Rpt. C.11.

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

having _Forecastle, Bridge and Poop_ — Computation of Freeboard for Steamer, Sailing Ship, Tanker

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
"GRO"	Norwegian Bergen	4211		1917 - 10

Moulded Dimensions: Length 351·5 Breadth 50·62 Depth 28·42

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

Coefficient of fineness for use with Tables .... ·804

Port of Survey _Bergen_

Date of Survey _30ᵗʰ June 1932_

Name of Surveyor

Particulars of Classification ✳100A1

Depth for Freeboard (D)

Moulded depth ... ...

Stringer plate ... ...

Sheathing on exposed deck $T\left(\dfrac{L-S}{L}\right) =$

Depth for Freeboard (D) = $\overline{28\cdot46}$

Depth correction

(a) Where D is greater than Table depth
(D—Table depth) R = + 13·60

(b) Where D is less than Table depth (if allowed)
(Table depth—D) R =

Round of Beam correction

Moulded Breadth (B)

Standard Round of Beam = $\dfrac{B\times12}{50}$ =

Ship's Round of Beam =

Difference

Restricted to

Correction = $\dfrac{\text{Diff}^\circ}{4}\times\left(1-\dfrac{S_1}{L}\right)$ = − ·05

If restricted by superstructures

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
„ overhang					
R.Q.D. enclosed ...					
„ overhang					
Bridge enclosed ...					
„ overhang aft					
„ overhang forward					
F'cle enclosed ...					
„ overhang					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward					
Total					

Standard Height of Superstructure

„ „ R.Q.D.

Deduction for complete superstructure 38·76

Percentage covered $\dfrac{S}{L}$ =

„ „ $\dfrac{S_1}{L}$ =

„ „ $\dfrac{E}{L}$ = 42·94

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. 64·83
(corrected for absence of forecastle (if required))

Interpolation for bridge less than ·2L (if required)

Deduction = − 25·12

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.		1				1	
⅙L from A.P. ...		4				4	
²⁄₆L „ ...		2				2	
Amidships ...		4				4	
²⁄₆L from F.P. ...		2				2	
⅙L „ ...		4				4	
F.P.		1				1	
Total ...							

Mean actual sheer aft $=\dfrac{\quad}{\text{Mean standard sheer aft}}$

Mean actual sheer forward $=\dfrac{\quad}{\text{Mean standard sheer forward}}$

$\dfrac{\text{Length of enclosed superstructure}}{L}$ forward of amidships =

„ „ „ aft of „ =

Correction = $\dfrac{\text{Difference between sums of products}}{18}\left(\cdot75-\dfrac{S}{2L}\right) =$ − 2·75

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard.

	Ft.
Depth to Freeboard Deck =	28·46
Summer freeboard =	3·98
Moulded draught (d) =	24·48

Deduction for Tropical freeboard and addition for

Winter freeboard = $\dfrac{d}{4}$ inches = 6·12" = 155 ᵐ/ₘ

Addition for Winter North Atlantic Freeboard (if required) = $\dfrac{d}{3}$ = 8·16" = 207 ᵐ/ₘ

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\triangle =$ 10044

Tons per inch immersion at summer load water line

$T =$ 36·0

Deduction = $\dfrac{\triangle}{40\,T}$ inches

= 6·98

= 177 ᵐ/ₘ

TABULAR FREEBOARD ~~corrected for Flush Deck (if required)~~

Correction for coefficient

	+	−
Depth Correction	13·60	·
Deduction for superstructures ...		25·12
Sheer correction		2·75
Round of Beam correction ...		·05
Correction for Thickness of Deck amidships ...		
Other corrections, scantlings, etc.		
	13·60	27·92

56·93
62·13

− 14·32

Summer Freeboard = 47·81

TIMBER SUMMER FREEBOARD amidships from ~~Centre of Disc~~ to top of ~~Wood,~~ Deck Line, Steel, Deck :— 47·81" = 1214 ᵐ/ₘ

TIMBER					TIMBER		
Tropical Fresh Water Line above Centre of Disc	26·54 = 674 ᵐ/ₘ		Tropical Fresh Water Freeboard ...	34·71 = 882
„ Fresh Water Line „ „	20·42 = 519 „		Fresh Water „ ...	40·83 = 1037
„ Tropical Line „ „	19·56 = 497 „		Tropical „ ...	41·69 = 1059
„ Winter Line ~~below~~ above „	5·28 = 135 „		Winter „ ...	55·97 = 1421
„ Winter North Atlantic Line ~~below~~ „	4·75 = 121 „		Winter North Atlantic „ ...	66·00 = 1677
„ SUMMER	above	13·44 = 342 ·			

not marked

5m.3.32.