Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 23908
(For London Office only.)

13 JAN 1933

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~

Poop, Bridge & Forecastle

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
HANNAH	British Middlesbrough	128827	3697	1913 -4

Moulded Dimensions: Length 350·0 Breadth 49·79 Depth 26·05

Moulded displacement at moulded draught = 85 per cent. of moulded depth 8859 tons

Coefficient of fineness for use with Tables ·803

Port of Survey Newcastle-on-Tyne

Date of Survey 11th January 1933

Name of Surveyor Alex E Stevenson

Particulars of Classification +100A1
S.S.Shd. No 3-6,25
S.S. Shd. No.1-30

Depth for Freeboard (D)

Depth ... ... 26·05

Deduction ... ... ·04

Deduction for exposed deck $\left(\frac{S}{L}\right)$ = —

Depth for Freeboard (D) = 26·01

Depth correction

(a) Where D is greater than Table depth
(D—Table depth) R =
(2609 - 2333) · 2·72 = + 7·43
2·76

(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) 49·79

Standard Round of Beam = $\frac{B \times 12}{50}$ = 11·75

Ship's Round of Beam = 15·"

Difference 3·05

Restricted to —

Correction = $\frac{\text{Diff}^{e}}{4} \times \left(1 - \frac{S_1}{L}\right)$ = $\frac{3·05}{4}\left(1 - \frac{·6944}{·3023}\right)$ = -·23

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S_1)	Height	Height Correction	Effective Length (E)
Enclosed	43·67	43·67	7·6		43·67
Overhang enclosed	162·5 at side 166·66 at centre	165·28	7·6		165·28
Overhang aft	165·28				
Overhang forward					
Enclosed	35·5	35·25	7·6 + 3 wood dk		35·25
Overhang					
Aft					
Forward					
Opening aft					
" forward					
Total	244·45	244·20			244·20

Standard Height of Superstructure 7·00

" " R.Q.D. 5·333

Deduction for complete superstructure 38·67

Percentage covered $\frac{S}{L}$ = 69·84 %

" " $\frac{S_1}{L}$ = 69·44 %

" " $\frac{E}{L}$ = 69·44 %

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

Percentage from Table, Line B. (corrected for absence of forecastle (if required)) 62·61

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

Deduction = 38·67 × ·6261 = — 24·21

SHEER CORRECTION.

	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
	45·00	1	45·00	60	60·00	1	60·00
	20·02	4	80·08	26	26·07	4	104·28
	4·95	2	9·90	6·5	6·50	2	13·00
	—	4	—	—	—	4	—
	9·90	2	19·80	13	13·00	2	26·00
	40·04	4	160·16	52	52·14	4	208·56
	90·00	1	90·00	120	120·00	1	120·00
			404·94				531·84

Mean actual sheer aft / Mean standard sheer aft = Excess

Mean actual sheer forward / Mean standard sheer forward = Excess

Length of enclosed superstructure / L forward of amidships = > ·1L

" " aft of " = > ·1L

= Difference between sums of products / 18 $\left(\cdot 75 - \frac{S}{2L}\right)$ = $\frac{404·94}{126·90}$ / 18 $\left(75 - \frac{4008}{3492}\right)$ = — 2·83

On account of midship superstructure. If limited to maximum allowance of 1½ ins. per 100 ft.

For Tropical Freeboard.
Winter and Winter North Freeboard.

		Ft.
Moulded Freeboard Deck	=	26·09
Summer freeboard	=	3·48
Moulded draught (d)	=	22·61

Tropical freeboard and addition for Board = $\frac{d}{4}$ inches = 5·65 = 5¾"

Winter North Atlantic Freeboard (if

Deduction for Fresh Water.

Displacement in salt water at summer load water line

△ =

Tons per inch immersion at summer load water line

T =

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

=

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{803 + 68}{136} = \frac{1·483}{136}$ 56·50 / 61·61

	+	−
Depth Correction	7·43	—
Deduction for superstructures	—	24·21
Sheer correction	—	2·83
Round of Beam correction	—	·23
Correction for Thickness of Deck amidships	—	—
Other corrections, scantlings, etc.	—	—
	7·43	27·27

— 19·84

Summer Freeboard = 41·77

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck :— 3·5¾

Tropical Fresh Water Line above Centre of Disc		Tropical Fresh Water Freeboard	
Fresh Water Line	" "	Fresh Water	"
Tropical Line	" "	Tropical	"
Winter Line	below "	Winter	" 3·11½
Winter North Atlantic Line	" "	Winter North Atlantic	"

© 2021 Lloyd's Register Foundation