

Re-assignment.

27.0000

Index. No. 38087.  
(For London Office only).

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>Empire Seraph.</i>	Official Number <i>169077</i>	Nationality and Port of Registry <i>British Lyons.</i>	Gross Tonnage <i>129</i>	Date of Build <i>1942.</i>	Port of Survey
Moulded Dimensions: Length <i>92.0</i> Breadth <i>20.50</i> Depth <i>10.50</i>					Date of Survey <i>27. 9. 45.</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>260</i> tons <i>T.P. = 3.45</i>					Surveyor's Signature
Coefficient of fineness for use with Tables <i>.54 (.68 lower.)</i>					Particulars of Classification <i>+ 10071 For Towing Services.</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... .. <i>10.50</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(10.53 - 6.13) x .708 = +3.11.</i>	Moulded Breadth (B) <i>20.5</i>
Stringer plate ... .. <i>.03</i>	<i>4.4</i>	Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>4.92</i>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <i>✓</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Ship's Round of Beam = <i>5.00</i>
Depth for Freeboard (D) = <i>10.53</i>	If restricted by superstructures	Difference <i>.08</i>
		Restricted to <i>✓</i>
		Correction = $\frac{\text{Diff.}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.08}{4} = .02$

## 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  $\frac{S}{L} =$  *N/L.*

„ „  $\frac{S_1}{L} =$  *N/L.*

„ „  $\frac{E}{L} =$  *N/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 = *N/L.*

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	<i>19.20</i>	<i>1</i>		<i>19.20</i>	<i>21.3</i>	<i>21.3</i>	<i>1</i>		<i>21.30</i>
$\frac{1}{8}L$ from A.P. ... ..	<i>8.54</i>	<i>4</i>		<i>34.16</i>	<i>11.3</i>	<i>11.3</i>	<i>4</i>		<i>45.20</i>
$\frac{2}{8}L$ „ ... ..	<i>2.11</i>	<i>2</i>		<i>4.22</i>	<i>3.2</i>	<i>3.2</i>	<i>2</i>		<i>6.40</i>
Amidships ... ..	<i>-</i>	<i>4</i>		<i>-</i>	<i>-</i>	<i>-</i>	<i>4</i>		<i>-</i>
$\frac{3}{8}L$ from F.P. ... ..	<i>4.22</i>	<i>2</i>		<i>8.44</i>	<i>4.8</i>	<i>4.8</i>	<i>2</i>		<i>9.60</i>
$\frac{4}{8}L$ „ ... ..	<i>17.09</i>	<i>4</i>		<i>68.36</i>	<i>26.8</i>	<i>26.8</i>	<i>4</i>		<i>107.20</i>
F.P. ... ..	<i>38.40</i>	<i>1</i>		<i>38.40</i>	<i>63.7</i>	<i>63.7</i>	<i>1</i>		<i>63.70</i>
Total ... ..				<i>172.78</i>					<i>253.40</i>

Mean actual sheer aft = *Excess.*

Mean standard sheer aft

Mean actual sheer forward = *Excess.*

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = *Flush Deck.*

„ „ aft of „ =

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{80.62}{18} (.75) = -3.36$

If limited on account of midship superstructure. *Flush Deck.*

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.  $\frac{.75}{100} = .0075$

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = *10.53*

Summer freeboard = *1.02*

Moulded draught (d) = *9.51*

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = *2.38 = 2\frac{1}{2}*

Addition for Winter North Atlantic Freeboard (if required) = *✓*

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$  *287*

Tons per inch immersion at summer load water line

T = *3.56*

Deduction =  $\frac{\Delta}{40T}$  inches = *2.02 = 2*

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

Correction for coefficient

Depth Correction ... .. *3.11*

Deduction for superstructures ... .. *6*

Sheer correction ... .. *1.38*

Round of Beam correction ... .. *.02*

Correction for Thickness of Deck amidships ... .. *-*

Other corrections, scantlings, etc. ... .. *-*

+	-
<i>3.11</i>	<i>-</i>
<i>6</i>	<i>-</i>
<i>-</i>	<i>1.38</i>
<i>-</i>	<i>.02</i>
<i>-</i>	<i>-</i>
<i>-</i>	<i>-</i>
<i>3.11</i>	<i>1.40</i>

Summer Freeboard = *12.29*

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

Tropical Fresh Water Line above Centre of Disc ... ..	<i>2</i>
Fresh Water Line „ „ ... ..	<i>2</i>
Tropical Line „ „ ... ..	<i>2\frac{1}{2}</i>
Winter Line below „ „ ... ..	<i>2\frac{1}{2}</i>
Winter North Atlantic Line „ „ ... ..	<i>-</i>

Tropical Fresh Water Freeboard ... ..	<i>0 - 10\frac{1}{4}</i>
Fresh Water „ „ ... ..	<i>0 - 10\frac{1}{4}</i>
Tropical „ „ ... ..	<i>1 - 2\frac{3}{4}</i>
Winter „ „ ... ..	<i>1 - 2\frac{3}{4}</i>
Winter North Atlantic „ „ ... ..	<i>-</i>