

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having *Forecastle and Bridge combined.*

Port of Survey *Quebec, P.Q.*

Date of Survey *14th April, 1934*

Name of Surveyor *Geo. Allan*

Particulars of Classification *T100 A.1. With freeboard.*

(Type of Superstructures.)

Ship's Name *"New Northland"*
Nuevo Domineano

Nationality and Port of Registry *Canadian Quebec, P.Q.*

Official Number *149409*

Gross Tonnage *3445*

Date of Build *1926-4*

Moulded Dimensions: Length *285.0* Breadth *47'* Depth *24.6"*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *5738* tons

Coefficient of fineness for use with Tables *.720*

Depth for Freeboard (D)

Moulded depth ... *24.6"* ... *24.50*

Stringer plate ... *.04*

Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) = .21 \times .021$

Depth for Freeboard (D) = *24.54*

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R = $(24.54 - 17.00) 2.193$
 $= + 12.15"$

(b) Where D is less than Table depth (if allowed)
(Table depth-D) R = \checkmark

If restricted by superstructures \checkmark

Round of Beam correction

Moulded Breadth (B) *47.00*

Standard Round of Beam = $\frac{B \times 12}{50} = 11.28"$

Ship's Round of Beam *9"* = *9.00*

Difference *2.28" deficient*

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{2.28}{4} \times .021 = +.01$

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) | |
|-------------------------|-------------------------|--|-------------|-------------------|----------------------|--|
| Poop enclosed ... | | <i>none</i> | | | | |
| overhang ... | | | | | | |
| R.Q.D. enclosed ... | | <i>none</i> | | | | |
| overhang ... | | | | | | |
| Bridge enclosed ... | | | | | | |
| overhang aft ... | <i>279.00</i> | <i>279.0"</i> | <i>8.6"</i> | \checkmark | <i>279.00</i> | |
| overhang forward ... | | | | | | |
| Deck enclosed ... | | | | | | |
| overhang ... | | | | | | |
| Trunk aft ... | | | | | | |
| forward ... | | | | | | |
| Tonnage opening aft ... | | | | | | |
| forward ... | | | | | | |
| Total ... | <i>279.00</i> | <i>279.00</i> | | | <i>279.00</i> | |

Standard Height of Superstructure *6.35'*

" " R.Q.D. \checkmark

Deduction for complete superstructure *34.33"*

Percentage covered $\frac{S}{L} = 97.90\%$

" " $\frac{S_1}{L} = 97.90\%$

" " $\frac{E}{L} = 97.90\%$

Percentage from Table, Line A.
(corrected for absence of forecastle (if required)) *97.42%*

Percentage from Table, Line B.
(corrected for absence of forecastle (if required)) \checkmark

Interpolation for bridge less than 2L (if required)

Deduction = $34.33 \times .9742 = 33.44"$

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product | |
|-------------------------------|-------------------|--------------|---|---------------|-----------------|--------------------|--------------|---|---------------|--|
| A.P. ... | <i>38.50</i> | \checkmark | 1 | <i>38.50</i> | <i>33.75</i> | <i>33.75</i> | \checkmark | 1 | <i>33.75</i> | |
| $\frac{1}{4}$ L from A.P. ... | <i>17.13</i> | | 4 | <i>68.52</i> | <i>15.0</i> | <i>15.01</i> | | 4 | <i>60.04</i> | |
| $\frac{2}{4}$ L " ... | <i>4.235</i> | | 2 | <i>8.47</i> | <i>3.75</i> | <i>3.75</i> | | 2 | <i>7.50</i> | |
| Amidships ... | \checkmark | | 4 | \checkmark | \checkmark | \checkmark | | 4 | \checkmark | |
| $\frac{3}{4}$ L from F.P. ... | <i>8.47</i> | | 2 | <i>16.94</i> | <i>8.56</i> | <i>8.94</i> | | 2 | <i>22.90</i> | |
| $\frac{1}{4}$ L " ... | <i>34.26</i> | | 4 | <i>137.04</i> | <i>34.25</i> | <i>35.75</i> | | 4 | <i>185.20</i> | |
| F.P. ... | <i>77.00</i> | | 1 | <i>77.00</i> | <i>78.25</i> | <i>104.05</i> | | 1 | <i>104.05</i> | |
| Total ... | | | | <i>346.47</i> | | <i>+25.80</i> | | | <i>413.44</i> | |

Mean actual sheer aft = *Deficient* $> .75\%$ standard

Mean standard sheer aft

Mean actual sheer forward = *Excess*

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = \checkmark *> .1L*

" " aft of " = \checkmark *> .1L*

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{66.97}{18} (.75 - .4895) = -.97$

If limited on account of midship superstructure. \checkmark

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. \checkmark

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = *24.75*

Summer freeboard = *6.87*

Moulded draught (d) = *17.88*

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = *4.47 = 4\frac{1}{2}*

Addition for Winter North Atlantic Freeboard (if required) = *6\frac{1}{2}*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$

Tons per inch immersion at summer load water line

T =

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

$\frac{d}{4} = 4\frac{1}{2}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.72 + .68}{1.36} = \frac{1.40}{1.36}$

Depth Correction ... *12.15*

Deduction for superstructures ... *33.44*

Sheer correction ... *.97*

Round of Beam correction ... *.01*

Correction for Thickness of Deck amidships ... *2.50*

Other corrections, scantlings, etc. ... *61.23*

75.89 34.41 + 41.48

Summer Freeboard = *82.50*

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

| | | | |
|--|----------------------|------------------------------------|--------------------------|
| Tropical Fresh Water Line above Centre of Disc ... | <i>9"</i> | Tropical Fresh Water Freeboard ... | <i>6'-10\frac{1}{2}"</i> |
| Fresh Water Line " " ... | <i>4\frac{1}{2}"</i> | Fresh Water " " ... | <i>6'-1\frac{1}{2}"</i> |
| Tropical Line " " ... | <i>4\frac{1}{2}"</i> | Tropical " " ... | <i>6'-6"</i> |
| Winter Line below " " ... | <i>4\frac{1}{2}"</i> | Winter " " ... | <i>7'-3"</i> |
| Winter North Atlantic Line " " ... | <i>6\frac{1}{2}"</i> | Winter North Atlantic " " ... | <i>7'-5"</i> |

P PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | |
|--|---|-----------------------|-------|-------------------------|--------|---|--|--|--|
| Description of Hatchway | | | | ... | ... | N ^o 1 Hatch on Bridge deck | | | |
| Dimensions of Hatchway | | | | ... | ... | 15'-2" x 12'-0" x 2'-6 1/2" above wood deck | | | |
| COAMINGS | { | Height above Deck | ... | 2'-6 1/2" | | | | | |
| | | Thickness | Sides | ... | 4 1/4" | | | | |
| | | | Ends | ... | 4 1/4" | | | | |
| | | Stiffeners | ... | 7" x 3" x 36 Bulb angle | | | | | |
| | | Brackets, Stays | ... | | | | | | |
| HATCH BEAMS | { | Number | ... | 2 | | | | | |
| | | Spacing | ... | 4' | | | | | |
| | | Scantling and Sketch | ... | 7" x 3" x 40 double | | | | | |
| | | | ... | 11" x 30" | | | | | |
| | | Bearing Surface | ... | 3" | | | | | |
| FORE AND AFTERS | { | Number | ... | | | | | | |
| | | Spacing | ... | | | | | | |
| | | Unsupported Lengths | ... | | | | | | |
| | | Scantling* and Sketch | ... | None | | | | | |
| | | Bearing Surface | ... | | | | | | |
| HATCH COVERS | { | Material | ... | Wood | | | | | |
| | | Thickness | ... | 3" | | | | | |
| | | How fitted | ... | Running fore and aft | | | | | |
| | | Bearing Surface | ... | 3" | | | | | |
| Spacing of Cleats | | | | ... | 24" | | | | |
| Number of Tarpaulins | | | | ... | 3 | | | | |
| *Are wood fore and afters steel shod at all bearing surfaces? None | | | | | | | | | |
| Are battens and wedges efficient and in good condition? Yes | | | | | | | | | |
| Are tarpaulins in good condition and in accordance with rule requirements? Yes | | | | | | | | | |
| Are lashings provided in accordance with rule requirements? Yes | | | | | | | | | |

Particulars of fiddley, funnel and ventilator coamings:— *Fiddley 4' 8" high with gratings and hinged covers above Boat deck
 Skylights to engine room. Steel coamings with wood and glass covers attached.*

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

*Companionway to lower deck aft. of steel rivetted to deck plating
 and of substantial construction. Steel door on aft side. 12" sill.*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

*Boat deck:— 2 stokehole vents 22" dia. 14"
 Coaming and 14 feet high. Engine room vents 2— 12" dia. 14" coamings 10 feet high
 2— 20" dia. 14" coaming 14 feet high. Upper deck forward:— 7 vents 9" dia. 30" coaming
 4' 6" high 3— 14" dia. 30" coaming 4' 6" high. All ventilators strong and efficient
 and capable of standing alone. Canvas covers with wood plugs supplied
 for bad weather.*

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

*All of substantial construction and
 15" from deck to opening with attached caps for closing same.
 22 Air pipes in all.*

Particulars of Gangway Cargo and Coaling Ports:—

*One cargo port forward and one aft, on both sides of vessel.
 fitted with double steel watertight doors 7' 3" x 7' 0"
 4 in all.*



© 2020

Lloyd's Register
Foundation

Particulars of Scuppers and Sanitary Discharge Pipes —

All sanitary discharges above main deck. 11 valves on Port side and 10 on Star side 4 1/2" dia. valves ✓

Particulars of Side Scuttles:

None ✓

Particulars of Guard Rails:—

Bulwarks fitted on upper deck from Bridge to 57' aft. Open rails forward and aft for remainder of deck. ✓
Bulwarks fitted on upper deck from stem to 40 feet aft.

Particulars of Gangways, Lifelines, etc.:—

Can be rigged when required

Particulars of Freeing Arrangements.

| | Length of Bulwark | Height of Bulwark | Size of Freeing Ports | Number each side | Area each side | Rule area each side |
|-----------------|-------------------|-------------------|-----------------------|------------------|----------------|---------------------|
| From Bridge aft | 57' 0" | 44" | open rails clear of | ✓ | ✓ | ✓ |
| After Well | 40' 0" | 44" | None | ✓ | ✓ | ✓ |
| From Stem aft | 20' 0" | 44" | Bulwarks | 1. | ✓ | ✓ |
| Forward Well | | | 24" x 12" | | | |

State position of each freeing port ... { After Well:—
(F. and A. position and height above deck edge) { Forward Well:—
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—
Additional area where sheer is less than standard.

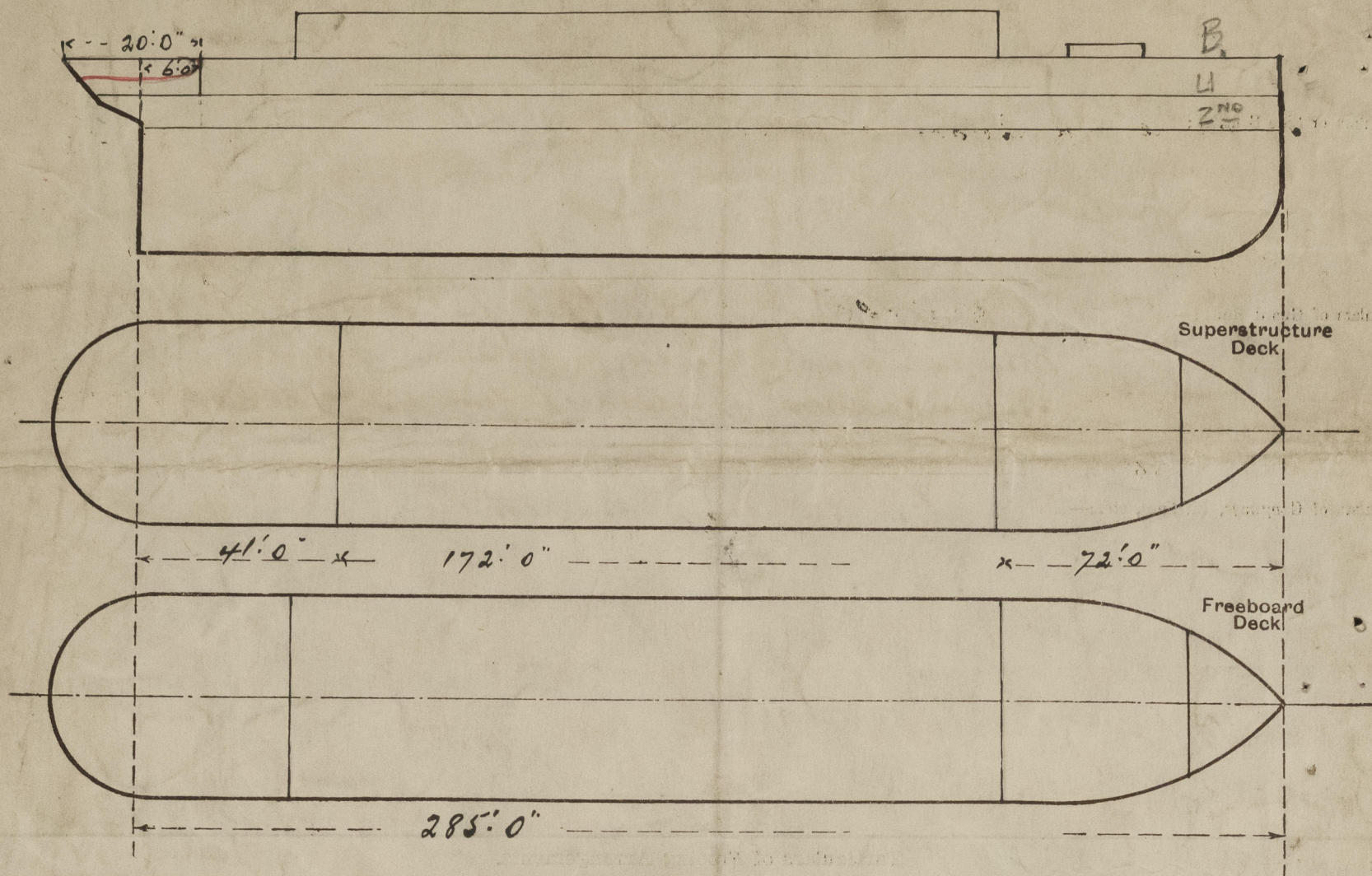
Particulars of Superstructures, Trunks, Casings, Deckhouses.

| | Coaming | Plating | Stiffeners | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
|---|--|---------|------------|---------|-------------------------------|------------------|-----------------|-------------------|
| Poop Bulkhead | ✓ | | | | | | | |
| Raised Quarter Deck Bulkhead | ✓ | | | | | | | |
| Bridge, After Bulkhead | The vessel has a complete erection 8' 6" high extending from the forward end to a point 6' 0" forward of the aft side of the aft post where it is finished with a complete bulkhead without openings | | | | | | | |
| Bridge, Forward Bulkhead | | | | | | | | |
| Forecastle Bulkhead | | | | | | | | |
| Trunk, Aft | Length 27' 9". The bulkhead has vertical plating 1/16" thick and wood lined inside in way of passenger accommodation. No brackets. | | | | | | | |
| Trunk, Forward | ✓ | | | | | | | |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | ✓ | | | | | | | |
| Exposed Machinery Casings on Superstructure Decks | ✓ | | | | | | | |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | ✓ | | | | | | | |
| Deckhouses on Flush Deck Ships | ✓ | | | | | | | |

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

| | |
|---|--|
| Poop Bulkhead | ✓ |
| Raised Quarter Deck Bulkhead | ✓ |
| Bridge, After Bulkhead | No openings. ✓ |
| Bridge, Forward Bulkhead | ✓ |
| Forecastle Bulkhead | ✓ |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | |
| Exposed Machinery Casings on Superstructure Decks | |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | Entrance to engine room in alleyway. 2 steel doors 25" x 66", also one steel door from upper deck 25" x 66" with 14" sill and capable of being operated from both sides. |
| Deckhouses on Flush Deck Ships | |

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 shewn on the following sketches:—



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

Rounded Draft

17' 4 1/4" = 2154 tons
15' 2" = 1400 "
12' 5" = 600 "

Builder's name and yard number *Swan Hunter & Wigham Richardson Ltd.*

Names of sister ships *None*

Owners *Clarke S.S. Co. Ltd. Quebec*

Fee £ *60.00* Received by me



© 2020

Lloyd's Register
Foundation