

AMENDED.

Rpt. C.11 (Comp.)

For LONDON OFFICE ONLY

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

Received
Index No.
Govt. Copy
Owners C11

Ship's Name EMPIRE TRADER	Official Number 169517	Nationality and Port of Registry LIBERIAN MONROVIA	Gross Tonnage 7201	Date of Build 1944	Port of Survey
Moulded Dimensions: Length 426.43' Breadth 56.00' Depth 36.92' ✓					Date of Survey 17/9/52
Freeboard Length					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 16440 tons					Particulars of Classification +100A1
Coefficient of fineness for use with Tables .768					

DEPTH FOR FREEBOARD (D).

Moulded depth	36.92
Stringer plate06
Wood Sheathing on exposed deck	$T \left(\frac{L-S}{L} \right) =$			
Depth for Freeboard (D) =	36.98			

DEPTH CORRECTION.

(a) Where D is greater than Table depth (D-Table depth) R = **(36.98-28.43)3 = +25.65**

(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)	56.00
Standard Round of Beam = $\frac{B \times 12}{50}$	13.44
Ship's Round of Beam	14.
Difference	.56
Restricted to	...
Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right)$	= $\frac{.56^2}{4} \times .9197 = -.13$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed
" overhang
R.Q.D. enclosed
" overhang
Bridge enclosed
" overhang aft
" overhang forward
Fore enclosed	34.25	34.25	7.5	-	34.25
" overhang
Trunk aft
" forward
Tonnage opening aft
" " forward
Total	34.25	34.25			34.25

Standard Height of Superstructure **7.5**

" " R.Q.D.

Deduction for complete superstructure **42**

Percentage covered $\frac{S}{L} =$...
" " $\frac{S_1}{L} =$...
" " $\frac{E}{L} =$... } **8.03**

Percentage from Table, Line A. **4.01**
(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 = **42 x .0401 = - 1.68**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	52.64	1		52.64	53	53.00	1		53.00
$\frac{1}{8}L$ from A.P.	23.43	4		93.72	22	22.00	4		88.00
$\frac{2}{8}L$ "	5.79	2		11.58	2 3/16	2.19	2		4.38
Amidships	0	4		0	0	0	4		0
$\frac{3}{8}L$ from F.P.	11.58	2		23.16	9.87	9.87	2		19.74
$\frac{4}{8}L$ "	46.85	4		187.40	46.00	46.00	4		184.00
F.P.	105.28	1		105.28	106.62	106.62	1		106.62
Total				473.78					455.74

Mean actual sheer aft =
Mean standard sheer aft = } **Deficient**

Mean actual sheer forward =
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =
" " aft of " = } **NIL**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75-S}{2L} \right) = \frac{18.04}{18} \left(\frac{.75-.0401}{2} \right) = +.71$
If limited on account of midship superstructure. 7099 If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck	=	36.98
Summer freeboard	=	9.23
Moulded draught (d)	=	27.75
Keel allowance	=	...
Extreme draught	=	...
Deduction for Tropical freeboard and addition for	=	...

Winter freeboard = $\frac{d}{4}$ inches = **6.94 = 7"**

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line	$\Delta =$ 14484
Tons per inch immersion at summer load water line	T = 48.62
Deduction = $\frac{\Delta}{40 T}$ inches	= 7.45
	= 7 1/2.

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient	768 + .68 = 1.448	81.05
	1.36	86.30
Depth Correction	25.65	
Deduction for superstructures	- 1.72	
Sheer correction	.71	
Round of Beam correction	.13	
Correction for Thickness of Deck amidships	-	
Other corrections, scantlings, etc.	-	
	26.36	1.85 + 24.51
		Summer Freeboard = 110.81

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

Tropical Fresh Water Line above Centre of Disc	...	14 1/2"	Tropical Fresh Water Freeboard	8' - 2 3/4"
Fresh Water Line	"	7 1/2"	Fresh Water	8' - 0 1/4"
Tropical Line	"	7"	Tropical	8' - 7 1/4"
Winter Line below	"	7"	Winter	8' - 3 3/4"
Winter North Atlantic Line	"	...	Winter North Atlantic	9' - 9 3/4"