

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

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

Ship's Name <b>LADY RODNEY.</b>	Official Number <b>154460</b>	Nationality and Port of Registry <b>BRITISH (CANADIAN) MONTREAL.</b>	Gross Tonnage <b>8252</b>	Date of Build <b>1929</b>	Port of Survey <i>Halifax N.S.</i>
Moulded Dimensions: Length <b>415'-0"</b> Breadth <b>60'-0"</b> Depth <b>32'-9"</b>					Date of Survey <i>3<sup>rd</sup> March 1953</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>13840 (FROM CURVES)</b> tons <small>FROM HYDROSTATIC CURVES.</small>					Surveyor's Signature <i>[Signature]</i>
Coefficient of fineness for use with Tables <b>.70 (CALCULATED ON LENGTH OF 415')</b>					Particulars of Classification <b>LLOYDS' + 100A1 WITH FREEBOARD.</b>

Depth for Freeboard (D). Moulded depth <b>32'-9"</b> ... .. <b>32.75</b> Stringer plate ... <b>34"</b> ... .. <b>.028</b> Sheathing on exposed deck <b>2 3/4" WOOD.</b> $T \left( \frac{L-S}{L} \right) = 2.75 \left( \frac{415-311.5}{415} \right)$ <b>.68</b> <b>.057</b> Depth for Freeboard (D) = <b>32.835</b>	Depth correction. (a) Where D is greater than Table depth (D-Table depth) R = $(32.835 - \frac{415}{15}) 3$ <b>+</b> $= (32.835 - 27.67) 3 = 5.165 \times 3 = 15.49$ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>-</b> If restricted by superstructures <b>-</b>	Round of Beam correction. Moulded Breadth (B) <b>60'</b> Standard Round of Beam = $\frac{B \times 12}{50} = \frac{60 \times 12}{50} = 14.4"$ Ship's Round of Beam = <b>12"</b> Difference <b>2.4</b> Restricted to <b>-</b> Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{2.4}{4} \left( 1 - \frac{230.89}{415} \right) = .26"$
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**DEDUCTION FOR SUPERSTRUCTURES.**

Mean Covered Length (S)	Equivalent Enclosed Length (S)	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	<b>40'-3 1/2"</b>	<b>50% = 20'-1 3/4"</b>	<b>7'-9"</b>	<b>20'-1 3/4"</b>
" overhang ... ..				
R.Q.D. enclosed ... ..				
" overhang ... ..				
Bridge enclosed ... ..	<b>229'-6"</b>	<b>75% = 172'-1 1/2"</b>	<b>8'-6"</b>	<b>172'-1 1/2"</b>
" overhang aft ... ..	<b>3'-0"</b>	<b>" = 2'-3"</b>	<b>"</b>	<b>2'-3"</b>
" overhang forward ... ..				
F'cle enclosed ... ..	<b>38'-8 1/2"</b>	<b>94% = 36'-4 1/2"</b>	<b>7'-9"</b>	<b>36'-4 1/2"</b>
" overhang ... ..				
Trunk aft ... ..				
" forward ... ..				
Tonnage opening aft ... ..				
" " forward ... ..				
<b>Total ... ..</b>	<b>311'-6"</b>	<b>230'-10 3/4"</b>		<b>230'-10 3/4"</b>

Standard Height of Superstructure **7'-6"**

" " R.Q.D. **-**

Deduction for complete superstructure **42"**

Percentage covered  $\frac{S}{L} = \frac{311.5}{415} = .75$

" "  $\frac{S_1}{L} = \frac{230.89}{415} = .556$

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

Percentage from Table, Line A.  
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. **.056(46-36) + 36 = 41.6%**  
(corrected for absence of forecastle (if required))

Interpolation for bridge less than .2L (if required)

Deduction = **42" x 41.6% = 17.5" = 17.47**

**SHEER CORRECTION.**

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ... ..	51.5	1	51.5	54"	51.5	1	51.5
1/4L from A.P. ... ..	22.92	4	91.68	23"	22.92	4	91.68
1/4L " ... ..	5.67	2	11.34	7"	5.67	2	11.34
Amidships ... ..	0	4	0	0	0	4	0
1/4L from F.P. ... ..	11.33	2	22.66	11"	11.	2	22
1/4L " ... ..	45.84	4	183.36	43"	43	4	172
F.P. ... ..	103.00	1	103.00	96"	96	1	96
<b>Total ... ..</b>			<b>463.54</b>				<b>444.52</b>

Mean actual sheer aft = **1.05**  
Mean standard sheer aft

Mean actual sheer forward =  $\frac{258}{274.51} = .94 = 94\%$   
Mean standard sheer forward

Length of enclosed superstructure forward of amidships =  $\frac{89.21}{415} = .214\%$

" " aft of " =  $\frac{140.29}{415} = .338\%$

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{19.02}{18} \left( .75 - \frac{311.5}{2 \times 415} \right) = 1.05 \times .375 = +.396$   
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. <b>32'-9" + 34" + 1" COMPOSITION</b> Depth to Freeboard Deck = <b>32'-10 5/8"</b> Summer freeboard = <b>6'-5 1/4"</b> Moulded draught (d) = <b>26'-5 3/8"</b> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>6 5/8"</b> Addition for Winter North Atlantic Freeboard (if required) = <b>-</b>	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 13,000$ FROM CURVES. Tons per inch immersion at summer load water line <b>T = 49</b> FROM CURVE. Deduction = $\frac{\Delta}{40T}$ inches = $\frac{13000}{40 \times 49} = 6 5/8"$	TABULAR FREEBOARD corrected for Flush Deck (if required) $\frac{74.6 + 77.8}{2} = 76.2$ Correction for coefficient. $76.2 \times \frac{.70 + .68}{1.36} = 77.34$ <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> <tr> <td style="text-align: center;">+</td> <td style="text-align: center;">-</td> </tr> <tr> <td style="text-align: center;">15.49</td> <td style="text-align: center;">17.47</td> </tr> <tr> <td style="text-align: center;">.39</td> <td style="text-align: center;">.26</td> </tr> <tr> <td style="text-align: center;">1.00</td> <td style="text-align: center;">COMPOSITION</td> </tr> <tr> <td style="text-align: center;">42.74</td> <td style="text-align: center;">+42.41</td> </tr> <tr> <td colspan="2" style="text-align: center;"><b>Summer Freeboard = 119.75"</b></td> </tr> </table>			+	-	15.49	17.47	.39	.26	1.00	COMPOSITION	42.74	+42.41	<b>Summer Freeboard = 119.75"</b>	
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<b>SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck: 6'-5 1/4" 9'-11 3/4"</b>			
Tropical Fresh Water Line above Centre of Disc	13 1/4"	Tropical Fresh Water Freeboard	5'-4"
Fresh Water Line " "	6 5/8"	Fresh Water " "	5'-10 5/8"
Tropical Line " "	6 5/8"	Tropical " "	5'-10 5/8"
Winter Line below " "	6 5/8"	Winter " "	6'-11 3/8"
Winter North Atlantic Line " "		Winter North Atlantic " "	

MEASURED FROM TOP OF 1" COMPOSITION ON UPPER DECK.

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.

Trade of ship.....

Names of sister ships..... LADY SOMERS

Builder's name and yard number..... CAMMELL LAIRD & CO BIRKENHEAD ENGLAND

Owners..... CANADIAN NATIONAL STEAMSHIPS MONTREAL

Fee £.....



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Foundation

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