



# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. 42289  
(For London Office only).

30 NOV 1950

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Ship's Name <b>ESSEX LIVERPOOL</b>	Official Number <b>183276</b>	Nationality and Port of Registry <b>BRITISH LONDON.</b>	Gross Tonnage <b>14540.</b>	Date of Build <b>1921</b>	Port of Survey <b>Newcastle-upon-Tyne</b>
Moulded Dimensions: Length <b>555'0"</b> Breadth <b>75'0"</b> Depth <b>43'3"</b> Upper Dk <b>43'3"</b> Trunk Dk <b>35'0"</b>					Date of Survey <b>During classification survey</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					Surveyor's Signature <b>W. Robinson</b>
Coefficient of fineness for use with Tables <b>80</b>					Particulars of Classification

<b>Depth for Freeboard (D).</b> Moulded depth <b>43'25"</b> Stringer plate <b>Trunk Dk 0'56"</b> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <b>43'33"</b>	<b>Depth correction.</b> (a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $(43'33" - 37'00") 3 = +18'99"$ (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ If restricted by superstructures	<b>Round of Beam correction.</b> Moulded Breadth (B) <b>75'0"</b> Standard Round of Beam = $\frac{B \times 12}{50} = 18'00"$ Ship's Round of Beam <b>U.Dk 15"</b> = $\frac{15 \times 12}{50} = 3'00"$ Difference Restricted to Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{3^2}{4} \times \frac{9198}{4} = +1'69"$
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## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<del>126'25"</del>		<del>8'25" (side)</del>		
" overhang ...					
R.Q.D. enclosed ...					
" overhang					
Bridge enclosed <b>U.Dk</b>	<b>44'5"</b>	<b>44'50"</b>	<b>7'5"</b>		<b>44'50"</b>
" overhang aft ...	<b>none</b>				
" overhang forward	<b>none</b>				
Fore enclosed ...	<del>90'0"</del>		<del>8'25" (side)</del>		
" overhang ...					
Trunk aft ...	<del>344'45"</del>		<del>8'25" (side)</del>		
" forward ...					
Tonnage opening aft ...					
" forward					
Total ...	<b>44'50"</b>	<b>44'50"</b>			<b>44'50"</b>

Standard Height of Superstructure **7'50"** ✓  
 " " R.Q.D. ✓  
 Deduction for complete superstructure **42'00"** ✓  
 Percentage covered  $\frac{S}{L} =$   
 $\frac{S_1}{L} =$   
 $\frac{E}{L} =$   
 Percentage from Table, Line A. **4'01"** ✓  
 (corrected for absence of forecastle (if required)) **4'01" - 5" = N.L.** ✓  
 Percentage from Table, Line B. **5'05" - 5" = 0'05"** ✓  
 (corrected for absence of forecastle (if required)) **0'05" - 0'05" = N.L.** ✓  
 Interpolation for bridge less than 2L (if required) **0'05" × 0'08" = N.L.** ✓  
 Deduction = **N.L.** ✓

## SHEER CORRECTION. (See sketch over).

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<b>65'50"</b>	1		<b>65'50"</b>	<b>51"</b>	<b>51'00"</b>	1		<b>51'00"</b>
$\frac{1}{2}$ L from A.P. ...	<b>29'15"</b>	4		<b>116'60"</b>	<b>6"</b>	<b>6'00"</b>	4		<b>24'00"</b>
$\frac{2}{3}$ L " ...	<b>7'20"</b>	2		<b>14'40"</b>	<b>0"</b>	<b>0'</b>	2		<b>0'</b>
Amidships ...		4			<b>0"</b>		4		
$\frac{2}{3}$ L from F.P. ...	<b>14'41"</b>	2		<b>28'82"</b>	<b>0"</b>	<b>0'</b>	2		<b>0'</b>
$\frac{1}{2}$ L " ...	<b>58'30"</b>	4		<b>233'20"</b>	<b>15"</b>	<b>15'00"</b>	4		<b>60'00"</b>
F.P. ...	<b>131'00"</b>	1		<b>131'00"</b>	<b>120"</b>	<b>120'00"</b>	1		<b>120'00"</b>
Total ...				<b>589'53"</b>					<b>255'00"</b>

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 " = } Deficient Sheers.

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{334'53}{18} \left( \frac{75-0'40}{2 \times 116'60} \right) = +13'19"$  ✓  
 If limited on account of midship superstructure. ✓  
 If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft. ✓

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Depth to Freeboard Deck = <b>43'33"</b> Summer freeboard = <b>11'88"</b> Moulded draught (d) = <b>31'45"</b> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>7'86" : 8"</b> Addition for Winter North Atlantic Freeboard (if required) = <b>7'46" + 5'55" + 13'41" = 13'42"</b>	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40T}$ inches = <b>8'34"</b>	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required) Correction for coefficient $\frac{68+80}{1'36} = 1'48/1'36$ <table border="1"> <thead> <tr> <th></th> <th>+</th> <th>-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction ...</td> <td><b>18'99"</b></td> <td>✓</td> </tr> <tr> <td>Deduction for superstructures ...</td> <td><b>13'19"</b></td> <td>✓</td> </tr> <tr> <td>Sheer correction ...</td> <td><b>69"</b></td> <td>✓</td> </tr> <tr> <td>Round of Beam correction ...</td> <td></td> <td>✓</td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td></td> <td>✓</td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td></td> <td>✓</td> </tr> <tr> <td><b>Summer Freeboard</b></td> <td><b>162'81"</b></td> <td></td> </tr> </tbody> </table>		+	-	Depth Correction ...	<b>18'99"</b>	✓	Deduction for superstructures ...	<b>13'19"</b>	✓	Sheer correction ...	<b>69"</b>	✓	Round of Beam correction ...		✓	Correction for Thickness of Deck amidships		✓	Other corrections, scantlings, etc. ...		✓	<b>Summer Freeboard</b>	<b>162'81"</b>	
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**SUMMER FREEBOARD** amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:

	Freeboard	Freeboard
Tropical Fresh Water Line above Centre of Disc	<b>16'34"</b>	Tropical Fresh Water Freeboard ...
Fresh Water Line	<b>8'34"</b>	Fresh Water
Tropical Line	<b>8'34"</b>	Tropical
Winter Line below	<b>8'34"</b>	Winter
Winter North Atlantic Line	<b>13'42"</b>	Winter North Atlantic

Freeboards as previously assigned by the American Bureau (as per Lloyd's Register)

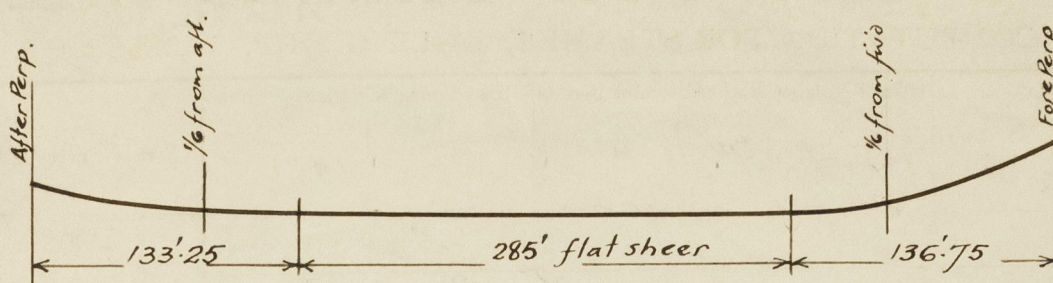
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# Esso Liverpool.

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.



Present Freeboards measured from Upper Deck:-

Trop.	11' 2 1/2" below <sup>deck</sup> <del>centre</del> <sub>of disc</sub>	8" above centre of disc.	23,300 tons displ.
Sum.	11' 10 1/2" "	-	22,600 - do
Winter	12' 6 1/2" "	8" below centre of disc	21,900 - do
W.N.A.	13' 0" "	13 1/2" - do -	21,425 - do
F.W. allowance		8 3/4"	
T.P.I. - 87.2			
Gross Tonnage (Panama)		12,590.8	

Trade of ship International.

Names of sister ships ✓

Builder's name and yard number Newport News S.B. & D.D. Co., U.S.A. No 261

Owners Anglo-American Oil Co Ltd.

Fee £                     



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