

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

*Ottawa Port 38337*

Ship's Name <b>"OTTAWA PALMER"</b>	Official Number	Nationality and Port of Registry <b>British</b>	Gross Tonnage <b>850 (Approx.)</b>	Date of Build <b>Dec. 1945</b>	Port of Survey <b>Vancouver, B.C.</b>
				Under Construction <b>Dec. 1945</b>	Date of Survey <b>During construction</b>
Moulded Dimensions: Length <b>210.0</b> Ft. Breadth <b>36.5</b> Ft. Depth <b>14'-1"</b> to 2nd Deck <b>21'-8"</b> Upp. Deck					Surveyor's Signature <b>R. H. Scott</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>1778</b> tons (T.P.I. = <b>14.45</b> )					Particulars of Classification <b>contemplated 100 A1 with Freeboard, part welded.</b>
Coefficient of fineness for use with Tables <b>.68 (678 ACTUAL)</b>					

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

Standard Height of Superstructure **6.00'**

" " R.Q.D. ☒

Deduction for complete superstructure **27.03'**

Percentage covered  $\frac{S}{L} =$  **100.00**

" "  $\frac{S_1}{L} =$  **94.36**

" "  $\frac{E}{L} =$  **94.36**

Percentage from Table, Line A. **93.06**  
(corrected for absence of fore-castle (if required)) ☒

Percentage from Table, Line B. ☒  
(corrected for absence of fore-castle (if required)) ☒

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

Deduction = **27.03 x .9306 = 25.15"**

SHEER CORRECTION.								ACTUAL SUPERSTRUCTURE HT = 7'-7"	
Station	Standard Ordinate	S	Product	Actual Ordinate Ins.	Effective Ordinate	S	Product	STANDARD	" " = 6'-0"
A.P. ...	31.03	1	31.03	+21.50	48.50	1	48.50		
%L from A.P. ...	13.81	4	55.24	8.50	21.58	4	86.32		
%L " ...	3.415	2	6.83	-	5.33	2	10.66		
Amidships ...	-	4	-	-	-	4	-		
%L from F.P. ...	6.83	2	13.66	-	7.04	2	14.08		
%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 ☒

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

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 = **65.5**

" " aft of " =

**Deduction for Tropical Freeboard.**

**Addition for Winter and Winter North Atlantic Freeboard.**

**3" CANT UP OF**

Depth to Freeboard Deck = **14.36** Ft.

Summer freeboard = **.42**

Moulded draught (d) = **13.94**

**Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 3.48" = 3 1/2"**

**Addition for Winter North Atlantic Freeboard = 5 1/2"**

**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

= **3.56"**

= **3 1/2"**

Correction for coefficient. **NIL.**

**TABULAR FREEBOARD** corrected for Flush Deck (if required) ☒

	+	-
Depth Correction	<b>.15</b>	-
Deduction for superstructures	-	<b>25.15</b>
Sheer correction	-	<b>.81</b>
Round of Beam correction	<b>.09</b>	-
Correction for Thickness of Deck amidships	<b>3.00</b>	-
Other corrections, scantlings, etc.	-	-
	<b>3.24</b>	<b>25.96</b>
		<b>- 22.72"</b>
		<b>Summer Freeboard = 2.14"</b>

**3" CANT UP OF**

**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~W~~ Steel, Deck:—**

Tropical Fresh Water Line above Centre of Disc	...	3 1/2"	Tropical Fresh Water Freeboard	...	0'-5" (LIMITED)
Fresh Water Line	"	3 1/2"	Fresh Water	"	0'-1 1/2"
Tropical Line	"	NIL	Tropical	"	0'-1 1/2"
Winter Line below	"	3 1/2"	Winter	"	0'-5" (LIMITED)
Winter North Atlantic Line	"	5 1/2"	Winter North Atlantic	"	0'-8 1/2"
					0'-10 1/2"



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.

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

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

Poof Equivalent Bhd.

60.50

.33

60.83

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

36.5

.63

61.46 equiv. enclosed length.

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

#### Displacement and Tons per Inch at Intermediate Waterlines

	Displacement	T.P.I.
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" .....

Builder's name and yard number ..... Burrard Dry Dock Co. Ltd. - Yard No. 245 (South Yard) .....

Owners ..... Minister of Munitions and Supply of Canada .....

Fee \$40.00 .....



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