

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.Index. No. 31180
(For London Office only.)

SEP 11 1937

Report # 4432 Canadian Great Lakes

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having Continuous deck from break of fore-castle

(Type of Superstructures.)

Ship's Name S.S. "Burlin" Nationality and Port of Registry British Montreal Official Number 72132 Gross Tonnage 2241 Date of Build 1924-8

Moulded Dimensions: Length 248'0" Breadth 42'83 Depth 25'0"
Moulded displacement at moulded draught = 85 per cent. of moulded depth 5475 tons
Coefficient of fineness for use with Tables .849

Port of Survey Chicago, Ill.
Date of Survey 9th April 1937
Name of Surveyor Geo. Allan

Particulars of Classification +100 A.I. N.H. Subord. for service on the Great Lakes River St. Lawrence and by day 6.0. from April 1 close of navigation

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	... .. 25'0"	(a) Where D is greater than Table depth (D - Table depth) R = (25.05 - 16.53) 1.908	...	Moulded Breadth (B)	42.83
Stringer plate	... .. 6'5"	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 8.52	...	Standard Round of Beam = $\frac{B \times 12}{50}$	10.28
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	...	If restricted by superstructures	...	Ship's Round of Beam	10.2
Depth for Freeboard (D) =	25.05			Difference	.22" excess
				Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L}\right)$	$= \frac{.22}{4} \times .8307 = -.05"$

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 ...	42'00	42.00	7'3"		42.00
" overhang ...					
Funnel aft ...					
" forward ...					
Funnel opening aft ...					
" forward ...					
Total ...	42.00	42.00			42.00

Standard Height of Superstructure 6.00'
" " R.Q.D. 30.80"
Deduction for complete superstructure 30.80"
Percentage covered $\frac{S}{L} = 16.93$
" " $\frac{S_1}{L} = 16.93$
" " $\frac{E}{L} = 16.93$
Percentage from Table, Line A. 8.46
(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 = $30.80 \times .0846 = -2.61"$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	34.80	1		34.80	12.00	12.00	1		12.00
1/4 L from A.P. ...	15.49	4		61.96	1.50	1.50	4		6.00
1/2 L " ...	3.83	2		7.66	-	-	2		-
Amidships ...	-	4		-	-	-	4		-
3/4 L from F.P. ...	7.65	2		15.30	-	-	2		-
1/4 L " ...	30.97	4		123.88	3.50	3.50	4		14.00
F.P. ...	69.60	1		69.60	36.00	36.00	1		36.00
Total ...				313.20					68.00

Mean actual sheer aft = Deficient
Mean standard sheer aft =

Mean actual sheer forward = Deficient
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = 3 mls.
" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - S}{2L} \right) = \frac{245.20}{18} \left(\frac{75 - .0846}{2L} \right) = +9.06"$
If limited on account of midship superstructure ✓

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.

Ft.
Depth to Freeboard Deck = 25.05
Summer freeboard = 4.64
Moulded draught (d) = 20.41

Deduction for Tropical freeboard and Addition for INTERMEDIATE Winter freeboard = $\frac{d}{4}$ inches = 5.10
Addition for Winter North Atlantic Freeboard (if required) = $\frac{d}{2}$ =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

Deduction = $\frac{\Delta}{40 T}$ inches

=

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.849 + .68}{1.36} = \frac{1.529}{1.36}$

	+	-
Depth Correction	16.26	-
Deduction for superstructures	-	2.61
Sheer correction	9.06	-
Round of Beam correction	-	.05
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		

Summer Freeboard = 55.84

SUMMER FREEBOARD amidships from Centre of Diamond to top of Deck Line, Wood, Steel, Deck: -

Tropical Fresh Water Line above Centre of Diamond ✓
Fresh Water Line " " ✓
Tropical Line " " ✓
Winter Line below " " ✓
Winter North Atlantic Line " " ✓

Tropical Fresh Water Freeboard ... ✓
Fresh Water " " ✓
Tropical " " ✓
Winter INTERMEDIATE " " ✓
Winter North Atlantic " " ✓

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Particulars of riddley, funnel and ventilator coamings:— Riddley, funnel and ventilator coamings are of substantial construction and kept in efficient condition. Holes openings or top fitted with gratings and strong hinged steel covers. Engine room skylight of steel strongly constructed.

mil.

mil.

Three ventilators to Engineers quarters 12" dia. with 12" Coaming.
Can be closed with wooden plugs and canvas covers.

Forecastle, " 2 - 20" high x 4" dia.
Main deck. 2 - 20" " 2" " at fore end
" " 2 - 20" " " " at aft. end.
All air pipes fitted with wooden flungs.

ml

OUTARDE

Mr.

Open rails from forward to deck house aft.

Can be fitted when required

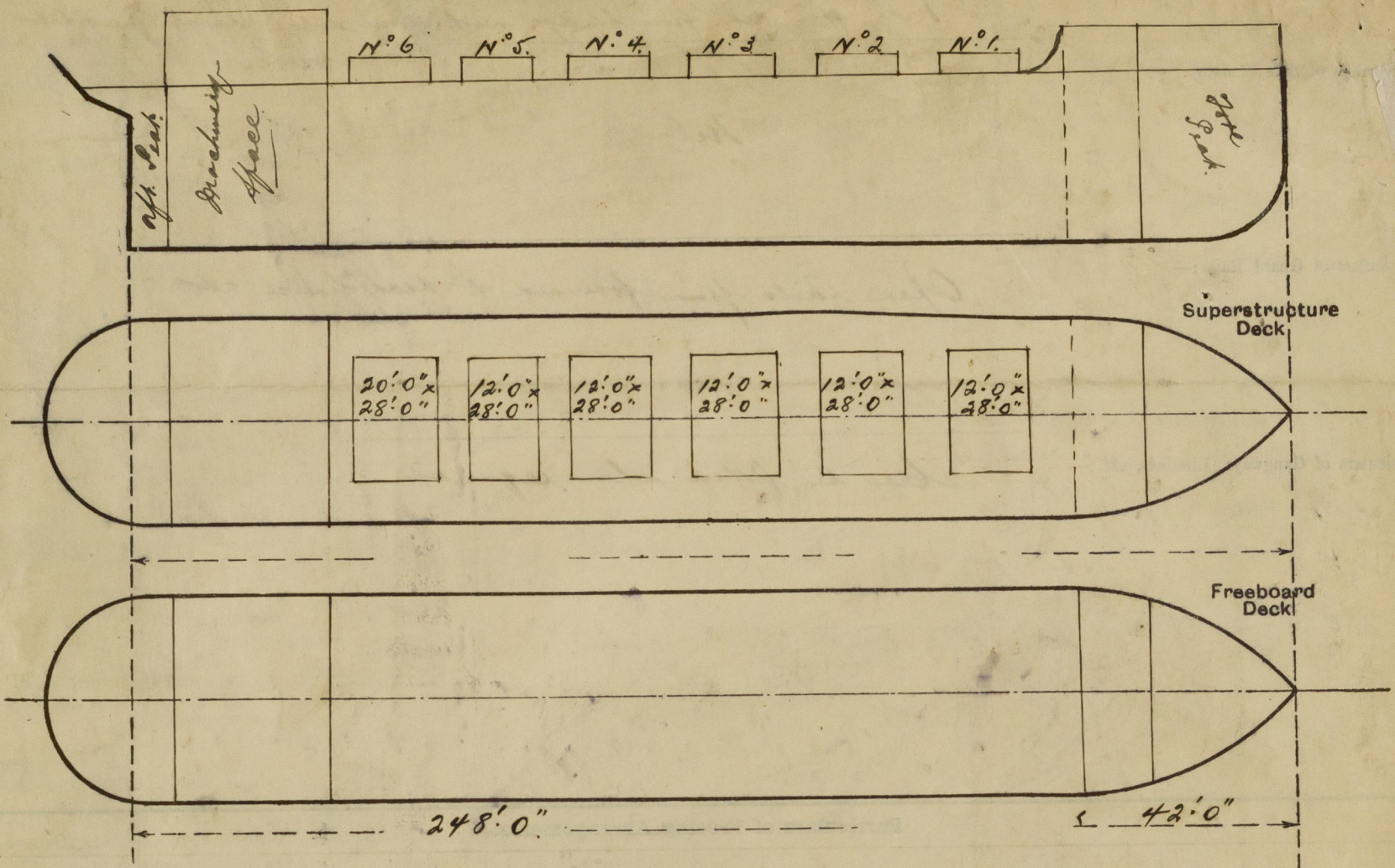
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
<i>aft. deckhouse.</i> Poop Bulkhead <i>bolowing machinery space</i>	Vertical Plating	30	<i>4 1/2" x 3 x 3/8" L.S.</i> <i>3 x 3 x 1/2"</i>	<i>24"</i>	<i>none</i>	<i>2 steel doors</i> <i>56" x 27"</i>	<i>18"</i>	<i>7'6"</i>
Raised Quarter Deck Bulkhead	Vertical Plating	30	<i>3 x 3 x 3/8" L.S.</i> <i>4 1/2" x 3 x 3/8" 5 x closed port</i>	<i>24"</i>	<i>none</i>	<i>2 wood doors</i> <i>56" x 26"</i>	<i>18"</i>	<i>7'6"</i>
Forecastle Bulkhead	Vertical Plating	30	3" x 3" L.S.	36"	None			
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Vertical Plating	30	2" x 3" L.S.	24"	None			
Exposed Machinery Casings on Superstructure Decks								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships								

Poop Bulkhead	...	...	...
Raised Quarter Deck Bulkhead	...	...	...
Forecastle	...	...	...
Bridge, After Bulkhead	...	...	2 Wood doors 56"x56" sill 18". 1 door 56"x30" with 18" coaming
Bridge, Forward Bulkhead	...	...	...
Forecastle Bulkhead	...	...	...
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...	...	...
Exposed Machinery Casings on Superstructure Decks	...	...	...
Machinery Casings within Superstructure not fitted with Class I Closing Devices	...	...	...
Access on Flush Deck Ships	...	...	...

Height of deck house 7'6". 4 wood doors each side of casing
 Wood doors to deck house can be opened from both sides.

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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—



State any special features in the construction of the ship:—

Tons per inch

19'0" = 22.79

17'0" = 22.58

15'0" = 22.38

13'0" = 22.17

11'0" = 21.96

9'0" = 21.67

7'0" = 21.42

Light draft 5'0" mean.

Builder's name and yard number *Palmer's Co. Ltd. Newcastle.*

Names of sister ships *None.*

Owners *Bruce Lindsay Bros. Ltd.*

Fee £ *50.00*

Received by me



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