

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. (For London Office only).

JAN -3 1941

Ship's Name ELIZABETE	Official Number 125	Nationality and Port of Registry BRITISH CARDIFF	Gross Tonnage 2039	Date of Build 1917-7	Port of Survey CARDIFF
Moulded Dimensions: Length 251' ✓ Breadth 43'-6" ✓ Depth 20'-2 1/2" ✓					Date of Survey 30th 31st Dec. 1940
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature A. Hunter
Coefficient of fineness for use with Tables .815 estimated					Particulars of Classification 100 A1

Depth for Freeboard (D) = 20'-2 1/2"	Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = (20' 2 1/2" - 16' 7 3/4") 1931 = 6' 80" 3 52 (b) Where D is less than Table depth (if allowed) (Table depth - D) R = ✓	Round of Beam correction. Moulded Breadth (B) 45'-6" ✓ Standard Round of Beam = $\frac{B \times 12}{50} = 10.44$ Ship's Round of Beam = 1'-0" ✓ Difference = 1-56 Restricted to Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{1.56}{4} \times 53.46 = -0.21$
Depth for Freeboard (D) = 20'-2 1/2"	If restricted by superstructures ✓	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
enclosed ...	25'-0"	25'-00	7'-0"	✓	25'-00
overhang ...	2'-0"	1'-00			1'-00
enclosed ...					
overhang ...					
enclosed ...	64'-0"	64'-00	7'-0"	✓	64'-00
overhang aft ...	SEA SWEET				
overhang forward ...					
enclosed ...	10'-0"	10'-00	7'-0"	✓	10'-00
overhang ...	7'-6"	1'-2			1'-20
aft ...					
forward ...					
opening aft ...					
" forward					
Total ...	118'-5	116'-3			116'-30

Standard Height of Superstructure **6'-0"**

" " R.Q.D. **31'-0"**

Deduction for complete superstructure **31'-0"**

Percentage covered $\frac{S}{L} = 47.21$

" " $\frac{S_1}{L} = 46.54$

" " $\frac{E}{L} = 46.54$

Percentage from Table, Line A. **33.06**
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. **33.06**
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) **✓**

Deduction = **31'-0" x 33.06 = -10'-28"**

SHEER CORRECTION.

on	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	25.10	1		25.10	41.25	✓	41.25	1	41.25
A.P. ...	15.62	4		62.48	12.00	12.00	4		48.00
...	3.86	2		7.72	-1.00	-1.00	2		-2.00
S ...	-	4		-	-	-	4		-
F.P. ...	7.72	2		15.44	13.50	13.50	2		27.00
...	31.24	4		124.96	37.00	37.00	4		148.00
...	70.20	1		70.20	72.5	✓	72.50	1	72.50
tal ...				305.90					334.75

Mean actual sheer aft = **89%**

Mean standard sheer aft

Mean actual sheer forward = **Excess**

Mean standard sheer forward

Length of enclosed superstructure forward of amidships **7'-0"**

" aft of " **7'-0"**

Aft sheer **25.10**
Standard **41.25**
Difference **16.15**
Aft of **12.00**
Standard **12.00**
Difference **0**
Aft of **-1.00**
Standard **-1.00**
Difference **0**
Total **16.15**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - S}{2L} \right) = \frac{16.15}{18} \left(\frac{75 - 2360}{2 \times 116.3} \right) = -0.53$

limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Correction for Tropical Freeboard.
Correction for Winter and Winter North Atlantic Freeboard.

Deduction for Fresh Water.

TABULAR FREEBOARD corrected for Flush Deck (if required)

Depth to Freeboard Deck = **Ft.**
Summer freeboard = **32.51**
Moulded draught (d) = **35.74**

Displacement in salt water at summer load water line
 $\Delta =$
Tons per inch immersion at summer load water line
 $T =$
Deduction = $\frac{\Delta}{40 T}$ inches

Correction for coefficient	+	-
Depth Correction	680	-
Deduction for superstructures	-	10.48
Sheer correction	-	.53
Round of Beam correction	-	.21
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **4.22**
Addition for Winter North Atlantic Freeboard (if required) = **31.52**

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

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	"

Lloyd's Register Foundation

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Trade of ship

Names of sister ships

Builder's name and yard number AMERICAN S. B. CO. CLEVELAND O.

Owners MINISTRY OF SHIPPING (MANAGERS:- HUDSON STEAMSHIP CO. LONDON)

Fee £ 12-0-0



© 2020

Lloyd's Register
Foundation