

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Complete superstructure with T.O. and superimposed forecastle of poop.
(Type of Superstructures.)

Port of Survey _____

Date of Survey 14-4-32

Name of Surveyor _____

Particulars of Classification +100 A1 with freeboard

Ship's Name <u>NETHERLAND SHIPBUILDING COMPANY. No. 224/5</u>	Nationality and Port of Registry <u>✓</u>	Official Number <u>✓</u>	Gross Tonnage <u>✓</u>	Date of Build <u>✓</u>
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Moulded Dimensions: Length 440' Breadth 60' 10 1/2" Depth 31' 4" to main deck
42' 11" shelter deck
 Moulded displacement at moulded draught = 85 per cent. of moulded depth 15,100 M³ tons
 Coefficient of fineness for use with Tables 694

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>31.50</u>	(a) Where D is greater than Table depth (D-Table depth) R = <u>(31.64 - 31.34) x 3 = +.9"</u>	Moulded Breadth (B) <u>60' 10 1/2"</u>
Stringer plate ... <u>assumed</u> ... <u>.06</u>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = _____	Standard Round of Beam = $\frac{B \times 12}{50} = \underline{14.61}$
Sheathing on exposed deck $\frac{L-S}{L} =$ _____	If restricted by superstructures _____	Ship's Round of Beam = <u>Assume standard.</u>
Depth for Freeboard (D) = <u>31.64</u>		Difference _____
		Restricted to _____
		Correction = $\frac{\text{Diff}^e}{4} \times (1 - \frac{S_1}{L}) =$ _____

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <u>47.67</u>	<u>47.67</u>	<u>11' 4"</u>	<u>✓</u>	<u>47.67</u>
" overhang				
R.Q.D. enclosed				
" overhang				
Bridge enclosed... .. <u>416.83</u>	<u>416.83</u>	<u>"</u>	<u>✓</u>	<u>416.83</u>
" overhang aft				
" overhang forward				
F'cle enclosed				
" overhang				
Trunk aft				
" forward				
Tonnage opening aft <u>5.50</u>	<u>2.75</u>	<u>"</u>	<u>✓</u>	<u>2.75</u>
" " forward				
Total <u>440.-</u>	<u>467.25</u>			<u>467.25</u>

Standard Height of Superstructure 4' 6"

" " R.Q.D. ✓

Deduction for complete superstructure 42"

Percentage covered $\frac{S}{L} = 100\%$

" " $\frac{S_1}{L} = 99.41\%$

" " $\frac{E}{L} = 99.41\%$

Percentage from Table, Line A. (corrected for absence of forecastle (if required)) 99.27%

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

Interpolation for bridge less than 2L (if required) ✓

Deduction = $.9927 \times 42 = \underline{41.70}$

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P.	<u>57.00</u>	1	<u>57.00</u>	<u>55.13+46=101.13</u>	<u>101.13</u>	1	<u>101.13</u>
1/4 L from A.P.	<u>25.36</u>	4	<u>101.44</u>	<u>22.06</u>	<u>45.00</u>	4	<u>180.00</u>
2/4 L "	<u>6.27</u>	2	<u>12.54</u>	<u>4.45</u>	<u>11.12</u>	2	<u>22.24</u>
Amidships	<u>-</u>	4	<u>-</u>	<u>-</u>	<u>-</u>	4	<u>-</u>
3/4 L from F.P.	<u>12.54</u>	2	<u>25.08</u>	<u>13.75</u>	<u>17.84</u>	2	<u>35.68</u>
1/4 L "	<u>50.73</u>	4	<u>202.92</u>	<u>51.25</u>	<u>72.12</u>	4	<u>288.48</u>
F.P.	<u>114.00</u>	1	<u>114.00</u>	<u>116.13+46=162.13</u>	<u>162.13</u>	1	<u>162.13</u>
Total			<u>612.98</u>				<u>789.66</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{146.68}{18} (.75 - .50) = \underline{-2.45}$

If limited on account of midship superstructure. ✓

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

Mean actual sheer aft = Even
 Mean standard sheer aft = Even
 Difference 3' 10"

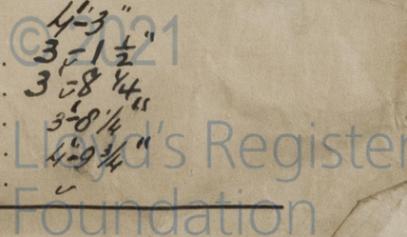
Mean actual sheer forward = Even
 Mean standard sheer forward = Even

Length of enclosed superstructure forward of amidships = 30 P.P.
 " " aft of " = ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	<u>93.30</u>
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{694 + .60}{1.36} \times 93.30$	<u>94.26</u>
Depth to Freeboard Deck = <u>31.64</u>	$\Delta =$	Depth Correction	<u>.90</u>
Summer freeboard = <u>4.25</u>	Tons per inch immersion at summer load water line	Deduction for superstructures	<u>41.70</u>
Moulded draught (d) = <u>27.39</u>	T =	Sheer correction	<u>2.45</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>6.85 = 6 3/4"</u>	Deduction = $\frac{\Delta}{40 T}$ inches = <u>✓</u>	Round of Beam correction	<u>✓</u>
Addition for Winter North Atlantic Freeboard (if required) = <u>✓</u>		Correction for Thickness of Deck amidships	<u>✓</u>
		Other corrections, scantlings, etc.	<u>✓</u>
		<u>.90</u> <u>44.15</u> <u>- 43.25</u>	
		Summer Freeboard = <u>51.01</u>	

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

Tropical Fresh Water Line above Centre of Disc <u>13 1/2"</u>	Tropical Fresh Water Freeboard <u>3-1 1/2"</u>
Fresh Water Line " " <u>6 3/4"</u>	Fresh Water " " <u>3 5/8 1/4"</u>
Tropical Line " " <u>6 3/4"</u>	Tropical " " <u>3 5/8 1/4"</u>
Winter Line below " " <u>6 3/4"</u>	Winter " " <u>4 2/3 1/4"</u>
Winter North Atlantic Line " " <u>✓</u>	Winter North Atlantic " " <u>✓</u>



PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	}	Height above Deck	...	...	...	...	...	...	...
		Thickness	}	Sides	...	...	...	...	...
		Stiffeners		Ends	...	...	...	...	...
		Brackets, Stays	...	...	...	...	...	...	...
HATCH BEAMS	}	Number	...	...	...	...	...	...	...
		Spacing	...	...	...	...	...	...	...
		Scantling and Sketch	...	...	...	...	...	...	...
FORE AND AFTERS	}	Bearing Surface	...	...	...	...	...	...	...
		Number	...	...	...	...	...	...	...
HATCH COVERS	}	Material	...	...	...	...	...	...	...
		Thickness	...	...	...	...	...	...	...
		How fitted	...	...	...	...	...	...	...
		Bearing Surface	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...

Particulars of fiddley, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles :—

Particulars of Companionways :—

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

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

Particulars of Gangway Cargo and Coaling Ports :—

Particulars of Scuppers and Sanitary Discharge Pipes —

Particulars of Side Scuttles :

Particulars of Guard Rails :—

Particulars of Gangways, Lifelines, etc. :—

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well
Forward Well

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
Bridge, Forward Bulkhead
Forecastle Bulkhead
Trunk, Aft
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	...
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	...
Deckhouses on Flush Deck Ships	...

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