

Ottawa Page
38337

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. 38526
(For London Office only).

Ship's Name "OTTAWA PANDORA"	Official Number	Nationality and Port of Registry British	Gross Tonnage 850 (Approx.)	Date of Build Under Construction Feb., 1946	Port of Survey Victoria, B. C.
Moulded Dimensions: Length ^{210.33} 210.0 Ft. Breadth 36.5 Ft. Depth 14'-1" to 2nd Deck TO CENTRE OF RUDDER STOCK 21'-8" " Upp. Deck					Date of Survey During construction
Moulded displacement at moulded draught = 85 per cent. of moulded depth (11'-11 1/2") 1778 tons (T.P.I. = 14.45)					Surveyor's Signature <i>[Signature]</i>
Coefficient of fineness for use with Tables (.678 actual) = .68					Particulars of Classification contemplated 100 A1 with Freeboard, part welded.

Depth for Freeboard (D). Moulded depth ... 14.08 Stringer plate ... 32"027 (3" Cant up at Ship's side) Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 14.11	Depth correction. (a) Where D is greater than Table depth (D-Table depth) R= (14.11-14.02) 1.618 = + 0.15 (b) Where D is less than Table depth (if allowed) (Table depth-D) R= ✓ If restricted by superstructures ✓	Round of Beam correction. Moulded Breadth (B) 36.5 Ft. Standard Round of Beam = $\frac{B \times 12}{50} = 8.76$ " Ship's Round of Beam = 3" at centre & (2nd Deck) EQUIV 2.25" straight to side Difference 6.51 Restricted to Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S}{L} \right) = \frac{6.51}{4} \times .0564 = .09$
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DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed Bhd. 30	61.46	61.46	7'-7" Side		61.46
" overhang ...	4.5	1.93	8'-1 1/4" Cr.		1.93
B-Q-D enclosed	3.87				
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
File enclosed	71.5	71.50	7'-7" Side		71.50
" overhang	69.0	51.75	8'-1 1/4" Cr.		51.75
Trunk aft					
" forward					
Tonnage opening aft	4.5	11.84	1/2 DIFF		11.84
" forward	.33				
Total	210.8	198.48			198.48

Standard Height of Superstructure 6.0
 " " R.Q.D.
 Deduction for complete superstructure 27.03
 Percentage covered $\frac{S}{L} = 94.36$
 " " $\frac{S}{L} = 100.00$
 " " $\frac{E}{L} = 94.36$
 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 x .9306 = - 25.15

SHEER CORRECTION.							
Station	Standard Ordinate	S	Product	Actual Ordinate Ins.	Effective Ordinate	S	Product
A.P. ...	31.03	1	31.03	21.50	48.50	1	48.50
1/2 L from A.P. ...	13.81	4	55.24	8.50	21.58	4	86.32
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	119.00			337.48

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{58.17}{18} \left(\frac{75-.50}{2} \right) = -.81$
 If limited on account of midship superstructure. ✓
 If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

Actual height of superstructure = 7'-7"
 Standard " = 6'-0"
 Excess = 1'-7"
 Excess forward = 2 1/2"
 Excess aft = 1'-9 1/2"

Length of enclosed superstructure forward of amidships = } C.S.S
 " " aft of " = }

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. 3" CANT UP OF Depth to Freeboard Deck = 14.36 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 (if required) = 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) 24.86 <table border="1"> <tr> <th></th><th>+</th><th>-</th></tr> <tr> <td>Depth Correction</td><td>0.15</td><td>-</td></tr> <tr> <td>Deduction for superstructures</td><td>-</td><td>25.15</td></tr> <tr> <td>Sheer correction</td><td>-</td><td>.81</td></tr> <tr> <td>Round of Beam correction</td><td>.09</td><td>-</td></tr> <tr> <td>Correction for Thickness of Deck amidships</td><td>3.00</td><td>-</td></tr> <tr> <td>Other corrections, scantlings, etc.</td><td>-</td><td>-</td></tr> <tr> <td></td><td>3.24</td><td>25.96</td></tr> <tr> <td>Summer Freeboard =</td><td>2.14</td><td></td></tr> </table>		+	-	Depth Correction	0.15	-	Deduction for superstructures	-	25.15	Sheer correction	-	.81	Round of Beam correction	.09	-	Correction for Thickness of Deck amidships	3.00	-	Other corrections, scantlings, etc.	-	-		3.24	25.96	Summer Freeboard =	2.14	
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:— 0'-5" (limited)

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

Equivalent camber Mean height = $\frac{3}{2} \times \frac{36.5}{36.5} \times \frac{12}{12} = 1.5''$
 Equiv camber = $1.5 \times 1.5 = 2.25''$

Poop equivalent $60.50 + .33 = 60.83'$
 $+ \frac{2 \times 11.5}{36.5} = .63'$
 61.46'

 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 PASQUA" - OTTAWA PAINTER"

Builder's name and yard number..... Victoria Machinery Depot Co., Ltd. - Yard No. 42

Owners Minister of Munitions and Supply of Canada.

Fee \$40.00 PA