

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

15324

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having POOP BRIDGE & FORECASTLE

(Type of Superstructures.)

Ship's Name <u>S. NATHURA.</u>	Nationality and Port of Registry <u>BRITISH LIVERPOOL.</u>	Official Number <u>143690.</u>	Gross Tonnage <u>8889.85</u>	Date of Build <u>1920-12.</u>
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Moulded Dimensions: Length 478.16. Breadth 68.21. Depth 38.34.37

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

Coefficient of fineness for use with Tables _____

Port of Survey Middlesbrough.

Date of Survey While calling Jan 1935.

Name of Surveyor Cyril B. Scorer.

Particulars of Classification 100. A.1.

<p>Depth for Freeboard (D)</p> <p>Moulded depth <u>38.37</u></p> <p>Stringer plate <u>0.4</u></p> <p>Sheathing on exposed deck</p> <p>$T \left(\frac{L-S}{L} \right) =$</p> <p>Depth for Freeboard (D) = <u>38.35</u></p>	<p>Depth correction</p> <p>(a) Where D is greater than Table depth (D-Table depth) R = $(38.41-31.88) \times 3 = + 19.59$ 6.53</p> <p>(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>✓</u></p> <p>If restricted by superstructures <u>✓</u></p>	<p>Round of Beam correction</p> <p>Moulded Breadth (B) <u>63.62.</u></p> <p>Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>15.27</u></p> <p>Ship's Round of Beam = <u>16.</u></p> <p>Difference <u>0.73</u></p> <p>Restricted to <u>✓</u></p> <p>Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>0.73</u></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 <u>equally</u> ...	<u>47.25</u>		<u>7.5</u>		
„ overhang	<u>5.20</u>				
R.Q.D. enclosed					
„ overhang					
Bridge enclosed... ..	<u>178.00</u>		<u>7.95</u>		
„ overhang aft	<u>43.75</u>				
„ overhang forward					
Fore enclosed <u>apm</u> ...	<u>41.50</u>		<u>7.00</u>		
„ overhang					
Trunk aft					
„ forward					
Tonnage opening aft ...					
„ „ forward					
Total					

Standard Height of Superstructure _____

„ „ R.Q.D. _____

Deduction for complete superstructure _____

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

„ „ $\frac{S_1}{L} =$ _____

„ „ $\frac{E}{L} =$ _____

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 = _____

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>57.82</u>	1		<u>57.82</u>	<u>59.25</u>	<u>59.25</u>	1		<u>59.25</u>
$\frac{1}{8}$ L from A.P. ...	<u>25.73</u>	4		<u>102.92</u>	<u>27.30</u>	<u>27.30</u>	4		<u>109.20</u>
$\frac{3}{8}$ L „	<u>6.36</u>	2		<u>12.72</u>	<u>7.75</u>	<u>7.75</u>	2		<u>15.50</u>
Amidships	-	4		-	<u>0.00</u>	-	4		-
$\frac{5}{8}$ L from F.P. ...	<u>12.72</u>	2		<u>25.44</u>	<u>15.25</u>	<u>15.25</u>	2		<u>30.50</u>
$\frac{7}{8}$ L „	<u>51.46</u>	4		<u>205.84</u>	<u>58.25</u>	<u>58.25</u>	4		<u>233.00</u>
F.P.	<u>115.63</u>	1		<u>115.63</u>	<u>128.25</u>	<u>128.25</u>	1		<u>128.25</u>
Total				<u>520.37</u>					<u>575.70</u>

Mean actual sheer aft = Excess

Mean standard sheer aft = _____

Mean actual sheer forward = Excess

Mean standard sheer forward = _____

Length of enclosed superstructure forward of amidships = _____

„ „ aft of „ = _____

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ $\frac{55.33}{18} (.75 - \frac{S}{2L})$

If limited on account of midship superstructure.

If limited to maximum allowance of $1\frac{1}{2}$ 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 = _____ Ft.</p> <p>Summer freeboard = _____</p> <p>Moulded draught (d) = _____</p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = _____</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</p> <p>$\Delta =$ _____</p> <p>Tons per inch immersion at summer load water line</p> <p>T = _____</p> <p>Deduction = $\frac{\Delta}{40T}$ inches = _____</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient</p> <p>Depth Correction</p> <p>Deduction for superstructures</p> <p>Sheer correction</p> <p>Round of Beam correction</p> <p>Correction for Thickness of Deck amidships</p> <p>Other corrections, scantlings, etc.</p> <p>Summer Freeboard = _____</p>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	...	...	Tropical Fresh Water Freeboard	...	...
Fresh Water Line	„	„	Fresh Water	„	...
Tropical Line	„	„	Tropical	„	...
Winter Line below	„	„	Winter	„	...
Winter North Atlantic Line	„	„	Winter North Atlantic	„	...

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
UPPER DECK			BRIDGE DECK			UPPER DECK			BRIDGE DECK		
Description of Hatchway	...	...	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	...	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...	...	...
	Sides	...	...	...	...	...	...	...	...	...	...
	Ends	...	...	...	...	...	...	...	...	...	...
	Stiffeners	...	...	...	...	...	...	...	...	...	...
HATCH BEAMS	Number	...	...	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...	...	...

FORE AND AFTERS	Number	...	...	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...	...	...
	Unsupported Lengths	...	...	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...	...	...
HATCH COVERS	Material	...	...	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...	...	...
	How fitted	...	...	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...	...	...

Spacing of Cleats	...	...	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...	...	...

Particulars of fiddle, funnel and ventilator coamings:—

*Engine Room skylight in casing top of steel strongly constructed.
Funnel and ventilator coamings in good condition.
Fiddle openings in casing top protected by strong hinged steel covers.*

Particulars of Flush Bunker Scuttles:—

2 Bunker scuttles on bridge deck 18" x 18" 20 dia strongly constructed with bayonet joints (no chain attached).

Particulars of Companionways:—

Steel companion on poop deck to crew space & steering house 4'6" x 5'3" x 5'3" high with wood door 4'6" x 2'0" 12" thick with 6" sill operated from both sides.

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

2 vents on fore-castle deck to hold 27" x 27" dia 42 coamings. 1 M.U. under store 10" x 12" x 30". 2 Q.R.V. in fore well to hold 7'0" x 26" x 60" STAYED. 2 VENT. suitably stayed to bridge deck. 1 VENT. 4'0" x 24" dia 36" STAYED. 2 VENT. 5'0" x 28" x 36" STAYED. 2 VENT. on bridge deck 2'6" x 18" x 28". 2 VENT. 3'0" x 24" x 30".

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

1 air pipe to fore peak under fore-castle 3" dia 17' high. 2 air pipes to Q.B. tanks in fore well 3" dia 17' high. 2 air pipes to bridge deck 3" dia 17' high. 2 air pipes to after peak on poop deck 3" dia 17' high. Efficient means of closing air pipes, no snifting holes fitted.

Particulars of Gangway Cargo and Coaling Ports:—

Steel hinged W.T. door fitted P.S. 4'6" x 4'6" 12" above deck in bridge tween decks strongly constructed and fastened by screw bolts spaced 1'6" apart.

Particulars of Scuppers and Sanitary Discharge Pipes:—

All sanitary discharge pipes from officers & crew accommodation discharged above foreboard deck and are fitted with storm valves at ship's side. Scuppers from enclosed bridge tween deck discharged overhead 8'0" below deck with storm valves at ship's side. Scuppers from forward and after well discharge 1'6" below foreboard deck open pipes.

Particulars of Side Scuttles:—

Side scuttles in fore-castle & poop accommodation are fitted with hinged deadlights. There are 6 side scuttles fitted below foreboard deck in forward store room & steering compartment. 9" dia 1'6" below foreboard deck to bottom of light fitted with hinged deadlights.

Particulars of Guard Rails:—

Guard rails fitted on fore-castle deck 3'4" high with 3 rods & stanchions 4'9" apart. Poop 3'6" high with 3 rods & stanchions 5'0" apart. Bridge deck in way of hatch & after end 3'6" high 3 rods & stanchions 5'0" apart. A bulwark is fitted between hatches on bridge deck 3'6" high efficiently supported.

Particulars of Gangways, Lifelines, etc.:—

Lifelines are available for use in any part of the ship for the protection of the crew.

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	91.5	4.0	1 @ 2'6" x 1'2" 3 @ 3'6" x 1'4"	4	15.36	18.3
Forward Well	110.9	4.0	3'6" x 1'4"	3	12.81	22.2

State position of each freeing port from fore-castle to after well:—
(F. and A. position and height above deck edge) After Well:— 10'0" 36'6" 6'4" 8'6" } 14' above deck.
Forward Well:— 20'6" 54'0" 76'0" }
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—
Six with 4" x 4" L & no shutters
one with 4" x 4" L & hinged shutter.

Additional area where sheer is less than standard.

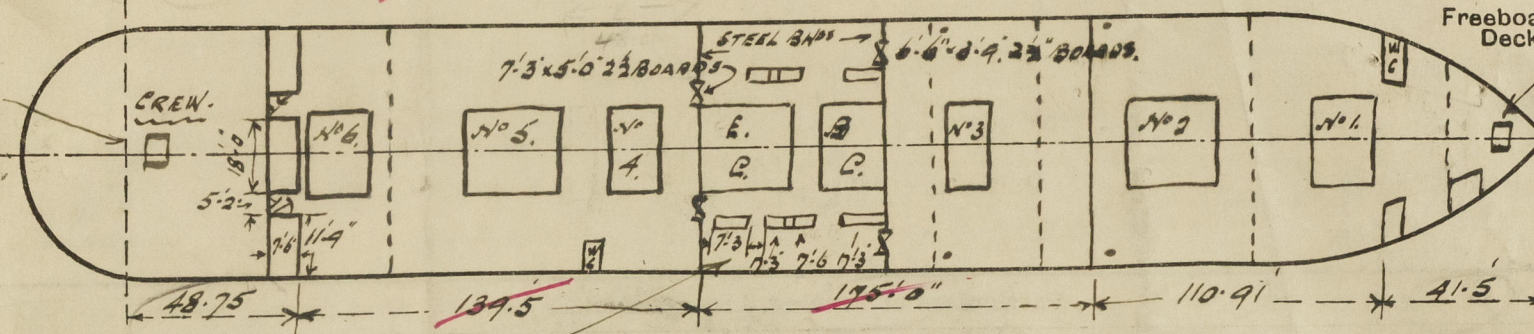
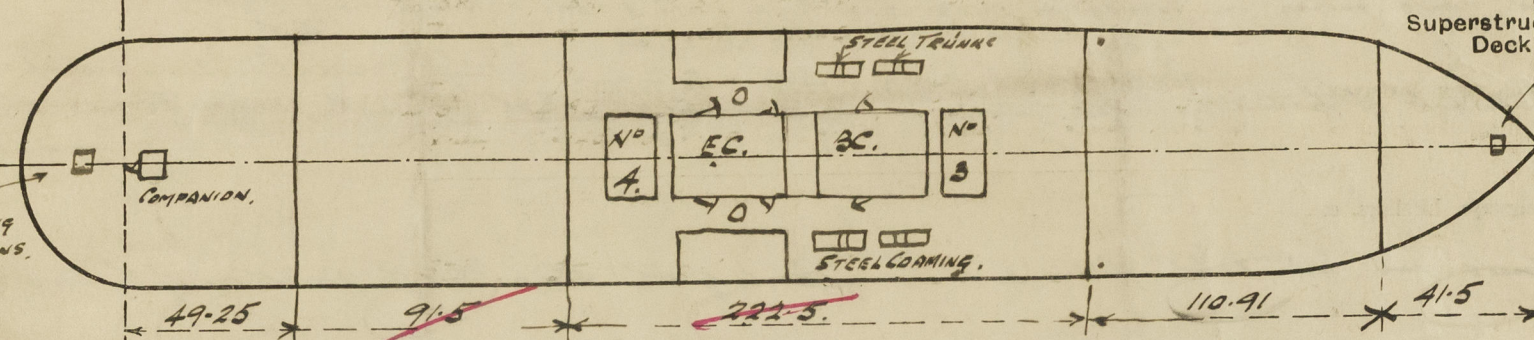
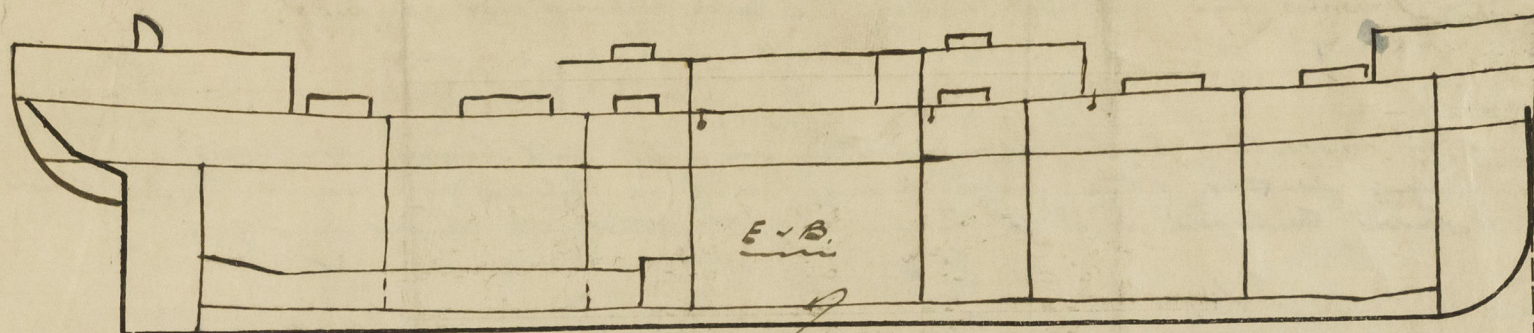
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓	40	7'33" x 48L	2'7"	None	5'0" x 2'0"	18"	7'6"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	✓	40	4" FLANGES	3'0" ADAPT	None	7'3" x 5'0"	✓	7'11 1/2"
Bridge, Forward Bulkhead	✓	50	9'33" x 50J	2'7"	Brackets 16" bottom	None	✓	7'11 1/2"
Fore-castle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	44	36	8'3" x 36"	3'9"	Brackets top & bottom	5'0" x 2'0"	16"	7'0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	30	3 Flange 4'3" x 34"	3'0"	Riveted to beam at top	5'0" x 2'6"	18"	7'11 1/2"
Deckhouses on Flush Deck Ships								

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

Poop Bulkhead	Hinged steel doors manipulated both sides to crew & wood doors 15" thick to W.C. both sides.
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	2 1/2" storm boards in riveted channels.
Bridge, Forward Bulkhead	None.
Fore-castle Bulkhead	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	Hinged steel doors manipulated both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Hinged steel doors manipulated 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 shown on the following sketches:—



Port
Recess $\frac{5.17 \times 7.5}{25.91} = \frac{1.50}{47.25}$

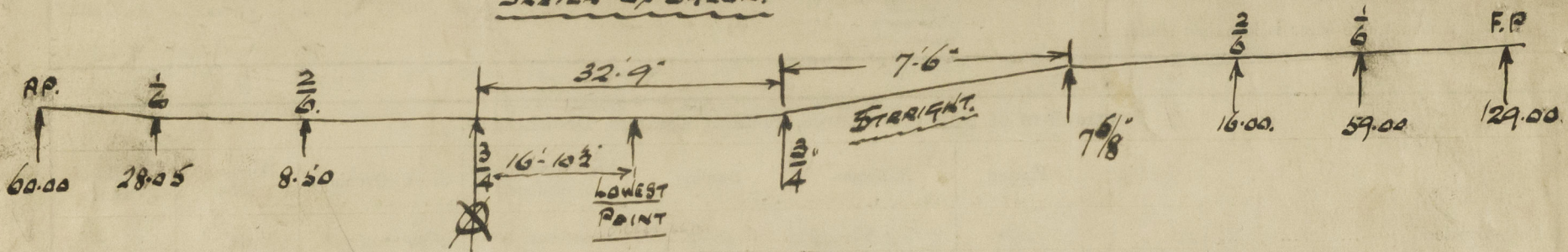
BUNGER HATCHES, IN TWEEN DECK
7'2" x 4'4"
COAMINGS, 9" B.A.
COVERS, 3" BEARING 2 1/2"
CLEATS & TARP

The side houses on the after deck, the bridge and bulkhead have been removed. The coamings of No 4 hatch in the bridge have been increased.

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

The survey was held while the vessel was in dry dock for alterations. 37'6" in length midships being removed, from stoke hold forward.

SKETCH OF SHEER.



The following displacement particulars, given by Repairers.

Displacement at 30'0" draft. 18,910 tons T.P.L. 60.00 tons
" 31'0" " 19,630 " 60.25 "

Builder's name and yard number

C. Connell & Co. Glasgow Yard No 377.

Names of sister ships

Owners

Thos & Jno Brocklebank L.

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