

Amended computation for closing of Tonnage Opening

B.T. COPY.

Index. No. 28064.
(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name BENRINNES.	Official Number 145884	Nationality and Port of Registry British, London	Gross Tonnage 6638	Date of Build 1921-3.	Port of Survey
Moulded Dimensions: Length 419.5' Breadth 54.67' Depth 39.00'					Date of Survey 17.4.40
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables .742 (estimated)					Particulars of Classification + 100 A1 sheets, all with freeboard.

Depth for Freeboard (D).		Depth correction.		Round of Beam correction.	
Moulded depth	39.00	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	54.67
Stringer plate	.04	(39.04 - 27.97) R =	33.21"	Standard Round of Beam = $\frac{B \times 12}{50}$	13.12
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	✓	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	11.87"	Ship's Round of Beam	13.25
Depth for Freeboard (D) =	39.04	If restricted by superstructures	✓	Difference Excess	.13
				Restricted to	
				Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L} \right)$	$= \frac{.13 \times 91.66}{4} = -.03"$

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					
Forecastle enclosed ...	35.00	35.00	7.56'	✓	35.00
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ forward					
Total ...	35.00	35.00			35.00

Standard Height of Superstructure	7.5'
„ „ R.Q.D.	
Deduction for complete superstructure	42.00"
Percentage covered $\frac{S}{L} =$	8.34
„ „ $\frac{S_1}{L} =$	8.34
„ „ $\frac{E}{L} =$	8.34
Percentage from Table, Line A.	4.17
(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 =	$42' \times 4.17\% = -1.75"$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	51.95	✓	1	51.95	60.00	60.00	1		60.00
$\frac{1}{2}$ L from A.P. ...	23.12		4	92.48	26.07	26.07	4		104.28
$\frac{3}{8}$ L „ ...	5.71		2	11.42	6.52	6.52	2		13.04
Amidships ...	✓		4	✓	✓	✓	4		✓
$\frac{3}{8}$ L from F.P. ...	11.42		2	22.84	13.62	13.62	2		27.24
$\frac{1}{2}$ L „ ...	46.24		4	184.96	54.50	54.50	4		218.00
F.P. ...	103.90		1	103.90	120.00	120.00	1		120.00
Total ...				467.55					542.56

Mean actual sheer aft = Excess.
Mean standard sheer aft

Mean actual sheer forward = Excess.
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = } Nil.
„ „ aft of „ = }

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{75.01 - .0417}{18} = -2.95"$
If limited on account of midship superstructure. ✓ *yes. Nil* *7083*

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD	77.64 + 1.04
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient	78.68
Depth to Freeboard Deck =	$\Delta = 142.55$		82.26
Summer freeboard =	Tons per inch immersion at summer load water line		
Moulded draught (d) =	T = 44		
Deduction for Tropical freeboard and addition for Winter freeboard = 1 inches = 7" <i>1906 amendment</i>	Deduction = $\frac{\Delta}{40 T}$ inches		
Addition for Winter North Atlantic Freeboard (if required) =	= 8.1"		
	= 8"		

Depth Correction	33.21
Deduction for superstructures	- 1.75
Sheer correction	- 1.95
Round of Beam correction	- .03
Correction for Thickness of Deck amidships	4.56
Other corrections, scantlings, etc. to correspond to a summer moulded draught of 29'-2 1/4"	7.57
Summer Freeboard =	118.25

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

1906 freeboards re assigned.	Tropical Fresh Water Line above Centre of Disc ...	15"	Tropical Fresh Water Freeboard ...	9'-10 1/4"
	Fresh Water Line	8"	Fresh Water	8'-7 1/4"
	Tropical Line	7"	Tropical	9'-2 1/4"
	Winter Line below	7"	Winter	9'-3 1/4"
	Winter North Atlantic Line	✓	Winter North Atlantic	10'-5 1/4"

Benrinner.

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.

$$\text{Full Flush-deck penalty} = 1.5 \times \frac{419.5}{100} = 6.29.$$

$$\frac{E}{L} = .0834$$

$$\text{penalty} = 6.29 \times \frac{.0866}{.1} = 1.04''$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



© 2020

Lloyd's Register
Foundation