878* = *-35.61*

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	Mean actual sheer aft Mean standard sheer aft =
A.P. ...	58.60	1	58.60	56.00		1	56.00	Deficient > 75%
$\frac{1}{2}$ L from A.P. ...	26.075	4	104.30	49.00		4	76.00	Mean actual sheer forward Mean standard sheer forward =
$\frac{3}{8}$ L " ...	6.445	2	12.89	2.00		2	4.00	Deficient
Amidships ...	✓	4	✓	✓		4	✓	Length of enclosed superstructure forward of amidships =
$\frac{3}{8}$ L from F.P. ...	12.89	2	25.78	15.00		2	30.00	L
$\frac{1}{2}$ L " ...	52.15	4	208.60	52.00		4	208.00	" " aft of " =
F.P. ...	117.20	1	117.20	110.00		1	110.00	
Total ...	527.4		527.37			484	478.00	.75

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{437.37}{18} \left(75 - \frac{438.8}{2 \times 486} \right) = +1.75$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = <i>35.04</i> Ft. Summer freeboard = <i>6.50</i> Moulded draught (d) = <i>28.54</i> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = Addition for Winter North Atlantic Freeboard (if required) =	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 $\frac{76 + 68}{1.36} = \frac{144}{1.36}$ <table border="1" style="width: 100%;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ...</td> <td><i>7.92</i></td> <td></td> </tr> <tr> <td>Deduction for superstructures ...</td> <td></td> <td><i>35.61</i></td> </tr> <tr> <td>Sheer correction ...</td> <td><i>1.75</i></td> <td></td> </tr> <tr> <td>Round of Beam correction ...</td> <td></td> <td><i>0.02</i></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>8.67</i></td> <td><i>35.63</i></td> </tr> </table> Summer Freeboard = <i>70.90</i>		+	-	Depth Correction ...	<i>7.92</i>		Deduction for superstructures ...		<i>35.61</i>	Sheer correction ...	<i>1.75</i>		Round of Beam correction ...		<i>0.02</i>	Correction for Thickness of Deck amidships ...			Other corrections, scantlings, etc. ...				<i>8.67</i>	<i>35.63</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 „ „ ...

Summer Moulded Draught = 28'-8 7/8 approx

