

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 32314
(For London Office only.)

12 OCT 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having a Forecastle, Bridge and Poop deck
and accommodation for more than 12 passengers.
(Type of Superstructures.)

Port of Survey Amsterdam

Date of Survey 11 October 1932

Name of Surveyor H. P. Jonker

Particulars of Classification 100 A1

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>M. V. POELAV. LAUT</u>	<u>Dutch</u> <u>AMSTERDAM</u>	<u>27.11.40</u>	<u>9272</u>	<u>1929</u> <u>1 mo</u>
Moulded Dimensions: Length <u>149.35</u>	Breadth <u>61.0</u>	Depth <u>11.227</u>		
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>19522</u> <u>16 3/4</u> tons				
Coefficient of fineness for use with Tables <u>.439</u>				

<p>Depth for Freeboard (D) <u>11.227</u></p> <p>Moulded depth <u>11.227</u></p> <p>Stringer plate ... <u>12</u></p> <p>Sheathing on exposed deck <u>✓</u></p> <p>$T \left(\frac{L-S}{L} \right) = 40 \times .4362 = 31$</p> <p>Depth for Freeboard (D) = <u>11.270</u></p>	<p>Depth correction</p> <p>(a) Where D is greater than Table depth (D - Table depth) R = <u>8.33</u> <u>(11.27 - 9.95) / 30 = 328</u></p> <p>(b) Where D is less than Table depth (if allowed) (Table depth - D) R =</p> <p>If restricted by superstructures</p>	<p>Round of Beam correction</p> <p>Moulded Breadth (B) <u>61.0</u> <u>18.59</u></p> <p>Standard Round of Beam = $\frac{B \times 12}{50} = 372$</p> <p>Ship's Round of Beam = <u>15</u> <u>381</u></p> <p>Difference <u>9</u></p> <p>Restricted to</p> <p>Correction = $\frac{\text{Diff}}{4} \times \left(1 + \frac{S_1}{L} \right) = \frac{9}{4} \times .4508 = 1$</p>
--	--	--

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)	
Poop enclosed EQUIV...	<u>12.38</u>	<u>12.38</u>	<u>2499</u>	<u>✓</u>	<u>12.38</u>	
„ overhang ...	<u>3.74</u>	<u>3.74</u>	<u>✓</u>	<u>✓</u>	<u>3.74</u>	
R.Q.D. enclosed						
„ overhang						
Bridge enclosed...	<u>52.02</u>	<u>52.02</u>	<u>2588</u>	<u>✓</u>	<u>52.02</u>	
„ overhang aft	<u>61</u>	<u>61</u>	<u>✓</u>	<u>✓</u>	<u>61</u>	
„ overhang forward	<u>40</u>	<u>40</u>	<u>2499</u>	<u>✓</u>	<u>40</u>	
F'cle enclosed EQUIV...	<u>15.04</u>	<u>15.04</u>	<u>2499</u>	<u>✓</u>	<u>15.04</u>	
„ overhang ...	<u>2.34</u>	<u>1.17</u>	<u>✓</u>	<u>✓</u>	<u>1.17</u>	
Trunk aft						
„ forward						
Tonnage opening aft						
„ „ forward						
Total	<u>84.17</u>	<u>82.02</u>			<u>82.02</u>	

Standard Height of Superstructure 2290

„ „ R.Q.D. ✓

Deduction for complete superstructure 1067

Percentage covered $\frac{S}{L} = 56.35$

„ $\frac{S_i}{L} = 54.91$

„ $\frac{E}{L} = 54.91$

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

Percentage from Table, Line B.
(corrected for absence of forecastle (if required)) 40.91

Interpolation for bridge less than 2L (if required)

Deduction = .4091 1067 = 436

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual sheer aft = <u>excl.</u>
A.P. ...	<u>1498</u>	<u>1</u>	<u>✓</u>	<u>1498</u>	<u>1543</u>	<u>1543</u>	<u>1</u>	<u>✓</u>	<u>1543</u>	
1/4 L from A.P. ...	<u>666</u>	<u>4</u>	<u>✓</u>	<u>2664</u>	<u>724</u>	<u>724</u>	<u>4</u>	<u>✓</u>	<u>2908</u>	Mean actual sheer forward = <u>excl.</u>
3/4 L „ ...	<u>166</u>	<u>2</u>	<u>✓</u>	<u>332</u>	<u>164</u>	<u>164</u>	<u>2</u>	<u>✓</u>	<u>328</u>	Mean standard sheer forward
Amidships ...	<u>-</u>	<u>4</u>	<u>✓</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4</u>	<u>✓</u>	<u>-</u>	Length of enclosed superstructure forward of amidships = <u>.10</u>
3/4 L from F.P. ...	<u>333</u>	<u>2</u>	<u>✓</u>	<u>666</u>	<u>546</u>	<u>546</u>	<u>2</u>	<u>✓</u>	<u>1092</u>	„ „ aft of „ = <u>.10</u>
1/4 L „ ...	<u>1331</u>	<u>4</u>	<u>✓</u>	<u>5324</u>	<u>1714</u>	<u>1714</u>	<u>4</u>	<u>✓</u>	<u>6856</u>	
F.P. ...	<u>2996</u>	<u>1</u>	<u>✓</u>	<u>2996</u>	<u>3448</u>	<u>3448</u>	<u>1</u>	<u>✓</u>	<u>3448</u>	
Total				<u>13480</u>					<u>16145</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{2695}{18} \left(.75 - \frac{.2017}{2} \right) = 1.70$

If limited on account of midship superstructure. ✓

If limited to maximum allowance of 1 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 = <u>11.302</u></p> <p>Summer freeboard = <u>2.490</u></p> <p>Moulded draught (d) = <u>8.812</u></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = <u>18 c. M.</u></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 $\Delta = 18280 \text{ M}^3$</p> <p>Tons per inch immersion at summer load water line $T = 23.6$</p> <p>Deduction = $\frac{\Delta}{40T}$ inches = <u>19 c. M.</u></p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient $\frac{.739 + .68}{1.36} = \frac{1.419}{1.36}$</p> <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td><u>328</u></td> <td></td> </tr> <tr> <td>Deduction for superstructures</td> <td></td> <td><u>436</u></td> </tr> <tr> <td>Sheer correction</td> <td></td> <td><u>10</u></td> </tr> <tr> <td>Round of Beam correction</td> <td></td> <td><u>1</u></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td><u>32</u></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>360</u></td> <td><u>509</u></td> </tr> <tr> <td>Summer Freeboard =</td> <td><u>2487</u></td> <td></td> </tr> </table>		+	-	Depth Correction	<u>328</u>		Deduction for superstructures		<u>436</u>	Sheer correction		<u>10</u>	Round of Beam correction		<u>1</u>	Correction for Thickness of Deck amidships	<u>32</u>		Other corrections, scantlings, etc.				<u>360</u>	<u>509</u>	Summer Freeboard =	<u>2487</u>	
	+	-																											
Depth Correction	<u>328</u>																												
Deduction for superstructures		<u>436</u>																											
Sheer correction		<u>10</u>																											
Round of Beam correction		<u>1</u>																											
Correction for Thickness of Deck amidships	<u>32</u>																												
Other corrections, scantlings, etc.																													
	<u>360</u>	<u>509</u>																											
Summer Freeboard =	<u>2487</u>																												

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Deck:— 249 c. M.

Tropical Fresh Water Line above Centre of Disc	... <u>34 c. M.</u>
Fresh Water Line	... <u>19 „</u>
Tropical Line	... <u>18 „</u>
Winter Line	below ... <u>18 „</u>
„	„

Tropical Fresh Water Freeboard	... <u>212</u>
Fresh Water	... <u>230</u>
Tropical	... <u>231</u>
Winter	... <u>264</u>
„	„

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
* FORWARD WELL * DECK * AFTER WELL *											
Description of Hatchway	N ^o 1	N ^o 2	N ^o 3	N ^o 4	N ^o 5	N ^o 6		ON UPPER DECK W.T. BOLLARD	ON BRIDGE DECK W.T. BOLLARD	ON FIRE-CAUSE DECK	
Dimensions of Hatchway	24-0 x 20-0	32-0 x 20-0	34-8 x 20-0	13-4 x 20-0	29-4 x 20-0	24-0 x 20-0		45 x 22	42 x 20	41 x 24	
COAMINGS	Height above Deck	.30	.30	.30	.30	.30		15	15	30	
	Thickness Sides	.44	.44	.44	.44	.44		1 1/4	1 1/4	.44	
	Thickness Ends	.44	.44	.44	.44	.44		1 1/4	1 1/4	.44	
	Stiffeners	44	44	44	44	44		10 x 3 1/2 x .50	10 x 3 1/2 x .50	44	
	Brackets, Stays	7 x 3 x .40	7 x 3 x .40	7 x 3 x .40	7 x 3 x .40	7 x 3 x .40					
HATCH BEAMS	Number	4	5	6	2	5					
	Spacing	5-5	5-4	5-5 1/2 x 10	5-2 1/2 x 10	5-5 1/2 x 10					
	Scantling and Sketch	4 x 3 x .44	same	same	same	same					
	Top angles	4 x 3 x .44	same	same	same	same					
	Bottom angle	18 x .36	same	same	same	same					
	Bearing Surface	4 x 3 x .44	3	3	3	3					
FORE AND AFTERS	Number			steel trunk from upper deck to bridge deck							
	Spacing										
	Unsupported Lengths										
	Scantling* and Sketch										
	Bearing Surface										
HATCH COVERS	Material	pine	same	same	same	same		W.T. STEEL COVER .40	W.T. STEEL COVER .40	pine	
	Thickness	2 3/4	same	same	same	same				2 3/4	
	How fitted	longit.	same	same	same	same				longit.	
	Bearing Surface	3	same	same	same	same				3	
Spacing of Cleats	24	same	same	same	same	same				24	
Number of Tarpaulins	two	same	same	same	same	same				two	

Particulars of fiddle, funnel and ventilator coamings: — Tidobley hatches on casing top steel coamings, provided with steel covers, permanently attached in their proper position. Engine room skylight of steel strongly constructed. Tidobley and funnel ventilators in efficient condition.

Particulars of Flush Bulkhead Scuttles: — Companion ways. On Poop deck to poop space, steel companion way lead clear 60 x 26 x 1 3/8 thick, silt 9" above wood deck. On Bridge deck to bridge space, steel companion way lead clear 60 x 24 x 1 3/8 thick, silt 9 1/2" above wood deck. Wood doors in Companion ways are capable of being closed and operated from both sides.

Particulars of Companion ways: — Ventilators on Superstructure decks. On poop deck 8 mushroom ventilators to poop space 9 x 6" diam, one vent. 20 x 12" diam x .40 to steering room. 4 vent. 20 x 10" diam x .44 and 9 goose neck ventilators 23 x 6" diam to holds and tween decks. On Bridge deck goose neck ventilators 24 to 23 x 6" diam, and 11 vent. 33 x 18" diam x .44 to holds & tween decks. 4 ventilators 34 x 30" diam x .44 and one ventilator 36 x 55" diam x .44 to motor room. On Fore castle deck: 3 vent 33 x 12" diam x .40 to store room and fore castle space and 4 vent. 32 x 18" diam x .44 and goose neck ventilators 22 x 6" diam, to holds and tween decks, all measured above wood deck.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks: — In Forward well 20 vent. 34 x 18" diam x .44 and 15 goose neck ventilators 23 x 6" diam to holds and tween decks. In Afterwell 12 vent. 34 x 18" diam x .44 and 4 vent. 34 x 15" diam x .44, and 6 vent. on top of S.B. P.S. deck house, 30 x 18" diam x .40, and 10 goose neck vent. 23 x 6" diam to holds, tween decks and deck tank, one vent. to power room 35 x 6 1/2" diam x .40. All ventilators are measured above wood deck. All ventilators are provided with wooden latches and canvas covers for closing the openings. All goose neck ventilators and airpipes are provided with canvas covers for closing the openings.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks: — On Fore castle deck airpipes to fore peak tank and double bottom tanks 23 x 23" diam. On Bridge deck airpipes to double bottom tanks 24 x 3" diam. On Poop deck airpipes to after peak tank and double bottom tanks 24 x 3" diam. In Afterwell airpipes to double bottom 24 x 3" diam. In Forward well airpipes to double bottom tank 24 x 3" diam. Filling pipes to tank 36 x 6" diam, openings closed with steel screwed plugs. All airpipes are provided with canvas covers for closing the openings.

Particulars of Gangway Cargo and Coaling Ports: —

Particulars of Scuppers and Sanitary Discharge Pipes: — Tree Board discharges through ship side below load waterline. 4" scupper pipes provided with storm valve's. W.C. and wash places, officers and crew, discharged through ship side below freeboard deck, all sanitary pipes are provided with storm valve's.

Particulars of Side Scuttles: — All side scuttles to spaces below superstructure decks are fitted with efficient inside portable deadlights stored adjacent to the side scuttles. All side scuttles to spaces below freeboard deck (in upper tween deck) are fitted with efficient deadlights permanently attached in their proper position, so that they can be effectively closed and secured watertight.

Particulars of Guard Rails: —

Open rail on superstructure deck. Transoms spaced ± 4'-0" apart.

Particulars of Gangways, Lifelines, etc.: —

The crew are berthed in poop space. no gang way or lifelines are provided for the protection of the crew in the forward or afterwell.

Lifelines available

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	35.76" 120-0"	3'-9"	7.5 x 2,- 4,- x 2,-	2 1	3.53 M ² 30 ft ²	2.18 M ² 24 ft ²
Forward Well	29.42 99-2	3'-9"	7.5 x 2,-	3	4.18 M ² 45 ft ²	1.79 M ² 19 ft ²

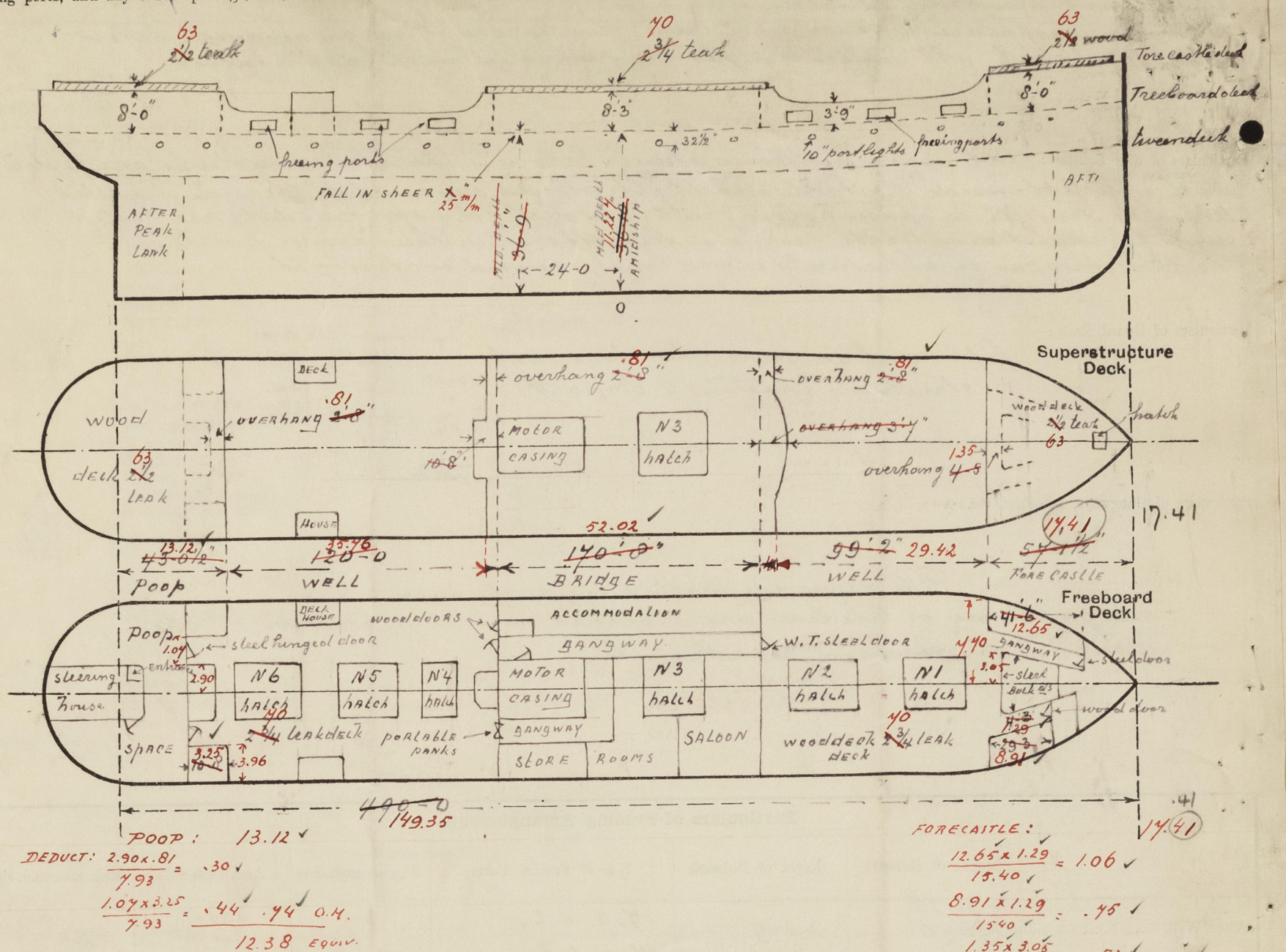
State position of each freeing port ... After Well: — height above deck edge 11"
(F. and A. position and height above deck edge) Forward Well: — height above deck edge 11"
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — Bars fitted spaced 8" apart.
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	10 x .44	.40	4 x 3 x .40	2'-6"	top and bottom angle lugs	6'-0" x 2'-0"	8"	8'-0"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	6 x 3 x .40	.24	4 x 2 1/2 x .30	2'-4"	PS none SB	6'-0" x 3'-0" 5'-9" x 3'-6"	10" 13"	8'-3"
Bridge, Forward Bulkhead	10 x .44	.40	4 x 3 1/2 x .56	2'-6"	top & bottom angle lugs	5'-0" x 2'-3"	15 1/2"	8'-3"
Forecastle Bulkhead	10 x 3 1/2 x .44	.24	2 1/2 x 2 1/2 x .32	2'-6"	none	4'-3" x 0'-0"	none	8'-0"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	10 x .34	.30	4 x 2 1/2 x .30	2'-8"	continuous	no openings		8'-3"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	10 x 3 1/2 x .44	.30	4 x 2 1/2 x .30	2'-8"	continuous	6'-3" x 2'-4"	10"	8'-3"
Deckhouses on Flush Deck Ships								

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

Poop Bulkhead	Steel hinged doors closed and operated from both sides
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	Port side: wood door 30" leak closed and operated from both sides. Starboard: portable planks 2 1/2" pine fitted for the full height in channel bars welded to the bulk heads.
Bridge, Forward Bulkhead	W.T. steel hinged door capable of being manipulated from one side.
Forecastle Bulkhead	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	No closing appliances are fitted to the access openings of the gang way.
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	no openings.
Deckhouses on Flush Deck Ships	Steel hinged doors closed and operated from both sides.

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:—

The vessel has been examined afloat.
 and submitted for partly N°1

~~Hld. displacement at 85% of the mld draught (36-9) = 19522 H³~~
 Hld. displacement at 85% of the mld draught (36-10) = 19578 H³
 Displacement extreme at 29-0 draught = 60.5 tons per inch
 " " " " " " 20-0 " = 60.2 " " "
 " " " " " " 27-0 " = 59.0 " " "

Builder's name and yard number Nederlandsche Scheepsbouw My., Yard No. 189

Names of sister ships "POBLAU ROEBIAH"

Owners Stoomvaart My. "Nederland"

Fee 203 : — Received by me

exp. 3 —



© 2020
 Lloyd's Register
 Foundation