

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	Port of Survey
ARCH OF BERMUDA	162650	British London	22424	1931	
					Date of Survey 17.12.43
Dimensions: Length	Breadth	Depth		Surveyor's Signature	
550.0	76.5	43.29			
Displacement at moulded draught = 85 per cent. of moulded depth			32065	tons	Particulars of Classification
					+100 A1 with fuelbow
Fineness for use with Tables		725			

<p>Depth for Freeboard (D) = 43.29</p> <p>... .. 03</p> <p>Proposed deck = .125 x 1856 = .02</p> <p>Depth for Freeboard (D) = 43.34</p>	<p>Depth correction.</p> <p>(a) Where D is greater than Table depth $(D - \text{Table depth}) R = (43.34 - 36.67) \times 3 = +20.01$</p> <p>(b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ ✓</p> <p>If restricted by superstructures</p>	<p>Round of Beam correction.</p> <p>Moulded Breadth (B) = 76.5'</p> <p>Standard Round of Beam = $\frac{B \times 12}{50} = 18.36$</p> <p>Ship's Round of Beam = 6.00</p> <p>Difference = 13.36</p> <p>Restricted to</p> <p>Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{13.36}{4} \times \frac{1928}{100} = 4.64$</p>
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DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
351.33	351.33	8.25	-	351.33
2.58	1.29	"		1.29
88.64	88.64	8.0	-	88.64
5.36	2.08	"	-	2.08
447.91	443.94			443.94

Standard Height of Superstructure 75'

" " R.Q.D. 42'

Deduction for complete superstructure

Percentage covered $\frac{S}{L} = 81.44$

" " $\frac{S_1}{L} = \left. \begin{array}{l} \\ \end{array} \right\} 80.72$

" " $\frac{E}{L} = \left. \begin{array}{l} \\ \end{array} \right\}$

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

Percentage from Table, Line B. 76.19

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = $42 \times 76.19 = -32.00$

SHEER CORRECTION.

	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
P. ...	65.00	1	65.00	49.50	49.50	1	49.50
P. ...	28.93	4	115.72	21.72	21.72	4	86.88
...	7.15	2	14.30	5.43	5.43	2	10.86
...	-	4	-	-	-	4	-
P. ...	14.30	2	28.60	13.67	13.67	2	27.34
...	57.85	4	231.40	54.70	54.70	4	218.80
...	130.00	1	130.00	107.50	107.50	1	107.50
P. ...			585.02				500.88

Mean actual sheer aft
Mean standard sheer aft = } Deficient

Mean actual sheer forward
Mean standard sheer forward = }

Length of enclosed superstructure forward of amidships = } Sheer
L. " " aft of " = } deficient

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} = \frac{84.14}{18} (.75 - .4072) = +1.60$$

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

on for Tropical Freeboard.

a for Winter and Winter North
ic Freeboard.

Depth to Freeboard Deck = 43.44 Ft.

Summer freeboard = 14.21

Moulded draught (d) = 29.23

for Tropical freeboard and addition for
r freeboard = $\frac{d}{4}$ inches = 7.31 = 7 1/4"

for Winter North Atlantic Freeboard (if
red) =

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 = 7 1/4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{725 + 68}{136}$

	+	-
Depth Correction	20.01	-
Deduction for superstructures	-	32.00
Sheer correction	1.60	-
Round of Beam correction64	-
Correction for Thickness of Deck amidships	1.26	-
Other corrections, scantlings, etc.	58.74	-
<i>Sum extreme draught of 29.23</i>	82.25	32.00

Summer Freeboard = 170.50

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

FREEBOARD amidships from Centre of Disc to top of hatch			
Tropical Fresh Water Line above Centre of Disc	14 1/2"
Fresh Water Line	"	"	7 1/4"
Tropical Line	"	"	7 1/4"
Winter Line	below	"	7 1/4"
Winter North Atlantic Line	"	"	"