Basic computation for Scantling Purposes.

Rpt. C.11 (Comp.).

Index. No. .....
(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build
Leonardo da Vinci				1921

Port of Survey .....

Date of ~~Survey~~ 12.4.42

Surveyor's Signature .....

Particulars of Classification 100 H (with flat Combustible)

Moulded Dimensions: Length 429.25 Breadth 52.5 Depth 31.17

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

Coefficient of fineness for use with Tables .682 (assumed)

Depth for Freeboard (D).

Moulded depth 31.17

Stringer plate ... ... .04

Sheathing on exposed deck

$T\left(\frac{L-S}{L}\right) =$

Depth for Freeboard (D) = 31.21

Depth correction.

(a) Where D is greater than Table depth (D—Table depth) R =
(31.21 − 28.62) 3 = + 7.77
2.59

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

If restricted by superstructures

Round of Beam correction.

Moulded Breadth (B)

Standard Round of Beam $= \frac{B \times 12}{50} =$

Ship's Round of Beam = assumed standard

Difference

Restricted to

Correction $= \frac{\text{Diff}^{e}}{4} \times \left(1 - \frac{S_1}{L}\right) =$ Nil

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S_1)	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 7.5

„ „ R.Q.D. –

Deduction for complete superstructure 42

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

„ „ $\frac{S_1}{L} =$ } 100

„ „ $\frac{E}{L} =$

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 = −42.00

SHEER CORRECTION.

LR height tween decks 8.00
Standard 7.50
Diff .50

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 / Mean standard sheer aft =

Mean actual sheer forward / Mean standard sheer forward =

Length of enclosed superstructure / L forward of amidships =

„ „ aft of „ =

Correction $= \frac{\text{Difference between sums of products}}{18}\left(\cdot 75 - \frac{S}{2L}\right) =$ −.50

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.

		Ft.
Depth to Freeboard Deck	=	31.21
Summer freeboard	=	3.84
Moulded draught (d)	=	27.37

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

Δ =

Tons per inch immersion at summer load water line

T =

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

=

TABULAR FREEBOARD ~~corrected for Flush Deck (if required)~~ 80.67

Correction for coefficient $\frac{\cdot 682 + \cdot 08}{1 \cdot 36} = \frac{1 \cdot 362}{1 \cdot 36} =$ 80.79

	+	−
Depth Correction	7.77	–
Deduction for superstructures	–	42.00
Sheer correction	–	.50
Round of Beam correction	–	–
Correction for Thickness of Deck amidships ...	–	–
Other corrections, scantlings, etc.	–	–
	7.77	42.50

34.73

Summer Freeboard = 46.06

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck :— 3.84

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 „	

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