

Timber

B.T. COPY

Rpt. C.11.

Index. No. (For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Raised Quarter Deck and Forecastle

Port of Survey Sunderland

(Type of Superstructures.)

Date of Survey Whilst building

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

SPRINGWAVE

British
London

1936

Name of Surveyor Colin Bartlett

Moulded Dimensions: Length 220'0 Breadth 36'0 Depth 16'0

Moulded displacement at moulded draught = 85 per cent. of moulded depth 2203 tons

Coefficient of fineness for use with Tables 716

Particulars of Classification +100 A1

Glass contemplated

Depth for Freeboard (D)			Depth correction		Round of Beam correction	
Moulded depth	...	16.00	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	
Stringer plate03		+ 2.30"	Standard Round of Beam = $\frac{B \times 12}{50}$ =	
Sheathing on exposed deck			(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	
$T \left(\frac{L-S}{L} \right) =$		<u>None.</u>		✓	Difference	
Depth for Freeboard (D) =		<u>16.03</u>	If restricted by superstructures	✓	Restricted to	
					Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right)$ =	<u>- .03</u>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>In R.Q.D.</u>				
" overhang ...					
R.Q.D. enclosed ...	<u>135.48</u>				
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
Forecastle enclosed <u>Open</u> ...	<u>21.27</u>				
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	<u>156.75</u>				

Standard Height of Superstructure	<u>6.0</u>
" " R.Q.D.	<u>3.8</u>
Deduction for complete superstructure	<u>28.0</u>
Percentage covered $\frac{S}{L} =$	<u>71.25</u>
" " $\frac{S_1}{L} =$	<u>71.25</u>
" " $\frac{E}{L} =$	<u>71.25</u>
Percentage from Table, Line A. <u>Timber</u>	<u>82.25</u>
(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 = <u>28.00</u> × <u>.8225</u> =	<u>- 23.03</u>

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...		1				1	
$\frac{1}{6}$ L from A.P. ...		4				4	
$\frac{2}{6}$ L " ...		2				2	
Amidships ...		4				4	
$\frac{2}{6}$ L from F.P. ...		2				2	
$\frac{1}{6}$ L " ...		4				4	
F.P. ...		1				1	
Total ...							

Mean actual sheer aft = Excess
Mean standard sheer aft

Mean actual sheer forward = Excess
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = 7.1L

" " aft of " = 7.1L

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

- .62

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.

R.Q. Ft.
Depth to Freeboard Deck = 20.03
Summer freeboard = 4.50
Moulded draught (d) = 15.53

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{3\frac{1}{2}}$ inches = 5.18 = 5\frac{1}{4}"

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ 2550

Tons per inch immersion at summer load water line

$T =$ 14.62

Deduction = $\frac{\Delta}{40T}$ inches

= 4.36

= 4\frac{1}{4}"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	<u>2.30</u>	
Deduction for superstructures		<u>23.03</u>
Sheer correction		<u>.62</u>
Round of Beam correction		<u>.03</u>
Correction for Thickness of Deck amidships	<u>48.00</u>	
Other corrections, scantlings, etc.		
	<u>50.30</u>	<u>23.68</u>
Summer Freeboard =	<u>+ 26.62</u>	

TIMBER SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:

TIMBER	Tropical Fresh Water Line above Centre of Disc	...	<u>13\frac{1}{4}"</u>
"	Fresh Water Line	"	<u>9\frac{1}{4}"</u>
"	Tropical Line	"	<u>9"</u>
"	Winter Line	below	<u>0\frac{1}{4}"</u>
"	Winter North Atlantic Line	"	<u>5\frac{3}{4}"</u>

RAISED QUARTER DECK	Tropical Fresh Water Freeboard	...	<u>3' 9\frac{3}{4}"</u>
"	Fresh Water	"	<u>4' 1\frac{3}{4}"</u>
"	Tropical	"	<u>4' 2"</u>
"	Winter	"	<u>4' 1\frac{1}{4}"</u>
"	Winter North Atlantic	"	<u>5' 4\frac{3}{4}"</u>

5" (1)

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