

# PROPOSED LENGTHENING.

## LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

For LONDON OFFICE ONLY

Received .....

Index No. ....

Govt. Copy .....

Owners Cl. ....

24.384  
6.934  
31.318

MOEARA.

Port of Survey .....

Date of Survey 21/9/56

Surveyor's Signature .....

Particulars of Classification +100A1

Moulded Dimensions: Length 31.318 ✓ Breadth 6.096 ✓ Depth 2.896 ✓  
Freeboard Length .....  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 357.6 m<sup>3</sup> ✓  
(excluding bossing)  
Coefficient of fineness for use with Tables .761 ✓

## DEPTH FOR FREEBOARD (D).

Moulded depth ... .. 2.896Stringer plate ... .. .008

Wood Sheathing on exposed deck

$$T \left( \frac{L-S}{L} \right) =$$

Depth for Freeboard (D) = 2.904

## DEPTH CORRECTION.

(a) Where D is greater than Table depth  
(D-Table depth) R =

$$8.33(2.904 - 2.088) 7.909 = +54\%$$

(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) 6.096 ✓

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 122\%$$

Ship's Round of Beam = NIL ✓Difference 122 ✓

Restricted to

$$\text{Correction} = \frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{122}{4} \times .6300 = +19\%$$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..					
" overhang ... ..					
R.Q.D. enclosed ... ..	<u>7.315</u> ✓	<u>7.315</u>	<u>.914</u>	<u>.914</u>	<u>7.299</u> ✓
" overhang ... ..					
Bridge enclosed ... ..					
" overhang aft ... ..					
" overhang forward ... ..					
F'cle enclosed ... ..	<u>4.267</u> ✓	<u>4.267</u>	<u>2.134</u>	—	<u>4.267</u>
" overhang ... ..					
Trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..					
" " forward ... ..					
Total ... ..	<u>11.582</u>	<u>11.582</u>			<u>11.566</u>

Standard Height of Superstructure 1.830 m ✓" " R.Q.D. .916 ✓Deduction for complete superstructure .414 ✓

$$\text{Percentage covered } \frac{S}{L} = \left. \begin{array}{l} \\ \\ \end{array} \right\} 37.00 \%$$

$$\frac{S_1}{L} = 36.93 \%$$

Percentage from Table, Line A. 20.89 ✓  
(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)

$$\text{Deduction} = 414 \times 20.89 = -86\%$$

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ... ..	<u>515</u> ✓	1	<u>515</u>			1	
$\frac{1}{4}$ L from A.P. ... ..	<u>229</u> ✓	4	<u>916</u>			4	
$\frac{2}{4}$ L " ... ..	<u>57</u> ✓	2	<u>114</u>			2	
Amidships ... ..	<u>0</u>	4	<u>0</u>	<u>0 NIL</u>		4	<u>0</u>
$\frac{3}{4}$ L from F.P. ... ..	<u>114</u> ✓	2	<u>228</u>			2	
$\frac{1}{4}$ L " ... ..	<u>458</u> ✓	4	<u>1832</u>			4	
F.P. ... ..	<u>1030</u> ✓	1	<u>1030</u>			1	
Total ... ..			<u>4635</u>				

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{4635}{18} \left( .75 - \frac{1.856}{2 \times 31.318} \right) = +12.5\%$$

If limited on account of midship superstructure.

Mean actual sheer aft

Mean standard sheer aft =

Mean actual sheer forward

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

" " aft of " = } Deficient! ✓  
sheer.

## Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 2.904Summer freeboard = 410Moulded draught (d) = 2.494

Keel allowance =

Extreme draught =

Deduction for Tropical free-

board and addition for =

Winter freeboard =  $\frac{d}{4}$  inches =

Addition for Winter North Atlantic Freeboard (if required) =

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

Deduction =  $\frac{\Delta}{40 T}$  inches

=

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.761 + .68}{1.36} = \frac{1.441}{1.36}$ Depth Correction ... .. 54 ✓Deduction for superstructures ... .. -86 ✓Sheer correction ... .. 145 ✓Round of Beam correction ... .. 19 ✓

Correction for Thickness of Deck amidships ... ..

Other corrections, scantlings, etc. ... ..

Summer Freeboard = 409 ✓SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc ... ..

Fresh Water Line " " ... ..

Tropical Line " " ... ..

Winter Line below " " ... ..

Winter North Atlantic Line " " ... ..

Tropical Fresh Water Freeboard ... ..

Fresh Water " " ... ..

Tropical " " ... ..

Winter " " ... ..

Winter North Atlantic " " ... ..



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.

Volume of  $\Delta$ . before lengthening =  $\frac{260}{1.009}$  ✓ = 257.7 m<sup>3</sup> ✓ at 85% Mtd D ✓  
Added volume. =  $6.934 \times 6.096 \times 2.896 \times .85 \times .96$  ✓ = ~~99.9~~ 93.7 m<sup>3</sup> ✓  
Vol of  $\Delta$ . after lengthening. 357.6 m<sup>3</sup> ✓ .. .. .

Trade of ship .....

Names of sister ships .....

Builder's name and yard number .....

Owners .....

Fee £ : : .....

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950," paragraph 11.)



© 2021

Lloyd's Register  
Foundation