

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
Greenock Dockyard No. 480					
Moulded Dimensions: Length 512.00' Breadth 69.00' Depth 38.50'					Date of Survey 8-3-51
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables 0.759 (reported)					Particulars of Classification 10A1 CP1B contingent

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth	38.50'	(a) Where D is greater than Table depth (D - Table depth) R = +13.32'	Moulded Breadth (B) 69.00'
Stringer plate	0.07'	(38.57 - 34.13) 3' 4.44'	Standard Round of Beam = $\frac{B \times 12}{50} = 16.56'$
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Ship's Round of Beam = 17.25'
T $\left( \frac{L-S}{L} \right) =$			Difference 0.69'
Depth for Freeboard (D) =	38.57'	If restricted by superstructures	Restricted to
			Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{0.69}{4} \times 0.5666 = -0.10'$

### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <i>Expire</i> ...	122.67 ✓	122.67 ✓	8.0' ✓	✓	122.67 ✓
" overhang ... ..	-				
R.Q.D. enclosed ... ..	-				
" overhang <i>Expire</i> ... ..	-				
Bridge enclosed <i>Expire</i> ...	49.49 ✓	49.49 ✓	8.0' ✓	✓	49.49 ✓
" overhang aft ... ..	-				
" overhang forward ... ..	-				
F'cle enclosed ... ..	49.75 ✓	49.75 ✓	8.0' ✓	✓	49.75 ✓
" overhang ... ..	-				
Trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..					
" " forward ... ..					
Total ... ..	221.91 ✓	221.91 ✓			221.91 ✓

Standard Height of Superstructure ..... 7.50 ✓

" " R.Q.D. .... ✓

Deduction for complete superstructure ..... 42.00 ✓

Percentage covered  $\frac{S}{L} =$  } 43.34% ✓

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

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

Percentage from Table, Tanker 34.34% ✓  
(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 =  $42.00 \times 0.3434 = -14.42$  ✓

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	61.20 ✓	1	61.20 ✓	42.00 ✓	42.00 ✓	1	42.00
$\frac{1}{8}$ L from A.P. ...	27.23 ✓	4	108.92 ✓	14.00 ✓	14.00 ✓	4	56.00
$\frac{3}{8}$ L " ...	6.73 ✓	2	13.46 ✓	0	0	2	0
Amidships ...	0	4	0	0	0	4	0
$\frac{3}{8}$ L from F.P. ...	13.46 ✓	2	26.92 ✓	0	0	2	0
$\frac{1}{8}$ L " ...	54.46 ✓	4	<del>217.84</del> ✓	1.50 ✓	1.50 ✓	4	6.00
F.P. ...	121.40 ✓	1	121.40 ✓	66.00 ✓	66.00 ✓	1	66.00
Total ...			550.74 ✓				170.00

$$\frac{\text{Mean actual sheer aft}}{\text{Mean standard sheer aft}} =$$

$$\frac{\text{Mean actual sheer forward}}{\text{Mean standard sheer forward}} =$$

} Deficient

$$\frac{\text{Length of enclosed superstructure}}{L} \text{ forward of amidships} =$$

} Tanker

" " aft of " =

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{8}{2L} \right) = \frac{380.74}{18} (0.75 - 0.2167) = +112.8''$  If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

If limited on account of midship superstructure.

Deduction for Tropical Freeboard.  
Addition for Winter and Winter North Atlantic  
Freeboard.

		Ft.
Depth to Freeboard Deck	=	38.57
Summer freeboard	=	8.80
		<hr/>
Moulded draught (d)	=	29.77

Deduction for Tropical freeboard and addition for  
 Winter freeboard =  $\frac{d}{4}$  inches =  $7.44$  i.e.  $7\frac{1}{2}$   
 Addition for Winter North Atlantic Freeboard (~~if~~  
 required) =  $7.44 + 5.12 = 12.56$  i.e.  $12\frac{1}{2}$

### Deduction for Fresh Water.

Displacement in salt water at summer load water line  
 $\Delta = \text{Not available}$   
 Tons per inch immersion at summer load water line  
 $T =$

Deduction =  $\frac{40}{74}$  inches  
=  $7\frac{1}{2}$ " ✓

TABULAR FREEBOARD corrected for Flush Deck (if required)  

$$\frac{0.68 + 0.759}{1.36} = \frac{1.439}{1.36}$$
 Correction for coefficient

	+	-
Depth Correction ... ..	13.32	-
Deduction for superstructures ... ..	-	14.42
Sheer correction ... ..	11.28	-
Round of Beam correction ... ..	-	0.10
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ... ..	-	-
	24.60	14.52
		+10.08
	Summer Freeboard = 105.54"	

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

Tropical Fresh Water Line above Centre of Disc	15" 15"	Tropical Fresh Water	Freeboard
Fresh Water Line " "	7 1/2"	Fresh Water	"
Tropical Line " "	7 1/2"	Tropical	"
Winter Line below " "	7 1/2"	Winter	"
Winter North Atlantic Line " "	12 1/4" 12 1/2"	Winter North Atlantic	"



480.

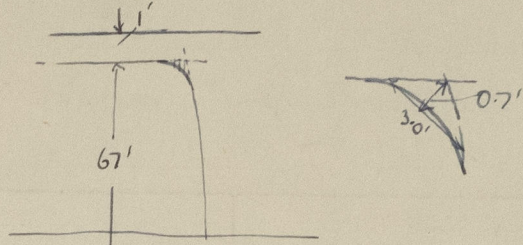
A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Mean covered length of superstructure

Roof :  $124'6'' - \frac{124'6'' - 119'0''}{3} = 124'6'' - 1'10'' = 122'8''$  ✓  $+ \frac{2}{3} \times 5.5 = \frac{11.9}{122.67}$

Bridge Deduction for rounded corners. - assume radius = 4.0 ft

deduction =  $\frac{3.0' \times 0.7'}{67'} = 0.03'$  ✓



Thus <sup>equivalent</sup> mean covered length =  $\left[ 51'9'' - \frac{51'9'' - 47'6''}{3} - 0.03' \right] \frac{67}{69}$   
 $= (51' - 0.03') \frac{67}{69} = 50.97 \times \frac{67}{69} = 49.49'$  ✓

Trade of ship \_\_\_\_\_

Names of sister ships \_\_\_\_\_

Builder's name and yard number \_\_\_\_\_

Owners \_\_\_\_\_

Fee £ \_\_\_\_\_



© 2020

Lloyd's Register  
Foundation