

FORT COLUMBIA
37352.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 37664
(For London Office only).(COMPUTATION FOR STEAMER, ~~SAILING-SHIP, TANKER~~)

Ship's Name CHANDLER "CRYSTAL PARK"	Official Number 175384	Nationality and Port of Registry British Montreal, P.Q.	Gross Tonnage 7161.44 7212 M.O.T. 57.52	Date of Build 1944	Port of Survey North Vancouver, B.C.
Moulded Dimensions: Length 417.35 Breadth 56.90' Depth 37.33' to Upper Deck (28.58' to 2nd Deck) TO CENTRE OF RUDDER STOCK.					Date of Survey May, 1944
Moulded displacement at moulded draught = 85 per cent. of moulded depth 16,600 tons					Surveyor's Signature J. Caldwell
Coefficient of fineness for use with Tables .771					Particulars of Classification Contemplated 100 A1 with freeboard corresponding to a Summer Moulded draught of 26'-10"

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 37.33'	(a) Where D is greater than Table depth (D—Table depth) R= (37.39—27.82) 3 = +28.71	Moulded Breadth (B) 56.9'
Stringer plate06'	(b) Where D is less than Table depth (if allowed) (Table depth—D) R= 9.57	Standard Round of Beam = $\frac{B \times 12}{50} = 13.66$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓	If restricted by superstructures ✓	Ship's Round of Beam = 14.00"
Depth for Freeboard (D) = 37.39		Difference .34
		Restricted to ✓
		Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.34}{4} = -.09$

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 ...					
F'cle enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...					

Standard Height of Superstructure

" " R.Q.D.

Deduction for complete superstructure

Percentage covered $\frac{S}{L} =$ " " $\frac{S_1}{L} =$ **Flush deck.**" " $\frac{E}{L} =$

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
1/4L 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	-
3/4L from F.P. ...	11.38	2	22.76	11.63	11.63	2	23.26
1/4L " ...	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 =
L

" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{10.68}{18} \times .75 = -.45$
If limited on account of midship superstructure. **No. Flush deck.**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.

Depth to Freeboard Deck = **37.39**
Summer freeboard = **10.56**
Moulded draught (d) = **26.83**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = $6.71 = 6 \frac{3}{4}$ "Addition for Winter North Atlantic Freeboard (if required) = **✓**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 13,760$

Tons per inch immersion at summer load water line

T = **48.20**Deduction = $\frac{\Delta}{40T}$ inches
= $\frac{13,760}{40 \times 48.20} = 7 \frac{1}{4}$ "

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient. $\frac{.771 + .68}{1.36} = \frac{1.451}{1.36}$ 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"**38.51 .54 **+37.97**Summer Freeboard = **126.75**

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, 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"

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Fee \$100.00

