

Actual Ship (Geometric draught)
Particulars measured from plans

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. 54974
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Port of Survey

(Type of Superstructures.)

Date of Survey 26.6.36

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

Name of Surveyor

Cannell Fair
N 1023 + 24

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)

Particulars of Classification 100 M with 60 (Contemplated)

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>35.00</u>	(a) Where D is greater than Table depth <u>2.64</u> (D - Table depth) R = $(35.00 - 32.40) \times 3$ = <u>+ 7.92</u>	Moulded Breadth (B) <u>62.00</u>
Stringer plate <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{62 \times 12}{50} = 14.88$
Sheathing on exposed deck $T \left(\frac{L+S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>15.50</u>
Depth for Freeboard (D) = <u>35.04</u>		Difference <u>5.52</u>
		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.62}{4} \times .1234 = -.02$

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	Standard Height of Superstructure
Poop enclosed <u>75.50</u>	<u>75.50</u>	<u>8'-6"</u>	<u>1</u>	<u>75.50</u>	<u>7'-6"</u>
„ overhang					„ „ R.Q.D. <u>✓</u>
R.Q.D. enclosed					Deduction for complete superstructure <u>42.00</u>
„ overhang					Percentage covered $\frac{S}{L} = 87.66\%$
Bridge enclosed					„ „ $\frac{S_1}{L} = 87.66\%$
„ overhang aft <u>350.50</u>	<u>350.50</u>	<u>8'-6"</u>	<u>1</u>	<u>350.50</u>	„ „ $\frac{E}{L} = 87.66\%$
„ overhang forward					Percentage from Table, Line A. <u>87.80%</u>
F'cle enclosed					(corrected for absence of forecastle (if required))
„ overhang					Percentage from Table, Line B.
Trunk aft					(corrected for absence of forecastle (if required))
„ forward					Interpolation for bridge less than .2L (if required)
Tonnage opening aft					Deduction = <u>42.00</u> × <u>.848</u> = <u>- 35.61</u>
„ „ forward					
Total <u>426.00</u>	<u>426.00</u>			<u>426.00</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual shear aft = <u>Deficient > 75%</u>
A.P.	<u>58.60</u>	<u>1</u>	<u>✓</u>	<u>58.60</u>	<u>56.00</u>		<u>1</u>	<u>56.00</u>		Mean actual shear forward = <u>Deficient</u>
$\frac{1}{8}L$ from A.P.	<u>26.075</u>	<u>4</u>	<u>✓</u>	<u>104.30</u>	<u>99.00</u>		<u>4</u>	<u>396.00</u>		Mean standard shear forward = <u>Deficient</u>
$\frac{3}{8}L$ „	<u>6.445</u>	<u>2</u>	<u>✓</u>	<u>12.89</u>	<u>2.00</u>		<u>2</u>	<u>4.00</u>		Length of enclosed superstructure forward of amidships = <u>> .1L</u>
Amidships	<u>✓</u>	<u>4</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>		<u>4</u>	<u>✓</u>		„ „ aft of „ = <u>> .1L</u>
$\frac{5}{8}L$ from F.P.	<u>12.89</u>	<u>2</u>	<u>✓</u>	<u>25.78</u>	<u>15.00</u>		<u>2</u>	<u>30.00</u>		
$\frac{7}{8}L$ „	<u>52.15</u>	<u>4</u>	<u>✓</u>	<u>208.60</u>	<u>52.00</u>		<u>4</u>	<u>208.00</u>		
F.P.	<u>117.20</u>	<u>1</u>	<u>✓</u>	<u>117.20</u>	<u>110.00</u>		<u>1</u>	<u>110.00</u>		
Total	<u>527.4</u>			<u>527.37</u>				<u>484</u>	<u>478.00</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{43.937}{18} \left(.75 - \frac{143.83}{486} \right) = +1.72$

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.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Depth to Freeboard Deck = <u>35.04</u> Ft.	Displacement in salt water at summer load water line $\Delta =$	Correction for coefficient $\frac{.76 + .68}{1.36} = \frac{1.44}{1.36}$
Summer freeboard = <u>6.50</u> Ft.	Tons per inch immersion at summer load water line $T =$	Depth Correction <u>7.92</u>
Moulded draught (d) = <u>28.54</u>	Deduction = $\frac{\Delta}{40T}$ inches	Deduction for superstructures <u>35.61</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches =		Sheer correction <u>1.72</u>
Addition for Winter North Atlantic Freeboard (if required) =		Round of Beam correction <u>.02</u>
		Correction for Thickness of Deck amidships <u>-</u>
		Other corrections, scantlings, etc. <u>-</u>
		<u>8.64</u> <u>35.63</u> - <u>26.96</u>
		Summer Freeboard = <u>70.90</u>

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 7/2 approx

