

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

 Index. No. 36067  
 (For London Office only).  
 JUL 31 1939

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Ship's Name <b>Barclay Curle</b> <b>n° 676</b>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <b>420</b> Breadth <b>57</b> Depth <b>28.5</b> <i>420.75 to n. of rudder stock</i>					Date of Survey <b>31.7.39</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons Coefficient of fineness for use with Tables <b>.742</b>					Surveyor's Signature _____ Particulars of Classification <b>+100 A1 with freeboard (contemplated)</b>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... .. <b>28.50</b> Stringer plate ... .. <b>.04</b> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <b>28.54</b>	(a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $(28.54 - 28.05) 3 = +1.47$ (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ If restricted by superstructures	Moulded Breadth (B) Standard Round of Beam = $\frac{B \times 12}{50} =$ Ship's Round of Beam = Difference <b>Assumed Standard</b> Restricted to Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) =$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>i</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ...						Standard Height of Superstructure <b>7.5'</b> ✓
" overhang ...						" " R.Q.D.
R.Q.D. enclosed			10'-0"			Deduction for complete superstructure <b>42"</b> ✓
" overhang			AFT			Percentage covered $\frac{S}{L} = 100\%$
Bridge enclosed...	<b>415.54</b>	<b>415.54</b>				" $\frac{S_1}{L} = 99.38\%$ ✓
" overhang aft ...	<b>414.79</b>	<b>414.79</b>			<b>415.54</b>	" $\frac{E}{L} = 99.38\%$ ✓
" overhang forward						Percentage from Table, Line A. (corrected for absence of forecastle (if required)) <b>99.24</b>
F'cle enclosed ...			14'-0"			Percentage from Table, Line B. (corrected for absence of forecastle (if required))
" overhang ...			FROM			Interpolation for bridge less than 2L (if required) ✓
Trunk aft ...			85'-0" FROM			Deduction = <b>42 x .9924 = -41.68</b>
" forward ...			F.P. TO			
Tonnage opening aft ...	<b>5.21</b>	<b>2.60</b>	F.P.		<b>2.60</b>	
" " forward	<b>.75</b>	<b>418.14</b>				
Total ...	<b>420.0</b>	<b>417.39</b>			<b>418.14</b>	

## SHEER CORRECTION.

See enclosed sketch.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<b>52.07</b>	1		<b>52.07</b>	<b>48</b>	<b>78</b>	1		<b>78.00</b>	Mean actual sheer aft = <b>excess</b>
1/2 L from A.P. ...	<b>23.17</b>	4		<b>92.68</b>	<b>21 3/8</b>	<b>34.71</b>	4		<b>138.84</b>	Mean actual sheer forward = <b>excess</b>
1/2 L ..	<b>5.73</b>	2		<b>11.46</b>	<b>5 3/8</b>	<b>8.58</b>	2		<b>17.16</b>	Mean standard sheer forward
Amidships ...		4					4			Length of enclosed superstructure forward of amidships =
1/2 L from F.P. ...	<b>11.46</b>	2		<b>22.92</b>	<b>10 1/16</b>	<b>19.14</b>	2		<b>38.28</b>	" " aft of " = <b>6.5.5.</b>
1/2 L ..	<b>46.35</b>	4		<b>185.40</b>	<b>42 3/4</b>	<b>77.42</b>	4		<b>309.68</b>	
F.P. ...	<b>104.15</b>	1		<b>104.15</b>	<b>96</b>	<b>174</b>	1		<b>174.00</b>	
Total ...				<b>468.68</b>					<b>755.96</b>	

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{287.28}{18} \times .25 = -3.99$  ✓  
 If limited on account of midship superstructure. 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 = **28.54** ✓  
 Summer freeboard = **3.12** ✓  
 Moulded draught (d) = **25.42** ✓

 Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = **6.35 = 6 1/4** ✓  
 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 =  $\frac{\Delta}{40T}$  inches  
 $\frac{44}{4} = 6 1/4$  ✓

TABULAR FREEBOARD corrected for Flush Deck (if required)

 Correction for coefficient  $\frac{742.68}{1.36} = \frac{1.422}{1.36}$  ✓

 Depth Correction ... .. **1.47** ✓  
 Deduction for superstructures ... .. **41.68** ✓  
 Sheer correction ... .. **3.99** ✓  
 Round of Beam correction ... ..  
 Correction for Thickness of Deck amidships ... ..  
 Other corrections, scantlings, etc. ... ..

	+	-
Depth Correction	<b>1.47</b>	
Deduction for superstructures		<b>41.68</b>
Sheer correction		<b>3.99</b>
Round of Beam correction		
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	<b>1.47</b>	<b>45.67</b>
Summer Freeboard =		<b>37.89</b>

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

 Tropical Fresh Water Line above Centre of Disc ... **12 1/2"** ✓  
 Fresh Water Line " " ... **6 1/4"** ✓  
 Tropical Line " " ... **6 1/4"** ✓  
 Winter Line below " " ... **6 1/4"** ✓  
 Winter North Atlantic Line " " ... ✓

 Tropical Fresh Water Freeboard ... **2' 1 1/2"** ✓  
 Fresh Water " " ... **2' 7 1/4"** ✓  
 Tropical " " ... **2' 7 1/4"** ✓  
 Winter " " ... **3' 7 3/4"** ✓  
 Winter North Atlantic " " ...



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.

$$\text{Excess tween dk height } 10.0 - 7.5 = 2.5' = 30''$$

$$\text{Sheer at break} = 96 \times \left( \frac{125.37}{210.37} \right)^2 = 34.09''$$

$$\frac{30.00}{64.09} = \text{excess tween dk height}$$

Virtual sheer @ F.P. thro' superstructure deck @ break

$$64.09 \left( \frac{210.37}{125.37} \right)^2 = 180.44''$$

$$\text{Actual sheer at FP (Superstructure deck)} = 96''$$

$$\text{Excess tween dk. height} = 30''$$

$$\text{Height of raised fore deck} = 48''$$

174" Allowed sheer @ F.P.

$$174 \times .445 = 77.42 \quad " \quad " \quad @ \frac{1}{6}L \text{ from F.P.}$$

$$174 \times .11 = 19.14 \quad " \quad " \quad @ \frac{1}{3}L \quad " \quad \text{F.P.}$$

Trade of ship.....

Names of sister ships.....

Builder's name and yard number.....

Owners.....

Fee £.....



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Foundation