

AMENDED

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

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>EARNER.</b>	Official Number <b>169324</b>	Nationality and Port of Registry <b>BRITISH HULL</b>	Gross Tonnage <b>614.</b>	Date of Build <b>1943.</b>	Port of Survey.....
Moulded Dimensions: Length <b>142.50'</b> Breadth <b>33.0'</b> Depth <b>16.0'</b>					Date of Survey <b>2.9.55.</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) <b>1010</b> tons					Surveyor's Signature.....
Coefficient of fineness for use with Tables <b>.68 (ACTUAL .653)</b>					Particulars of Classification <b>+100 A1 "TOWING SERVICES"</b>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... .. <b>16.00</b>	(a) Where D is greater than Table depth (D-Table depth) R = <b>(16.03 - 9.50) / 1.096 = 4.16"</b>	Moulded Breadth (B) <b>33.0</b>
Stringer plate ... .. <b>.03</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>6.53</b>	Standard Round of Beam = $\frac{B \times 12}{50} = \mathbf{7.92}$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) = \mathbf{NONE.}$	If restricted by superstructures	Ship's Round of Beam = <b>9.00</b>
Depth for Freeboard (D) = <b>16.03</b>		Difference <b>1.08</b>
		Restricted to
		Correction = $\frac{\text{Diff}^c}{4} \times \left( 1 - \frac{S_1}{L} \right) = \mathbf{1.08 \times .4562 = -.49}$

## 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 ... ..	<b>77.5</b>	<b>77.5</b>	<b>7.0</b>	<b>✓</b>	<b>77.5</b>
" overhang ... ..					
Trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..					
" " forward ... ..					
Total ... ..	<b>77.5</b>	<b>77.5</b>			<b>77.5</b>

Standard Height of Superstructure **6.00**

" " R.Q.D. **✓**

Deduction for complete superstructure **20.25**

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

" "  $\frac{S_1}{L} =$  **54.38**

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

Percentage from Table, Line A. **38.13**

(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 = **20.25 x .3813 = 7.72**

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ... ..	<b>24.25</b>	<b>1</b>	<b>24.25</b>	<b>29.50</b>	<b>29.50</b>	<b>1</b>	<b>29.50</b>
$\frac{1}{8}L$ from A.P. ... ..	<b>10.79</b>	<b>4</b>	<b>43.16</b>	<b>12.33</b>	<b>12.33</b>	<b>4</b>	<b>49.32</b>
$\frac{2}{8}L$ " ... ..	<b>2.67</b>	<b>2</b>	<b>5.34</b>	<b>2.92</b>	<b>2.92</b>	<b>2</b>	<b>5.84</b>
Amidships ... ..	<b>✓</b>	<b>4</b>	<b>✓</b>	<b>✓</b>	<b>-</b>	<b>4</b>	<b>-</b>
$\frac{3}{8}L$ from F.P. ... ..	<b>6.34</b>	<b>2</b>	<b>10.68</b>	<b>8.08</b>	<b>9.43</b>	<b>2</b>	<b>18.86</b>
$\frac{4}{8}L$ " ... ..	<b>2.58</b>	<b>4</b>	<b>9.632</b>	<b>29.64</b>	<b>38.16</b>	<b>4</b>	<b>152.64</b>
F.P. ... ..	<b>48.50</b>	<b>1</b>	<b>48.50</b>	<b>43.45</b>	<b>46.75</b>	<b>1</b>	<b>46.75</b>
Total ... ..		<b>✓</b>	<b>218.25</b>	<b>+12.09</b>			<b>341.91</b>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \mathbf{123.66 \left( \frac{.75 - .2719}{78} \right) = -3.29}$

If limited on account of midship superstructure. **Yes.  $123.66 \times 3.29 = -2.36$**

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 = **.5L**

" " aft of " = **.0438**

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft. **.05 = 2.14**

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **16.03**

Summer freeboard = **1.87**

Moulded draught (d) = **14.16**

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **3.54 - .31**

Addition for Winter North Atlantic Freeboard (if required) =

## Deduction for Fresh Water.

Displacement in salt water at summer load water line  $\Delta = \mathbf{1078}$

Tons per inch immersion at summer load water line  $T = \mathbf{8.69}$

Deduction =  $\frac{\Delta}{40 T}$  inches =  $\mathbf{3.10 = 3}$

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

Correction for coefficient **NIL**

Depth Correction ... .. **7.16**

Deduction for superstructures ... .. **7.72**

Sheer correction ... .. **2.14**

Round of Beam correction ... .. **.12**

Correction for Thickness of Deck amidships ... ..

Other corrections, scantlings, etc. **ADDITION**

**OR SIDE SCUTTLE.**

+	-
<b>7.16</b>	<b>✓</b>
<b>7.72</b>	<b>✓</b>
<b>2.14</b>	<b>✓</b>
<b>.12</b>	<b>✓</b>
<b>10.79</b>	<b>✓</b>
<b>17.95</b>	<b>9.98</b>
<b>Summer Freeboard = 22.50</b>	

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

Tropical Fresh Water Line above Centre of Disc **.3"**

Fresh Water Line " **.3"**

Tropical Line " **NIL**

Winter Line below " **NIL**

Winter North Atlantic Line " **.2"**

Tropical Fresh Water Freeboard **1.10 1/2"**

Fresh Water " **1.10 1/2"**

Tropical " **1.10 1/2"**

Winter " **1.10 1/2"**

Winter North Atlantic " **1.10 1/2"**