

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name LAKE MICHIGAN	Official Number 175393	Nationality and Port of Registry BRITISH LONDON	Gross Tonnage 7139	Date of Build 1944	Port of Survey _____
Moulded Dimensions: Length 414.50 ✓ Breadth 56.84 ✓ Depth 37.33 ✓					Date of Survey 20/12/54
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 16630 ✓ tons					Surveyor's Signature _____
Coefficient of fineness for use with Tables .772 ✓					Particulars of Classification BS*

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 37.33 ✓	(a) Where D is greater than Table depth (D-Table depth) R = (37.33 - 27.83) 3.0 = 28.65 ✓	Moulded Breadth (B) 56.84 ✓
Stringer plate05 ✓	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 9.55 ✓	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{13.65}{50} = 13.65$ ✓
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 14.00 ✓
Depth for Freeboard (D) = 37.38 ✓		Difference .35 ✓
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.35}{4} = .09$ ✓

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 ...					
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 $\frac{S}{L} =$ _____

" " $\frac{S_1}{L} =$ _____

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

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 CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	51.75 ✓	1	51.75	54.50	54.50	1	54.50
$\frac{1}{2}$ L from A.P. ...	23.03 ✓	4	92.12	23.50	23.50	4	94.00
$\frac{3}{4}$ L " ...	5.69 ✓	2	11.38	6.75	6.75	2	11.50
Amidships ...	✓	4	-	4.75	-	4	✓
$\frac{1}{4}$ L from F.P. ...	11.38 ✓	2	22.76	11.50	11.50	2	23.00
$\frac{3}{4}$ L " ...	46.06 ✓	4	184.24	47.00	47.00	4	188.00
F.P. ...	103.50 ✓	1	103.50	105.50	105.50	1	105.50
Total ...			465.75				476.50

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{10.75}{18} \times .75 = .45$ ✓

If limited on account of midship superstructure.

Mean actual sheer aft = **EXCESS** ✓

Mean standard sheer aft = **EXCESS** ✓

Mean actual sheer forward = **EXCESS** ✓

Mean standard sheer forward = **EXCESS** ✓

Length of enclosed superstructure forward of amidships = **FLUSH DECK**

" " aft of " = **FLUSH DECK**

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 37.38 ✓ Summer freeboard = 9.77 ✓ Moulded draught (d) = 27.61 ✓ Keel allowance = _____ Extreme draught = _____ Deduction for Tropical freeboard and addition for _____ Winter freeboard = $\frac{d}{4}$ inches = 6.90 = 7 ✓ 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 = $\frac{\Delta}{40 T}$ inches = 4 1/4 ✓	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{77.00 \times 6.26}{1.36} = \frac{1.452}{1.36}$ <table border="1"> <tr><th></th><th>+</th><th>-</th></tr> <tr><td>Depth Correction</td><td>28.65 ✓</td><td></td></tr> <tr><td>Deduction for superstructures</td><td></td><td>✓</td></tr> <tr><td>Sheer correction</td><td></td><td>.45 ✓</td></tr> <tr><td>Round of Beam correction</td><td></td><td>.09 ✓</td></tr> <tr><td>Correction for Thickness of Deck amidships</td><td></td><td>✓</td></tr> <tr><td>Other corrections, scantlings, etc. to ...</td><td>.23 ✓</td><td></td></tr> <tr><td>CORRESPOND TO SUMMER Moulded DRAUGHT OF 27.60' (27.61 ACTUAL)</td><td>28.88 ✓</td><td>.54 ✓</td></tr> </table> Summer Freeboard = 117.25 ✓		+	-	Depth Correction	28.65 ✓		Deduction for superstructures		✓	Sheer correction		.45 ✓	Round of Beam correction		.09 ✓	Correction for Thickness of Deck amidships		✓	Other corrections, scantlings, etc. to23 ✓		CORRESPOND TO SUMMER Moulded DRAUGHT OF 27.60' (27.61 ACTUAL)	28.88 ✓	.54 ✓
	+	-																								
Depth Correction	28.65 ✓																									
Deduction for superstructures		✓																								
Sheer correction		.45 ✓																								
Round of Beam correction		.09 ✓																								
Correction for Thickness of Deck amidships		✓																								
Other corrections, scantlings, etc. to23 ✓																									
CORRESPOND TO SUMMER Moulded DRAUGHT OF 27.60' (27.61 ACTUAL)	28.88 ✓	.54 ✓																								

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

Tropical Fresh Water Line above Centre of Disc ...	14 1/4 ✓	Tropical Fresh Water Freeboard ...	8 1/4 ✓
Fresh Water Line " " ...	7 1/4 ✓	Fresh Water " " ...	9 1/2 ✓
Tropical Line " " ...	7 ✓	Tropical " " ...	9 1/2 1/4 ✓
Winter Line below " " ...	7 ✓	Winter " " ...	10 1/4 1/4 ✓
Winter North Atlantic Line " " ...	✓	Winter North Atlantic " " ...	✓