

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>S. Island Commander</i> <i>ex. S. Andrew Kelly.</i>	Official Number <i>134745</i>	Nationality and Port of Registry <i>Canadian</i> <i>Vancouver</i> <i>B.C.</i>	Gross Tonnage <i>270.98</i>	Date of Build <i>1912</i> <i>Altered</i> <i>1941</i>	Port of Survey <i>Vancouver, B.C.</i>
Moulded Dimensions: Length <i>117.6</i> Breadth <i>21.87</i> Depth <i>13.75 to R.Q.D.</i> <i>13.08 for use in computation</i>					Date of Survey <i>November 1941</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature <i>F. B. Gill and D. Turner</i>
Coefficient of fineness for use with Tables <i>.68 (actual, less than .68)</i>					Particulars of Classification <i>100 A - for towing services (contemplation)</i>

Depth for Freeboard (D). Moulded depth <i>Virtual</i> ... <i>13.08'</i> Ringer plate ... <i>3</i> ... <i>.03'</i> Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <i>✓</i> Depth for Freeboard (D) = <i>13.11'</i>	Depth correction. (a) Where D is greater than Table depth $(D - \text{Table depth}) \times \frac{100}{5.27} = +4.77''$ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>✓</i> If restricted by superstructures <i>✓</i>	Round of Beam correction. Moulded Breadth (B) <i>21.87'</i> Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>5.25''</i> Ship's Round of Beam = <i>7.00''</i> Difference <i>1.75''</i> Restricted to <i>✓</i> Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.75}{4} \times .0446 = -.02''$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...						Standard Height of Superstructure <i>6.00'</i>
" overhang ...						" " R.Q.D. <i>3.117'</i>
R.Q.D. enclosed ...	<i>98.60</i>	<i>98.60</i>	<i>.61</i>	<i>.92/3.117</i>	<i>29.10</i>	Deduction for complete superstructure <i>17.76'</i>
" overhang ...			<i>2.25</i>			Percentage covered $\frac{S}{L} =$ <i>100.00</i>
Bridge enclosed...			<i>Sheathing</i>			" $\frac{S_1}{L} =$ <i>95.54</i>
" overhang aft ...						" $\frac{E}{L} =$ <i>34.08</i>
" overhang forward						Percentage from Table, Line A. <i>18.46</i>
Poole enclosed <i>open</i>	<i>19.00</i>	<i>13.76</i>	<i>4'-9 1/2"</i>	<i>4.79/6.0</i>	<i>10.98</i>	(corrected for absence of forecastle (if required)) <i>✓</i>
" overhang ...			<i>min</i>			Percentage from Table, Line B. <i>✓</i>
Trunk aft ...						(corrected for absence of forecastle (if required)) <i>✓</i>
" forward ...						Interpolation for bridge less than .2L (if required) <i>✓</i>
Tonnage opening aft ...						Deduction = <i>17.76 x 18.46 = -3.28</i>
" " forward						
Total ...	<i>117.60</i>	<i>112.36</i>			<i>40.08</i>	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	
P. ...	<i>21.76</i>	<i>1</i>	<i>21.76</i>	<i>47.00</i>	<i>21.76</i>	<i>1</i>	<i>21.76</i>	Mean actual sheer aft = <i>Excess</i>
from A.P. ...	<i>9.685</i>	<i>4</i>	<i>38.74</i>	<i>27.00</i>	<i>9.685</i>	<i>4</i>	<i>38.74</i>	Mean actual sheer forward = <i>Deficiency</i>
" ...	<i>2.39</i>	<i>2</i>	<i>4.78</i>	<i>9.2</i>	<i>2.39</i>	<i>2</i>	<i>4.78</i>	Mean standard sheer forward = <i>.862</i>
amidships ...	<i>-</i>	<i>4</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>4</i>	<i>-</i>	Length of enclosed superstructure forward of amidships = <i>Deficiency</i>
from F.P. ...	<i>4.785</i>	<i>2</i>	<i>9.57</i>	<i>4.0</i>	<i>4.00</i>	<i>2</i>	<i>8.00</i>	" aft of amidships = <i>Deficiency</i>
" ...	<i>19.375</i>	<i>4</i>	<i>77.50</i>	<i>17.0</i>	<i>17.00</i>	<i>4</i>	<i>68.00</i>	Standard <i>14.355</i> Actual <i>12.0</i>
P. ...	<i>43.52</i>	<i>1</i>	<i>43.52</i>	<i>37.0</i>	<i>37.00</i>	<i>1</i>	<i>37.00</i>	<i>19.375</i> <i>3</i> <i>58.125</i> <i>17.0</i> <i>51.0</i>
Total ...			<i>195.87</i>				<i>178.28</i>	<i>43.52</i> <i>1</i> <i>43.52</i> <i>37.0</i> <i>37.0</i>
Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{17.59}{18} \times .15 = +.24$								If limited to maximum allowance of 1 1/2 ins. per 100 ft. <i>✓</i>
If limited on account of midship superstructure. <i>✓</i>								

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. <i>Raised Quarter</i> Depth to Freeboard Deck = <i>14.03'</i> Summer freeboard = <i>2.67'</i> Moulded draught (d) = <i>11.36'</i>	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ <i>420</i> Tons per inch immersion at summer load water line $T =$ <i>4.65</i> Deduction = $\frac{\Delta}{40T}$ inches = <i>2.26</i> $=$ <i>2 1/4"</i>	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient <i>None</i> Depth Correction ... <i>4.77</i> Deduction for superstructures ... <i>3.28</i> Sheer correction ... <i>.24</i> Round of Beam correction ... <i>.02</i> Correction for Thickness of Deck amidships ... <i>11.00</i> Other corrections, scantlings, etc. to position of lowest side scuttle. <i>7.53</i> Summer Freeboard = <i>32.00</i>
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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 1/4"</i>
Fresh Water Line " " ...	<i>2 1/4"</i>
Tropical Line " " ...	<i>Nil</i>
Winter Line below " " ...	<i>Nil</i>
Winter North Atlantic Line " " ...	<i>Nil</i>

Tropical Fresh Water Freeboard ...	<i>2'-5 3/4"</i>
Fresh Water " " ...	<i>2'-5 3/4"</i>
Tropical " " ...	<i>2'-8"</i>
Winter " " ...	<i>2'-8"</i>
Winter North Atlantic " " ...	<i>2'-8"</i>

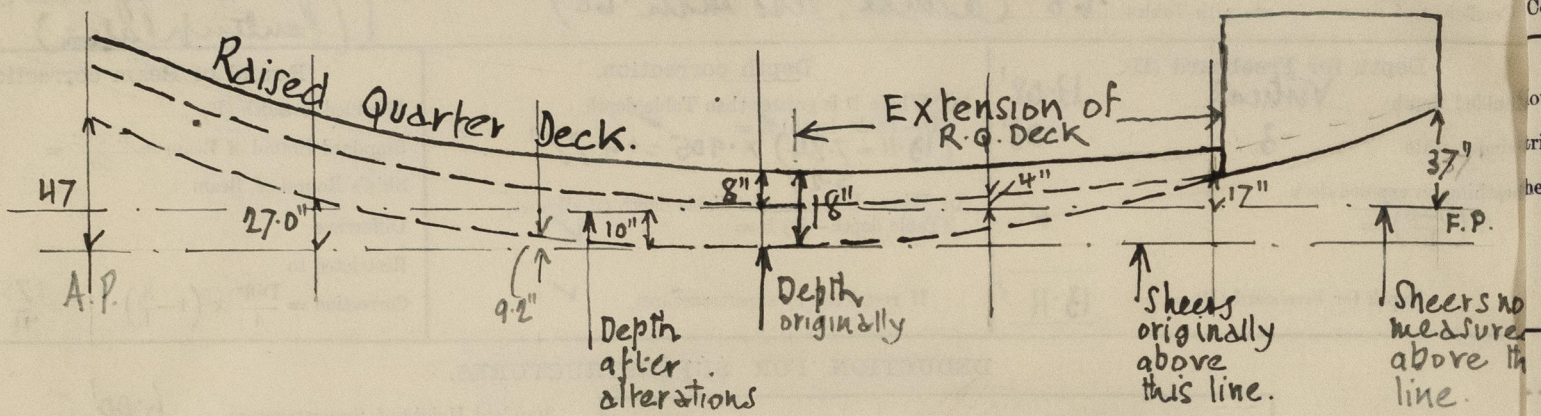
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A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Forecastle allowance.

$$\begin{array}{rcl}
 19.0 & & 10.14 \\
 11.76 \times .862 & & \\
 \hline
 7.24 \times \frac{1}{2} & = & 3.62 \\
 \hline
 13.76 & \text{allowed} &
 \end{array}$$

Measurement of Sheers.



Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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Foundation