

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index No. 38159
(For London Office only).

24 SEP 1945

N^o 29173.

Ship's Name EMPIRE CONIFER	Official Number 180632	Nationality and Port of Registry London	Gross Tonnage 1279.41	Date of Build 1935	Port of Survey Schiedam
Moulded Dimensions: Length 229'6" Breadth 36'0 1/2" Depth 15'8 7/8"					Date of Survey 12-14 Sept. 1945
Moulded displacement at moulded draught = 85 per cent. of moulded depth Could not be obtained tons					Surveyor's Signature J. H. H. H.
Coefficient of fineness for use with Tables .75 (assumed)					Particulars of Classification German Lloyd 100 A K E with freeboard

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 15.74'	(a) Where D is greater than Table depth (D - Table depth) R = (15.77 - 15.30) x 1.765 = + .83	Moulded Breadth (B) 36'0 1/2"
Stringer plate03	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = .47	Standard Round of Beam = $\frac{B \times 12}{50}$ = 8.65
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓	If restricted by superstructures	Ship's Round of Beam = 9"
Depth for Freeboard (D) = 15.77		Difference .35
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$ = $\frac{.35 \times 2883}{4} = - .03$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed equivalent	.72	84.72	3.93' + 2 1/2'	-	84.72
" overhang ...					
Bridge enclosed equivalent	.45.48	45.48	4.25' + 2 1/2'	-	45.48
" overhang aft ...					
" overhang forward					
F'cle enclosed ...	23.94	23.94	7.25' + 2 1/2'	-	23.94
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward					
Total ...	154.14	154.14			154.14

Standard Height of Superstructure **6.0**
" " R.Q.D. **3.864**
Deduction for complete superstructure **28.95**
Percentage covered $\frac{S}{L} =$
" " $\frac{S_i}{L} =$ } **67.17**
" " $\frac{E}{L} =$
Percentage from Table, Line A. **58.19**
(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 = **28.95 x 58.19 = - 16.85**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	32.95	1	32.95	33' + .91	33.91	1	33.91		
1/4 L from A.P. ...	14.665	4	58.66	12 1/2'	13.41	4	53.64		
3/8 L " ...	3.625	2	7.25	1 1/4'	2.16	2	4.32		
Amidships ...	-	4	-	-	-	4	-		
3/8 L from F.P. ...	7.25	2	14.50	12 1/2'	12.50	2	25.00		
1/4 L " ...	29.33	4	117.32	39'	39.00	4	156.00		
F.P. ...	65.90	1	65.90	88 1/2'	88.50	1	88.50		
Total ...			296.58				361.37		

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{L} \right) = \frac{64.79}{18} \left(\frac{.75 - .3358}{.4142} \right) = - 1.49$
If limited on account of midship superstructure. **1.49 x .767/2 = - 1.24**
If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

Mean actual sheer aft =
Mean standard sheer aft = } **Excess.**
Mean actual sheer forward =
Mean standard sheer forward =
Length of enclosed superstructure forward of amidships = **.067**
" " aft of " = **.500**

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	28.40
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.75 + .68}{1.36} = \frac{1.43}{1.36}$	29.86
Depth to Freeboard Deck = 15.77	Δ =	Depth Correction83	
Summer freeboard = 2.33	Tons per inch immersion at summer load water line	Deduction for superstructures ... - 16.85	
Moulded draught (d) = 13.44	T =	Sheer correction ... - 1.24	82.8
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.36 = 3 1/4	Deduction = $\frac{\Delta}{40 T}$ inches = 3 1/4	Round of Beam correction03	26-9-45
Addition for Winter North Atlantic Freeboard (if required) =		Correction for Thickness of Deck amidships ... -	
		Other corrections, scantlings, etc. 15.43	1.86
		for summer moulded draught of 13-5 1/4 16.26	- 17.24
		Summer Freeboard = 28.00	

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

Tropical Fresh Water Line above Centre of Disc ...	6 1/2'	Tropical Fresh Water Freeboard ...	2' 4"
Fresh Water Line " ...	3 1/4'	Fresh Water " ...	2' 0 3/4"
Tropical Line " Not applicable ...	3 1/4'	Tropical " ...	2' 0 3/4"
Winter Line below " ...	3 1/4'	Winter " ...	2' 7 1/4"
Winter North Atlantic Line " Not applicable ...	3 1/4'	Winter North Atlantic " ...	2' 7 1/4"

Empire Conifer

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.

COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.
SURVEYOR'S FOR FREEBOARD.

Official Number	18002
Builder's name and yard number	1899.41 1902
Date of Survey	12.11.1902
Surveyor's signature	<i>J. H. ...</i>
Particulars of Construction	

Depth for Freeboard (D)	12.74
Depth correction	
Beam correction	
Result	$\frac{1.87 \times 12.04}{36.04} = .62$

Bridge.

$$\begin{array}{r} 44.85 \\ 2\frac{1}{3} \times 1.87 = 1.25 \\ \hline 46.10 \\ .62 \\ \hline 45.48 \end{array}$$

Reckn.

$$\begin{array}{r} 84.10 \\ 62 \text{ str. 1} \\ \hline 84.72 \end{array}$$

SEVEN CORRECTION.

Station	Observed	Corrected	Observed	Corrected	Observed	Corrected	Observed	Corrected
1	32.42	32.42	32.42	32.42	32.42	32.42	32.42	32.42
2	32.42	32.42	32.42	32.42	32.42	32.42	32.42	32.42
3	32.42	32.42	32.42	32.42	32.42	32.42	32.42	32.42
4	32.42	32.42	32.42	32.42	32.42	32.42	32.42	32.42
5	32.42	32.42	32.42	32.42	32.42	32.42	32.42	32.42
6	32.42	32.42	32.42	32.42	32.42	32.42	32.42	32.42
7	32.42	32.42	32.42	32.42	32.42	32.42	32.42	32.42
Total	227.98	227.98	227.98	227.98	227.98	227.98	227.98	227.98

Trade of ship *Coaster*

Names of sister ships *✓*

Builder's name and yard number *Empire Conifer*

Owners *(Ministry of War Transport.) Tyne & Tees Shipping Comp. New Castle*

Fee *£ 220.-*

