

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

 Index No. **35541.**  
 (For London Office only).

Ship's Name <b>"REBECA."</b>	Official Number	Nationality and Port of Registry <b>bulch Nillestad</b>	Gross Tonnage	Date of Build <b>1938</b>	Port of Survey <b>Middlesbrough.</b>
Moulded Dimensions: Length <b>102.10 M.</b> Breadth <b>17.04 M.</b> Depth <b>4.508 M.</b>					Date of Survey <b>While building.</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>5556 M<sup>3</sup></b>					Surveyor's Signature <b>J. Brighton.</b>
Coefficient of fineness for use with Tables <b>.832.</b>					Particulars of Classification <b>+100 A.1. carrying petroleum in bulk. (contemplated).</b>

Depth for Freeboard (D). Moulded depth ... <b>4.508</b> Stringer plate ... <b>.011</b> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <b>✓</b> Depth for Freeboard (D) = <b>4.519</b>	Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = <b>✓</b> (b) Where D is less than Table depth (if allowed) (Table depth - D) R = <b>8.33(6.806 - 4.519) 25.78 = -491 mm.</b> $2.287$ If restricted by superstructures	Round of Beam correction. Moulded Breadth (B) = <b>17.04 m.</b> Standard Round of Beam = $\frac{B \times 12}{50} =$ <b>341 mm.</b> Ship's Round of Beam = <b>356 mm.</b> Difference <b>excess = 15 mm</b> Restricted to Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L}\right) =$ <b><math>\frac{15 \times .23}{4} = -1 mm.</math></b>
--	---	---

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	24.81	24.81	2121 mm	✓	24.81
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
Forecastle enclosed ...	12.04	12.04	2121 mm	✓	12.04
„ overhang ...					
Trunk aft ...	-	38.77	2121 mm	✓	38.77
„ forward ...					
Tonnage opening aft ...					
„ forward ...					
Total ...	39.85	78.62			78.62

Standard Height of Superstructure **2090 mm.**„ „ R.Q.D. **✓**Deduction for complete superstructure **957 mm.**Percentage covered  $\frac{S}{L} =$  **39.03**„  $\frac{S_1}{L} =$  **77.00**„  $\frac{E}{L} =$  **77.00**Percentage from Table, Line A. TANKER = **71.61**  
(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 = **957 x .7161 = 685 mm.**

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	1105	1		1105	451	451	1		451
$\frac{1}{2}L$ from A.P. ...	491	4		1964	16	16	4		64
$\frac{3}{4}L$ „ ...	123	2		246	-	-	2		-
Amidships ...	-	4		-	-	-	4		-
$\frac{3}{4}L$ from F.P. ...	245	2		490	-	-	2		-
$\frac{1}{2}L$ „ ...	982	4		3928	119	119	4		476
F.P. ...	2210	1		2210	1372	1372	1		1372
Total ...				9943					2363

 Correction =  $\frac{\text{Difference between sums of products}}{18} \left( 75 - \frac{S}{2L} \right) = \frac{7580}{18} \left( 75 - .1951 \right) = +234 mm.$ 
If limited on account of midship superstructure. **✓**Mean actual sheer aft = **Deficient**Mean actual sheer forward = **Deficient**
 Length of enclosed superstructure forward of amidships = } **Deficient**  
 „ „ aft of „ = } **sheers.**

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

 Depth to Freeboard Deck = **4.519**  
 Summer freeboard = **420**  
 Moulded draught (d) = **4.099**

 Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{48} \times 85 = 9 mm.$ 

 Addition for Winter North Atlantic Freeboard (if required) = **85 + 84 = 169 mm = 14 cms.**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$  **6076**

Tons per inch immersion at summer load water line

 $T =$  **39.65**
 Deduction =  $\frac{\Delta}{40T}$  inches

 $= \frac{6076}{40 \times 39.65} = 3.83'' = 10 cms.$   
 $\frac{4}{48} = 9 cms.$ 

TABULAR FREEBOARD corrected for Flush Deck (if required)

 Correction for coefficient  $\frac{.832 + .68}{1.36} = \frac{1.512}{1.36}$ 

Depth Correction	...	...	...	...	491
Deduction for superstructures	...	...	...	...	685
Sheer correction	...	...	...	...	234
Round of Beam correction	...	...	...	...	1
Correction for Thickness of Deck amidships	...	...	...	...	-
Other corrections, scantlings, etc.	...	...	...	...	-
<b>Total</b>	<b>234</b>	<b>1177</b>	<b>-</b>	<b>943</b>	

Summer Freeboard = **416 mm.**

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

Tropical Fresh Water Line above Centre of Disc	...	72.19 cms
Fresh Water Line	...	4.10 "
Tropical Line	...	32.9 "
Winter Line below	...	32.9 "
Winter North Atlantic Line	...	63.14 "

Tropical Fresh Water Freeboard	...	23 "
Fresh Water	...	32 "
Tropical	...	33 "
Winter	...	51 "
Winter North Atlantic	...	59 "

18 FEB 1938

002870-002875-0232

RECEIVED  
2 MAR 1938



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.

Trunk.  $5.49 \times \frac{13.70}{17.04} = 4.65$  ✓  
 $54.02 \times \frac{10.34}{17.04} = 32.72$  ✓  
 $2.44 \times \frac{9.78}{17.04} = \frac{1.40}{38.77}$  ✓

Trade of ship.....

Names of sister ships.....

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

Owners.....

Fee £.....

