

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, ~~SAILING SHIP, TANKER~~)

Ship's Name HARMAC GROFTON	Official Number 175,361	Nationality and Port of Registry British Montreal, P.Q.	Gross Tonnage 7160.59	Date of Build 1944	Port of Survey North Vancouver, B.C.
Moulded Dimensions: Length ^{417.35} 416.50 ' Breadth 56.90' Depth (37.33' to Upper Deck (28.58' to 2nd Deck)					Surveyor's Signature <i>James Sinclair</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth 16,600 tons					Particulars of Classification Contemplated 100A with freeboard corresponding to a Summer moulded Dft. of 26'-10"
Coefficient of fineness for use with Tables .771.					

<p>Depth for Freeboard (D).</p> <p>Moulded depth 37.33'</p> <p>Stringer plate06'</p> <p>Sheathing on exposed deck</p> <p>$T \left(\frac{L-S}{L} \right) =$</p> <p>Depth for Freeboard (D) = 37.39</p>	<p>Depth correction.</p> <p>(a) Where D is greater than Table depth (D-Table depth) R= (37.39-27.82) x 3 = +28.71</p> <p>(b) Where D is less than Table depth (if allowed) (Table depth-D) R=</p> <p>If restricted by superstructures</p>	<p>Round of Beam correction.</p> <p>Moulded Breadth (B) 56.9'</p> <p>Standard Round of Beam = $\frac{B \times 12}{50} = 13.66$</p> <p>Ship's Round of Beam = 14.00"</p> <p>Difference .34</p> <p>Restricted to</p> <p>Correction = $\frac{Diff^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.34^2}{4} = -.09$</p>
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
Fore enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total					

Standard Height of Superstructure _____

" " R.Q.D. _____

Deduction for complete superstructure _____

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

" " $\frac{S_1}{L} =$ Nil.

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

Percentage from Table, Line A.
(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 = Nil

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate Ins.	Effective Ordinate	S M	Product
A.P.	51.73	1	51.73	55.00	55.00	1	55.00
1/2L from A.P.	23.02	4	92.08	23.25	23.25	4	93.00
1/2L "	5.69	2	11.38	6.50	6.50	2	13.00
Amidships	-	4	-	-	-	4	-
1/2L from F.P.	11.38	2	22.76	11.63	11.63	2	23.26
1/2L "	46.04	4	184.16	46.75	46.75	4	187.00
F.P.	103.47	1	103.47	105.00	105.00	1	105.00
Total			465.58				476.26

Mean actual sheer aft = _____

Mean standard sheer aft = _____

Mean actual sheer forward = _____

Mean standard sheer forward = _____

Length of enclosed superstructure forward of amidships = _____

" " aft of " = Nil.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{10.68 \times .75}{18} = -.45$

If limited on account of midship superstructure. No. Flush Deck.

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

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = 37.39</p> <p>Summer freeboard = 10.56</p> <p>Moulded draught (d) = 26.83</p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.71 = 6 3/4</p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line $\Delta = 13760$</p> <p>Tons per inch immersion at summer load water line $T = 48.20$</p> <p>Deduction = $\frac{\Delta}{40T}$ inches = 7 1/4</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient. $\frac{76.95 + 6.26}{1.36} = 1.451/1.36$</p> <table border="1"> <tr><td></td><td>+</td><td>-</td></tr> <tr><td>Depth Correction</td><td>28.71</td><td>-</td></tr> <tr><td>Deduction for superstructures</td><td>-</td><td>-</td></tr> <tr><td>Sheer correction</td><td>-</td><td>.45</td></tr> <tr><td>Round of Beam correction</td><td>-</td><td>.09</td></tr> <tr><td>Correction for Thickness of Deck amidships</td><td>-</td><td>-</td></tr> <tr><td>Other corrections, scantlings etc. to correspond to a summer moulded draught of 26'-10"</td><td>9.80</td><td>-</td></tr> <tr><td></td><td>38.51</td><td>.54</td></tr> </table> <p>Summer Freeboard = 126.75</p>		+	-	Depth Correction	28.71	-	Deduction for superstructures	-	-	Sheer correction	-	.45	Round of Beam correction	-	.09	Correction for Thickness of Deck amidships	-	-	Other corrections, scantlings etc. to correspond to a summer moulded draught of 26'-10"	9.80	-		38.51	.54
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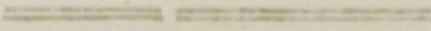
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~W&A~~ Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc 14"	Tropical Fresh Water Freeboard 10'-6 3/4"
Fresh Water Line " " 7 1/4"	Fresh Water " " 9'-4 3/4"
Tropical Line " " 6 3/4"	Tropical " " 9'-11 1/2"
Winter Line below " " 6 3/4"	Winter " " 10'-0"
Winter North Atlantic Line " "	Winter North Atlantic " " 11'-1 1/2"

129 MAR 1944

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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.



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Trade of ship.....

Names of sister ships..... **Burrard Dry Dock Co. Ltd., North Vancouver, B.C. (Yard No. 180)**

Builder's name and yard number..... **Burrard Dry Dock Co. Ltd., North Vancouver, B.C. (Yard No. 198)**

Owners **Minister of Munitions & Supply of Canada**

Fee £ **\$100.00** *ph.*



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