

Basis computation for a C.S. Ship

36631

Index. No. 36637.  
(For London Office only).

## Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

**RETAIN**

Ship's Name **NOTTINGHAM.** Official Number **14710** Nationality and Port of Registry **British London** Gross Tonnage **14710** Date of Build **1941**

Port of Survey **Glasgow** Date of Survey **Sept 1941** Surveyor's Signature **A. W. Paterson.**

Moulded Dimensions: Length **450.77** Breadth **60.00** Depth **31.56 (assumed)**  
*To centre of rudder stock*

Moulded displacement at moulded draught = 85 per cent. of moulded depth **14710** tons

Coefficient of fineness for use with Tables **.710**

Particulars of Classification **+100 A1 with freeboard (contemplated)**

**Depth for Freeboard (D).**

Moulded depth ... **31.56**

Stringer plate ... **.04**

Sheathing on exposed deck  $T \left( \frac{L-S}{L} \right) =$  **✓**

Depth for Freeboard (D) = **31.60**

**Depth correction.**

(a) Where D is greater than Table depth  $(D - \text{Table depth}) R =$   
 $(31.60 - 30.25) \times 3 = +4.65"$

(b) Where D is less than Table depth (if allowed)  $(\text{Table depth} - D) R =$   
 $1.55$

If restricted by superstructures

**Round of Beam correction.**

Moulded Breadth (B)

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

Ship's Round of Beam = **Assumed standard**

Difference

Restricted to

Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) =$  **Nie.**

## 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 ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
W'cle enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...					

*C.S.S.*

Standard Height of Superstructure **7.5'**

" " R.Q.D. **✓**

Deduction for complete superstructure **42.00"**

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

" "  $\frac{S_1}{L} =$  **100.00**

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

Percentage from Table, Line A. **✓**

(corrected for absence of forecastle (if required)) **100.00**

Percentage from Table, Line B. **✓**

(corrected for absence of forecastle (if required)) **✓**

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

Deduction = **42 × 1.00 = -42.00"**

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...		1				1	
$\frac{1}{2}L$ from A.P. ...		4				4	
$\frac{2}{8}L$ " ...		2				2	
Amidships ...		4				4	
$\frac{2}{8}L$ from F.P. ...		2				2	
$\frac{1}{2}L$ " ...		4				4	
F.P. ...		1				1	
Total ...							

*Assumed Standard*

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 " = **✓**
Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$  **-50"**

If limited on account of midship superstructure.

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

**Deduction for Tropical Freeboard.**

**Addition for Winter and Winter North Atlantic Freeboard.**

Depth to Freeboard Deck = **31.60**

Summer freeboard = **4.29**

Moulded draught (d) = **27.31**

Deduction for Tropical freeboard 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

$\Delta =$

Tons per inch immersion at summer load water line

T =

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

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

Correction for coefficient  $\frac{710 + .68}{1.36} = 1.34/1.36$

	+	-
Depth Correction ...	4.65	-
Deduction for superstructures ...	-	42.00
Sheer correction ...	-	.50
Round of Beam correction ...	-	-
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-
	<b>4.65</b>	<b>42.50</b>
		<b>-37.85</b>
		<b>Summer Freeboard = 51.41</b>

**87.34**  
**89.26**

## 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 " " ...	