

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER, (TUG)

Ship's Name <b>"EMPIRE NINA"</b>	Official Number <b>180474</b>	Nationality and Port of Registry <b>BRITISH</b> <b>HULL.</b>	Gross Tonnage <b>296</b>	Date of Build <b>1946</b>	Port of Survey <b>Hull.</b>
Moulded Dimensions: Length <b>115'-0"</b> Breadth <b>27'-6"</b> Depth <b>13'-6"</b>					Date of Survey <b>During construction</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>580</b> tons					Surveyor's Signature <b>J. Macleod</b>
Coefficient of fineness for use with Tables <b>68 (Actual 559)</b> <b>T = 5.96</b>					Particulars of Classification <b>*100 A1.</b> <b>FOR TOWING SERVICES.</b> <b>(CONTEMPLATED)</b>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <b>13'-5"</b>	(a) Where D is greater than Table depth (D-Table depth) R = <b>(13.53-7.67) .835 = + 5.19</b>	Moulded Breadth (B) <b>27'-5"</b>
Stringer plate ... <b>35</b> ... <b>03</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>✓</b>	Standard Round of Beam = $\frac{B \times 12}{50} =$ <b>6.6</b>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <b>✓</b>	If restricted by superstructures <b>✓</b>	Ship's Round of Beam = <b>8"</b>
Depth for Freeboard (D) = <b>13.53</b>		Difference <b>1.4</b>
		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{1.4}{4} \times 1 = -.35$ <b>✓</b>

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

Standard Height of Superstructure

" " R.Q.D.

Deduction for complete superstructure

Percentage covered  $\frac{S}{L} =$ "  $\frac{S_1}{L} =$ "  $\frac{E}{L} =$ 

NIL ✓

Percentage from Table, Line A.

(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 = NIL

## SHEER HEIGHTS TAKEN FROM TOP OF KEEL TO UPPER DECK AT SIDE.

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	21.50	1		21.50	16'-5 3/4"	35.75	1		35.75
1/4 L from A.P. ...	9.565	4		38.26	15'-2 1/4"	20.25	4		81.00
2/4 L " ...	2.365	2		4.73	14'-2"	8.00	2		16.00
Amidships ...	-	4		-	13'-6"	-	4		-
2/4 L from F.P. ...	4.73	2		9.46	13'-9"	3.00	2		6.00
1/4 L " ...	19.13	4		76.52	15'-1 1/2"	19.50	4		78.00
F.P. ...	43.00	1		43.00	17'-11 1/2"	53.50	1		53.50
Total ...				193.47					270.25

Mean actual sheer aft  
Mean standard sheer aft =Mean actual sheer forward  
Mean standard sheer forward =

EXCESS

Length of enclosed superstructure forward of amidships =

" " aft of " =

NIL

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{76.78}{18} \times .75 = -3.20$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft. - 1.73 ✓

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **13.53** Ft. ✓

Summer freeboard = **1.35** ✓

Moulded draught (d) = **12.18** ✓

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **3.05** ✓Addition for Winter North Atlantic Freeboard (if required) = **5"** ✓

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$  **634** ✓

Tons per inch immersion at summer load water line

 $T =$  **6.18** ✓Deduction =  $\frac{\Delta}{40 T}$  inches = **2 1/2"**DRAUGHTS. **11'-5 3/4"** **586** **6.02****10'-6"** **517** **5.79****9'-6"** **449** **5.54**

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

Correction for coefficient NIL

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

+	-
5.19	-
-	-
-	1.73
-	.35
-	-
-	-
5.19	2.08

Summer Freeboard = **16.34** ✓

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

Tropical Fresh Water Line above Centre of Disc ...	5 1/2"
Fresh Water Line " " ...	2 1/2"
Tropical Line " " ...	3
Winter Line below " " ...	3
Winter North Atlantic Line " " ...	5

Tropical Fresh Water Freeboard ...	0'-10 3/4"
Fresh Water " " ...	1'-13 1/4"
Tropical " " ...	1'-1 1/4"
Winter " " ...	1'-7 1/4"
Winter North Atlantic " " ...	1'-9 1/4"



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.

Trade of ship FOR TOWING SERVICES.

Names of sister ships "EMPIRE GRETA" "EMPIRE VERA"

Builder's name and yard number COCHRANE & SONS LTD., SELBY. YARD NO 1304.

Owners MINISTRY OF WAR TRANSPORT.

Fee £4. TO BE CHARGED WITH FIRST ENTRY.



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Foundation