

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for *Steamer, Sailing Ship, or Tanker*
 having *Prop. Bridge & Forecastle also Trunk in aft*
 will *NAUSICAA*
 (Type of Superstructures.)
 Ship's Name *NAUSICAA* Nationality and Port of Official Number *French 79398* Gross Tonnage *5005* Date of Build *1922*
 Port of Survey *Roaer*
 Date of Survey *22nd June 1931*
 Name of Surveyor *Archd. Murray*
 Particulars of Classification *100 A.1*
 Carrying *petroleum in bulk*

Moulded Dimensions: Length *388-0* Breadth *52-6* Depth *29-3*
 Moulded displacement at moulded draught = 85 per cent. of moulded depth *11560 metric tons*
 Coefficient of fineness for use with Tables *787*

Depth for Freeboard (D) = *8.93*
 Moulded depth ... *29-3*
 Stringer plate ... *02*
 Sheathing on exposed deck *T (L-S) = 2.00*

Depth correction
 (a) Where D is greater than Table depth
 $8.33(D - \text{Table depth}) R = 8.33(8.93 - 7.88) \times 29.86 = +.261$
 (b) Where D is less than Table depth (if allowed)
 (Table depth - D) R = *✓*
 If restricted by superstructures *✓*

Round of Beam correction
 Moulded Breadth (B) *52-6*
 Standard Round of Beam = $\frac{B \times 19}{50} = .320$
 Ship's Round of Beam = *13*
 Difference = *.010*
 Restricted to *✓*
 Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.010}{4} \times 371 = -.001$

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ... <i>30-30</i>	<i>32-30</i>	<i>7-0</i>	$\times \frac{2-133}{2252}$	<i>30-59</i>
" overhang ...				
R.Q.D. enclosed ...				
" overhang ... <i>8-23</i>	<i>8-23</i>	<i>7-0</i>	$\times \frac{2-133}{2252}$	<i>7-79</i>
Bridge enclosed ... <i>15-01</i>	<i>15-01</i>	<i>7-0</i>	$\times \frac{2-133}{2252}$	<i>14-22</i>
" overhang forward ... <i>3-43</i>	<i>1-71</i>	<i>7-0</i>	$\times \frac{2-133}{2252}$	<i>1-62</i>
Trunk aft <i>8-23</i>	<i>13-23</i>	<i>7-0</i>	$\times \frac{2-133}{2252}$	<i>8-95</i>
" forward <i>1-45</i>	<i>1-51</i>	<i>7-0</i>	$\times \frac{2-133}{2252}$	<i>1-43</i>
Tonnage opening aft ...				
" forward ...				
Total ...	<i>58-91</i>	<i>74-30</i>		<i>66-48</i>

Standard Height of Superstructure *2-252*
 R.Q.D. *✓*
 Deduction for complete superstructure *1-046*
 Percentage covered $\frac{S}{L} = 49.87\%$
 $\frac{S_1}{L} = 62.83\%$
 $\frac{E}{L} = 56.22\%$
 Percentage from Table, Line A. (corrected for absence of forecastle (if required)) *✓*
 Percentage from Table, Line B. *47.84%*
 (corrected for absence of forecastle (if required))
 Interpolation for bridge less than 2L (if required) *Tanker: correct*
 Deduction = $1.046 \times 47.84 = -.500$

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	1.238	1	1.238	1.473	1.473	1	1.473
1/4 L from A.P. ...	.550	4	2.200	.660	.660	4	2.640
1/2 L " ...	.137	2	.274	.152	.152	2	.304
Amidships ...	-	4	-	0	-	4	-
3/4 L from F.P. ...	.275	2	.550	.356	.356	2	.712
1/4 L " ...	1.100	4	4.400	1.296	1.296	4	5.184
F.P. ...	2.476	1	2.476	2.820	2.820	1	2.820
Total ...			11.138				13.133

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{1.995}{18} (.75 - .249) = -.056$$

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.

Depth to Freeboard Deck = *8.93*
 Summer freeboard = *1.34*
 Moulded draught (d) = *7.59*

Addition for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48}$ inches = *158 m/100*

Addition for Winter North Atlantic Freeboard (if required) = *97*

Deduction for Fresh Water.

Displacement in salt water at summer load water line *11560*
 $\Delta = 11.682 \text{ G. metric tons}$
 Tons per inch immersion at summer load water line *16.338*
 T = *16.338*

Deduction = $\frac{\Delta}{40T}$ inches = *179*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\times \frac{787 + .68}{1.36} =$

Depth Correction ... *.261*
 Deduction for superstructures ... *.500*
 Sheer correction ... *.056*
 Round of Beam correction ... *.001*
 Correction for Thickness of Deck amidships ... *-*
 Other corrections, scantlings, etc. ... *-*

+	-
<i>.261</i>	<i>.500</i>
<i>.056</i>	<i>.001</i>
<i>.001</i>	<i>-</i>
<i>.261</i>	<i>.557</i>
Summer Freeboard = <i>1.340</i>	

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, *Steel Deck*

Tropical Fresh Water Line above Centre of Disc ... *1.003*
 Fresh Water Line ... *1.182*
 Tropical Line ... *1.182*
 Winter Line ... *1.498*
 Winter North Atlantic Line ... *1.595*

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS							
Description of Hatchway	Forecastle Deck Cargo	Forecastle Deck Cargo	Poop Deck Coal	Poop Deck Coal	Oil tank Hatchways to exposed freeboard deck & trunk	Summit tank hatchways to exposed freeboard deck	
Dimensions of Hatchway	10'-6" x 12'-0"	10'-6" x 12'-0"	7'-7" x 14'-0"	6'-6" x 5'-3" 6'-3" x 4'-0"	8'-0" x 6'-0"	6'-0" x 4'-9" for 6'-0" x 5'-0" aft.	
COAMINGS	Height above Deck	2'-6"	6"	2'-6"	2'-6"	1'-0"	2'-9"
	Thickness	9/16"	9/16"	8/16"	3/16"	9/16"	9/16"
	Sides	9/16"	8/16"	7 x 3 x 9/16"	✓	✓	✓
	Ends	9/16"	8/16"	horizontal	✓	✓	✓
	Stiffeners	7 x 3 x 9/16"	✓	horizontal	✓	✓	✓
HATCH BEAMS	Brackets, Stays	horizontal	✓	horizontal	✓	✓	✓
	Number	1	1				
	Spacing	1	1				
	Scantling and Sketch	3 x 3 x 9/16" Keels 11 x 3 1/2" at centre	50	50	✓	oil tight covers to each hatchway.	oil tight covers to each hatchway.
	Bearing Surface	3	3				
FORE AND AFTERS	Number						
	Spacing						
	Unsupported Lengths						
	Scantling* and Sketch	✓	✓	✓	✓	buffer dam hatchways.	Coamings 12" high with w.t. steel covers.
	Bearing Surface						
HATCH COVERS	Material	Steel	10. flange				
	Thickness	10. 7/16"	2	50	50	50	
	How fitted	secured with 2 A.					
	Bearing Surface	secured with 2 A.					
		all to approved plan					
Spacing of Cleats	21"	21"	21"	21"			
Number of Tarpaulins	2	2	2	2			
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>Yes.</i></p> <p>Are battens and wedges efficient and in good condition? <i>Yes.</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>Yes.</i></p> <p>Are lashings provided in accordance with rule requirements? <i>Yes.</i></p>							

Particulars of fiddley, funnel and ventilator coamings:—

Fiddley gratings fitted with hinged steel covers.

Funnel fitted with outer casing and bonnet.

Riveted coamings to engine and boiler room ventilators.

36" high.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

Steel companion on trunkway giving access to pump room with hinged steel door at after end 4'-6" x 2'-0", opening both sides, sill 24" high.

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

On 12" and on 16" dia. coal vent to pump room and hold respectively on freeboard deck, also several coal vents on poop and forecastle, all with coamings 36" deep, wood caps and canvas covers to coamings, and canvas covers to bell mouths.

Thickness of coamings. Vents to Engine Space 3 1/4". Forecastle 3 1/4".

Freeb. Decks. 8.5 and 7.5 1/4". Superstructure Decks. 11.9 and 7.5 1/4".

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

Goose neck air pipes on freeboard deck to cofferdam (2), and ditto to after cofferdam on trunk, several gooseneck air pipes on poop and forecastle decks ventilating compartments immediately below. All 25" high to underside, with flaps and canvas covers to openings, No air caps.

Particulars of Gangway Cargo and Coaling Ports:—

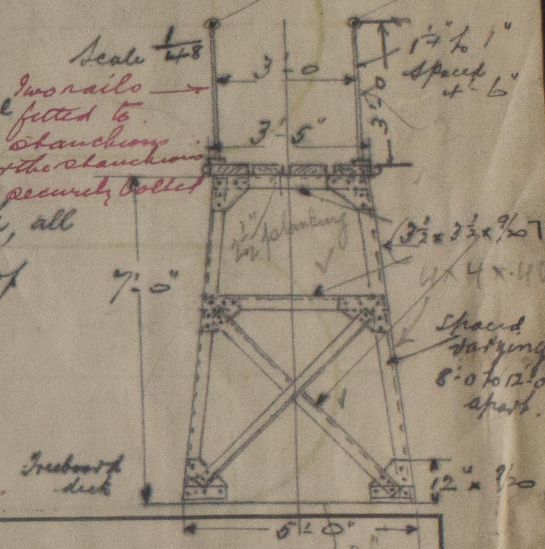
None.

Particulars of Scuppers and Sanitary Discharge Pipes — ¹⁸ Scuppers P. & S. discharging immediately below foreboard deck fitted with storm valves. ✓
Sanitary discharges fitted with storm valves. ✓

Particulars of Side Scuttles: One immediately below foreboard deck in stow forward and boatswains store aft, fitted with deadlights. ✓

Particulars of Guard Rails: — On superstructure decks only, stanchions 3'-0" high with two guard rails to forecabin deck, and 3'-0" high with three rails to poop and bridge. ✓

Particulars of Gangways, Lifelines, etc.: — Fore and aft gangway in centre over forward well at level of bridge and forecabin decks. also short gangway between bridge deck aft end, and trunk deck, all as per sketch. Trunk deck forming gangway aft of same, with stanchions 3'-0" high and wire rail full length each side.



Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports (as per approved plan)	Number each side	Area each side	Rule area each side
Well ...	114'-0"	3'-6"	3'-5" x 1'-3" ← Open rails for 90 feet	52	19.6 f	Open rails half length
ard Well ...	80'-0"	3'-6"	3'-5" x 1'-3" ← Semi circular ends	6'	23.5 f	do do

position of each freeing port ... After Well: — approximately equidistant } 12' above deck ✓
and A. position and height above deck edge) } Forward Well: — do }
whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — 3 bars.
Additional area where sheer is less than standard. Plan to be submitted showing the necessary alterations to comply with Rule requirements. herewith

Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Bulkhead ...	8/20	8/20	stake caposed 6 x 3 1/2 x 9/20	30	Brackets	3'-10" x 2'-6"	30"	7'-0"
ard Quarter Deck Bulkhead ...								
ge, After Bulkhead ...	8/20	6/20	3 x 3 x 8/20	27	to boundary bars	4'-10" x 2'-0" (one) 4'-7" x 3'-11" (two)	16	7'-0"
ge, Forward Bulkhead ...	9/20	8/20	6 x 3 1/2 x 9/20	30	brackets	4'-8" x 2'-0"	16	7'-0"
castle Bulkhead ...	8/20	6/20	3 x 3 x 8/20	27	to boundary bars	4'-8" x 2'-0"	16	7'-0"
k, Aft ...	8/20	7/20	Horizontal stiffeners half height and two web plates in each tank					5'-0"
k, Forward ...								
ed Machinery Casings on Freeboard or Raised Quarter Decks ...								
ed Machinery Casings on Superstructure Decks ...	7/20	6/20	4 x 3 x 8/20	27	✓	4'-9" x 2'-0"	18"	7'-3"
inery Casings within Superstructures not fitted with Class I Closing Appliances ...								
Deckhouses on Flush Deck Ships ...								

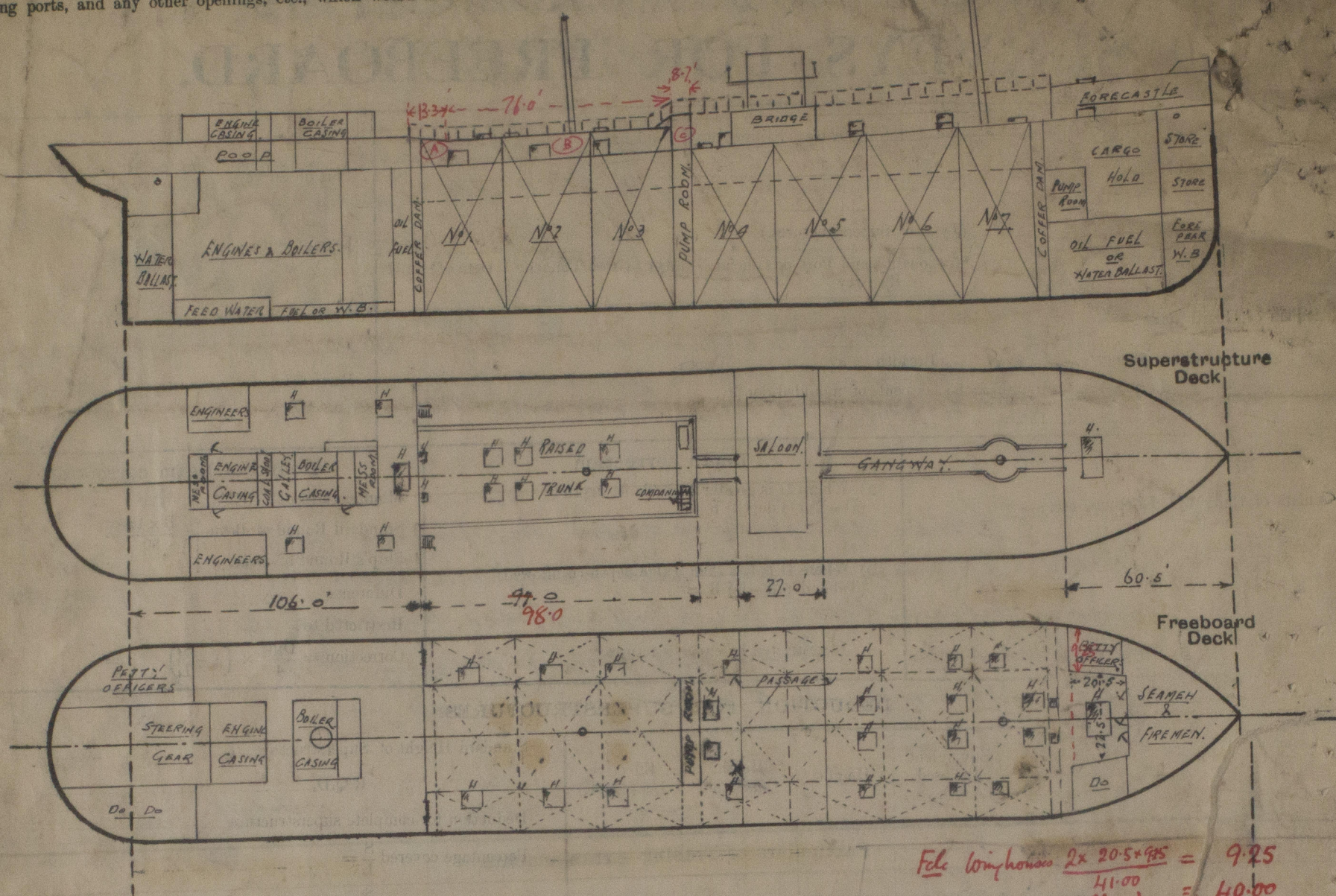
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead ...	Two bolted plates, bolts spaced 6" apart, and passing thro' poop front plate
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ...	One steel hinged door, and one steel hinged scull door, opening both sides.
Bridge Forward Bulkhead ...	strong steel hinged door, opening both sides.
Forecabin Bulkhead ...	wood doors opening both sides, giving access to forecabin petty officers.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Superstructure Decks ...	Steel hinged doors opening both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	✓
Deckhouses on Flush Deck Ships ...	✓

W 518 - 0128 (212)

Burlington.

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:—



$$\text{Febr. Winch house } 2 \times 20.5 \times 98.5 = 9.25$$

$$\frac{41.00}{\text{Closed}} = 40.00$$

$$\text{Length to equivalent } \text{Hd.} = 49.25 = 15.01 \text{ m}$$

$$\text{Total length } \frac{60.50}{\text{Overhang}} = 11.25 = 3.43 \text{ m}$$

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

2 Dks, (stl) and web frames, Longitudinal framing.

Builder's name and yard number North of Ireland Shipbuilding Co. Ltd. Londonderry.
 Names of sister ships ✓
 Owners Re Auxiliare de Navigation.
 Fee £ ✓ : : Received by me ✓