

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "OTTAWA PARADE"	Official Number	Nationality and Port of Registry British	Gross Tonnage 850 (Approx.)	Date of Build Under Construction Jan., 1946	Port of Survey <u>Vancouver, B. C.</u>
Moulded Dimensions: Length <u>210.0</u> Ft. Breadth <u>36.5</u> Ft. Depth <u>14'-1"</u> to 2nd Deck <u>21'-8"</u> " Up. Deck					Date of Survey <u>During construction</u>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>1778</u> tons (<u>11'-11 1/2"</u>) (T.P.I. = <u>14.45</u>)					Surveyor's Signature <u>R. M. Scott</u>
Coefficient of fineness for use with Tables <u>.68</u> (<u>.678</u> ACTUAL)					Particulars of Classification <u>* 100 A1 with</u> <u>Freeboard, part welded.</u>

Depth for Freeboard (D). Moulded depth ... <u>14.08</u> Stringer plate ... <u>.32"</u> ... <u>.027</u> $2\frac{1}{2}"$ Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <u>14.11</u>	Depth correction. (a) Where D is greater than Table depth (D-Table depth) R = (<u>14.11 - 14.08</u>) <u>1.618</u> = <u>+ .15"</u> (b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>✓</u> If restricted by superstructures <u>✓</u>	Round of Beam correction. Moulded Breadth (B) <u>36.5</u> Ft. Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>8.76"</u> Ship's Round of Beam <u>Equival. 2.25" = 3"</u> at centre & (2nd Deck) <u>straight to side</u> Difference <u>6.51"</u> Restricted to Correction = $\frac{\text{Diff}^o}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{6.51}{4} \times .0564 = + .09"$
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DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed Bhd. 30	<u>60.5</u>	<u>61.46</u>	<u>7'-7" Side</u>		<u>61.46</u>
" overhang ...	<u>4.5</u>	<u>1.93</u>	<u>8'-4 1/2" Cr.</u>		<u>1.93</u>
R.Q.D. enclosed	<u>3.87</u>				
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
Fore enclosed	<u>71.5</u>	<u>71.50</u>	<u>7'-7" Side</u>		<u>71.50</u>
" overhang	<u>69.0</u>	<u>51.75</u>	<u>8'-4 1/2" Cr.</u>		<u>51.75</u>
Trunk aft					
" forward					
Tonnage opening aft	<u>4.5</u>	<u>11.84</u>	<u>1/2 DIFF</u>		<u>11.84</u>
" " forward	<u>.33</u>				
Total	<u>210.0</u>	<u>198.48</u>			<u>198.48</u>

Standard Height of Superstructure 6.00
 " " R.Q.D. -
 Deduction for complete superstructure 27.03
 Percentage covered $\frac{S_1}{L} = 100.00$
 " " $\frac{S}{L} =$
 " " $\frac{E}{L} =$ } 94.36
 Percentage from Table, Line A. 93.06
 (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 = 27.03 \times 93.06 = -25.15"

SHEER CORRECTION.								Actual Superstructure Rt Standard " "		7'-7" 6-0 1'-7" 2 1/2 1'-9 1/2
Station	Standard Ordinate	S	M	Product	Actual Ordinate Ins.	Effective Ordinate	S	M	Product	Mean actual sheer aft = Excess Mean standard sheer aft
A.P. ...	31.03	1		31.03	+21.50 27.00	48.50	1		48.50	
1/2 L from A.P. ...	13.81	4		55.24	8.50	21.58	4		86.32	Mean actual sheer forward = Excess Mean standard sheer forward
1/2 L " ...	3.415	2		6.83	-	5.33	2		10.66	
Amidships ...	-	4		-	-	-	4		-	
1/2 L from F.P. ...	6.83	2		13.66	-	7.04	2		14.08	
1/2 L " ...	27.62	4		110.48	17.50	28.48	4		113.92	
F.P. ...	62.07	1		62.07	45.00	64.00	1		64.00	
Total ...				279.31	+19.00				337.48	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{58.17}{18} \times .25 = -.81"$

If limited on account of midship superstructure.

Length of enclosed superstructure forward of amidships = $\frac{L}{}$

" " aft of " = $\frac{L}{}$

C.S.S.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Actual Superstructure Rt 7'-7"
 Standard " 6'-0"
 For'd excess 1'-7"
 Wood deck 2 1/2"
 aft excess 1'-9 1/2"
 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 =
 " " aft of " = } C.S.S.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. CANT UP OF Depth to Freeboard Deck = <u>14.36</u> Summer freeboard = <u>.42</u> Moulded draught (d) = <u>13.94</u> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>3.48</u> = <u>3 1/2"</u> Addition for Winter North Atlantic Freeboard (if required) = <u>5 1/2"</u>	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 2141$ Tons per inch immersion at summer load water line $T = 14.92$ Deduction = $\frac{\Delta}{40T}$ inches = <u>3.56</u> = <u>3 1/2"</u>	Correction for coefficient. <u>Nil</u> TABULAR FREEBOARD corrected for Flush Deck (if required) <u>24.86</u> 24.86 Depth Correction ... <u>.15</u> Deduction for superstructures ... <u>25.15</u> Sheer correction ... <u>.81</u> Round of Beam correction ... <u>.09</u> Correction for Thickness of Deck amidships ... <u>3.00</u> Other corrections, scantlings, etc. ... <u>-</u> 3.24 25.96 - 22.72 Summer Freeboard = <u>2.14</u>
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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	...	<u>3 1/2"</u>	Tropical Fresh Water Freeboard	...	<u>0'-5" (LIMITED)</u>
Fresh Water Line	"	<u>3 1/2"</u>	Fresh Water	"	<u>0'-1 1/2"</u>
Tropical Line	"	<u>(LIMITED) Nil</u>	Tropical	"	<u>0'-5" (LIMITED)</u>
Winter Line	below	<u>3 1/2"</u>	Winter	"	<u>0'-8 1/2"</u>
Winter North Atlantic Line	"	<u>5 1/2"</u>	Winter North Atlantic	"	<u>0'-10 1/2"</u>

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.

Equivalent camber Mean height = $\frac{3 \times 36.5 \times 12}{2 \times 36.5 \times 12} = 1.5$

$\therefore \text{Equiv} = 1.5 \times 1.5 = \underline{\underline{2.25}}$

Poop equivalent head $\begin{array}{r} 60.50 \\ .33 \\ \hline 60.83 \end{array}$

$\frac{2 \times 11.5}{36.5}$

$\begin{array}{r} .63 \\ \hline 61.46 \end{array}$

Equiv. enclosed.

Equiv. overhang = $65.33 - 61.46 = \underline{\underline{3.87}}$

Displacement and Tons per Inch at Intermediate Waterlines

	<u>Displacement</u>	<u>T.P.I.</u>
13' W.L.	1961	14.70
14' W.L.	2138	14.92
15' W.L.	2317	15.17

Trade of ship.....International

Names of sister ships....."OTTAWA PAGET", "OTTAWA PAGE", "OTTAWA PALMER" etc.

Builder's name and yard number.....Burrard Dry Dock Co. Ltd. - Yard No. 247 (South Yard).

OwnersMinister of Munitions and Supply of Canada.

Fee \$40.00 ph



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Foundation

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