

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **41895**
(For London Office only.)

No. 12702

25 NOV 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

 having *a Fore castle, Bridge and poop deck*
Passenger Steamer.
 (Type of Superstructures.)
Port of Survey *Amsterdam*Date of Survey *23 November 1932*Name of Surveyor *H. P. Jonker*Particulars of Classification *+100 A1**S.S. Amos No. 2-28 Shelter AK w/ freeboard*
Fitted for oil fuel 8.20 etc

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<i>S.S. "JOHAN DE WIT"</i> <i>NEPTUNIA</i>	<i>Dutch</i> <i>AMSTERDAM</i>		<i>10355</i>	<i>1920</i> <i>2 mo</i>
Moulded Dimensions: Length <i>146.91</i> Breadth <i>17.90</i> Depth <i>11.582 m</i>				
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>19850</i> <i>16³</i> tons				
Coefficient of fineness for use with Tables <i>.763</i>				

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <i>11.582</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>8.33 (11.614 - 9.794) 30.00 = +455</i>	Moulded Breadth (B) <i>17.90</i>
Stringer plate <i>.013</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>✓</i>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{359.6 - 360}{50} = -0.2$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = .067 \times .283 = .019$	If restricted by superstructures <i>✓</i>	Ship's Round of Beam = <i>254</i>
Depth for Freeboard (D) = <i>11.614</i>		Difference = <i>106</i>
		Restricted to <i>✓</i>
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{106^2}{4} \times .3128 = +8$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	<i>13.08</i>	<i>13.08</i>	<i>2.362</i>	<i>✓</i>	<i>13.08</i>	Standard Height of Superstructure <i>2.286</i>
" overhang ...	<i>see sketch</i>		<i>+ Wood</i>			" " R.Q.D. <i>✓</i>
R.Q.D. enclosed ...						Deduction for complete superstructure <i>1067</i>
" overhang ...	<i>68.81</i>	<i>68.81</i>	<i>2.591</i>	<i>✓</i>	<i>68.81</i>	Percentage covered $\frac{S}{L} = 71.70\%$
Bridge enclosed ...	<i>68.81</i>	<i>68.81</i>	<i>2.591</i>	<i>✓</i>	<i>68.81</i>	" " $\frac{S_1}{L} = 68.72\%$
" overhang aft ...	<i>see sketch</i>		<i>+ Wood</i>			" " $\frac{E}{L} = 68.72\%$
" overhang forward ...						Percentage from Table, Line A.
F'cle enclosed ...	<i>23.47</i>	<i>19.05</i>	<i>2.362</i>	<i>✓</i>	<i>19.05</i>	(corrected for absence of forecastle (if required))
" overhang ...			<i>+ Wood</i>			Percentage from Table, Line B.
Trunk aft ...						(corrected for absence of forecastle (if required))
" forward ...						Interpolation for bridge less than .2L (if required)
Tonnage opening aft ...						Deduction = <i>1067</i> \times <i>.6082</i> = <i>-649</i>
" " forward ...						
Total ...	<i>105.31</i>	<i>100.94</i>			<i>100.94</i>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<i>1478</i>	<i>1</i>	<i>✓</i>	<i>1478</i>	<i>1410</i>	<i>1011</i>	<i>1</i>	<i>✓</i>	<i>1011</i>	Mean actual sheer aft = <i>.6356</i>
$\frac{1}{2}$ L from A.P. ...	<i>657</i>	<i>4</i>	<i>✓</i>	<i>2628</i>	<i>416</i>	<i>438</i>	<i>4</i>	<i>✓</i>	<i>1752</i>	Mean actual sheer forward = <i>Excess</i>
$\frac{3}{8}$ L " ...	<i>164</i>	<i>2</i>	<i>✓</i>	<i>328</i>	<i>57</i>	<i>60</i>	<i>2</i>	<i>✓</i>	<i>120</i>	Mean standard sheer forward
Amidships ...	<i>✓</i>	<i>4</i>	<i>✓</i>	<i>✓</i>	<i>30</i>	<i>✓</i>	<i>4</i>	<i>✓</i>	<i>✓</i>	Length of enclosed superstructure forward of amidships =
$\frac{3}{8}$ L from F.P. ...	<i>328</i>	<i>2</i>	<i>✓</i>	<i>656</i>	<i>438</i>	<i>498</i>	<i>2</i>	<i>✓</i>	<i>840</i>	" " aft of " =
$\frac{1}{2}$ L " ...	<i>1313</i>	<i>4</i>	<i>✓</i>	<i>5252</i>	<i>1542</i>	<i>1562</i>	<i>4</i>	<i>✓</i>	<i>5792</i>	
F.P. ...	<i>2956</i>	<i>1</i>	<i>✓</i>	<i>2956</i>	<i>3500</i>	<i>3496</i>	<i>1</i>	<i>✓</i>	<i>3249</i>	
Total ...				<i>13298</i>					<i>12764</i>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{534}{18} \left(.75 - \frac{3585}{2 \times 1478} \right) = +12$

If limited on account of midship superstructure. *✓*

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

 Depth to Freeboard Deck = *11.595*
 Summer freeboard = *2.220*
 Moulded draught (d) = *8.775*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches =

Addition for Winter North Atlantic Freeboard (if required =

Deduction for Fresh Water.

 Displacement in salt water at summer load water line
 $\Delta = 17920$ tonnes
 Tons per inch immersion at summer load water line
 $T = 23.52$ tonnes/inch
 Deduction = $\frac{\Delta}{40T}$ inches = *19*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 Depth Correction ... *455*
 Deduction for superstructures ... *649*
 Sheer correction ... *12*
 Round of Beam correction ... *8*
 Correction for Thickness of Deck amidships ... *19*
 Other corrections, scantlings, etc. *400*
 Summer Freeboard = *2820*

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

Tropical Fresh Water Line above Centre of Disc ...	<i>19</i>	Tropical Fresh Water Freeboard ...	<i>263</i>
Fresh Water Line " " ...	<i>19</i>	Fresh Water " " ...	<i>263</i>
Tropical Line " " ...	<i>19</i>	Tropical " " ...	<i>282</i>
Winter Line below " " ...	<i>19</i>	Winter " " ...	<i>282</i>
Winter North Atlantic Line " " ...	<i>19</i>	Winter North Atlantic " " ...	<i>282</i>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
ON FREEBOARD DECK										
Description of Hatchway	N1	N2	N3	N4	N4A	N5	N1	N2	N4	N4A
Dimensions of Hatchway	5-9-8-0	15-9-12-0	22-6-16-8	13-6-14-0	20-3-14-0	13-6-14-0	5-9-8-0	15-9-12-0	13-6-14-0	20-3-14-0
COAMINGS	Height above Deck	18	32	18	18	32	18	32	18	18
	Thickness Sides	.44	.44	.44	.44	.44	.44	.44	.44	.44
	Stiffeners	.44	.44	.44	.44	.44	.44	.44	.44	.44
	Brackets, Stays	none	none	none	none	none	none	none	none	none
HATCH BEAMS	Number	1	4	1	1	2	1	2	1	3
	Spacing	4-10 1/2	4-6	6-9	6-9	4-6	4-10 1/2	4-6	5-0 3/4	5-0 3/4
	Scantling and Sketch	3 x 3 x 40	3 1/2 x 3 x 42	3 x 3 x 42	3 x 3 x 42	3 x 3 x 40	3 x 3 x 40	3 x 3 x 40	3 x 3 x 40	3 x 3 x 40
	Bearing Surface	3	3	3	3	3	3	3	3	3
FORE AND AFTERS	Number	1	3	3	3	1	3	3	3	3
	Spacing	4-0	3-0	3-6	3-6	4-0	3-0	3-0	3-0	3-0
	Unsupported Lengths	5-9	4-10 1/2	6-9	6-9	5-9	4-10 1/2	4-10 1/2	4-10 1/2	4-10 1/2
	Scantling and Sketch	6 x 6 1/2	7 1/4 x 4	6 1/2 x 4	6 1/2 x 4	6 x 6 1/2	6 x 6 1/2	6 x 6 1/2	6 x 6 1/2	6 x 6 1/2
HATCH COVERS	Material	pine	pine	pine	pine	pine	pine	pine	pine	pine
	Thickness	3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4
	How fitted	athwartship	athwartship	athwartship	athwartship	athwartship	athwartship	athwartship	athwartship	athwartship
	Bearing Surface	3	3	3	3	3	3	3	3	3
Spacing of Cleats	24	24	24	24	24	24	24	24	24	24
Number of Tarpaulins	two	two	two	two	two	two	two	two	two	two

Particulars of fiddle, funnel and ventilator coamings: — Fiddle hatches on casing top angle coamings provided with portable shut covers. Engine room skylights of steel strongly constructed. Fiddle and funnel ventilators in efficient condition.

Particulars of Flush Bulker Scuttles: — Hatchways on fore castle deck. One hatchway 30" x 26" coaming 16 x 32 and one hatchway 40" x 42 coaming 20 x 36. Hatchways 2 1/2 pine bearing surface 2 1/2" battens, cleats, wedges, tarpaulins etc all fitted as required. On freeboard deck in gangway fore castle space one hatch 40" x 42" angle coaming 3 1/2 x 3 x 36 wood cover 1 1/2 pine, no battening down arrangement fitted.

Particulars of Companionways: — On freeboard deck in deckhouses in fore castle space, wood doors 25 x 63 x 1 1/2 teak in fore castle front bulkhead wood door 25 x 63 x 1 1/2 teak sills 10" doors closed and operated from both sides. Steel companion way in forward well, steel doors 27 x 34 sills 10" doors closed and operated from both sides. On Poop deck to Poop space, steel companion way wood door 24 x 62 x 1 1/2 teak. On Poop and Bridge deck to Bridge space and deckhouse, steel deck houses, doors 20 x 75 to 49 x 75 x 1 1/2 teak sills 5" doors closed and operated from both sides.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks: — On fore castle deck vent: 34 x 10" diam x 16" diam x 12" diam and 9" diam x 40, goose neck vent: 25 x 6" diam to hold and tween decks. On Bridge and Poop deck vent 24 x 24 diam, 16 diam x 12 diam x 40, goose neck vent 21 x 6 diam to hold and tween decks. On freeboard deck in forward and afterwell vent 33 x 24 diam, 20" diam x 12" diam x 40, goose neck vent 36 x 6" diam. Ventilators are provided with wooden hatches and canvas covers for closing the openings. Goose neck vents 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 air pipes to tanks 25 x 3" diam and 27 x 3 1/2" diam. On Poop and Bridge deck air pipes to tanks 22 x 3" diam and 19 x 3" diam. On freeboard deck in forward and afterwell air pipes to tanks 36 x 3" diam. All air pipes are provided with canvas covers for closing the openings.

Particulars of Gangway Cargo and Coaling Ports: — On S.B. PS on each side between tween deck and freeboard deck five W.T. ringed coaling ports 3-3 x 3-0 sills 11 1/2" above tween deck edge strongly constructed. On S.B. PS on each side between freeboard and bridge deck one W.T. gangway door 6-0 x 6-4 1/2 and one on PS 3-5 1/2 x 6-7 3/4 sills 12 1/2" above freeboard deck edge strongly constructed.

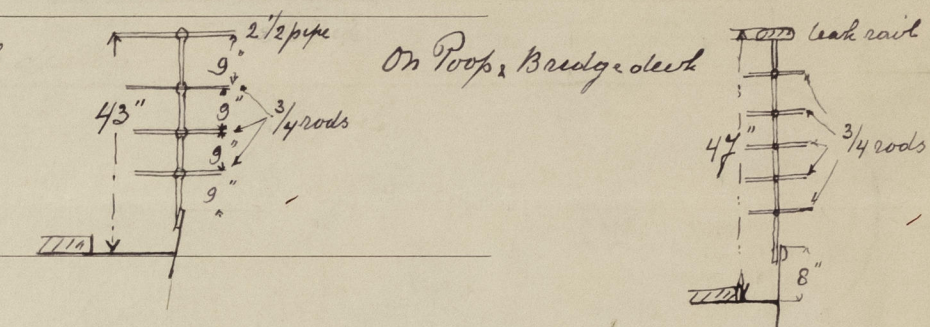
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Particulars of Scuppers and Sanitary Discharge Pipes: — Forward and afterwell discharged through ship side below freeboard deck by 3 1/2" scupper pipes. All sanitary discharge pipes, discharged through ship side below freeboard deck and are provided with storm valves, or valves handled from freeboard deck all as required.

Particulars of Side Scuttles: — Side scuttles to spaces below superstructure decks and freeboard deck are fitted with portable dead light, stowed adjacent to the side scuttles. Side scuttles to spaces below the upper tween deck are fitted with dead light permanently attached in their proper position.

Particulars of Guard Rails: — Open rail on fore castle deck.



Particulars of Gangways, Lifelines, etc.:

Lifelines fitted in forward well.

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 ... on P.S.	9-6	48	3, - x 1, 45	4	21 ft ²	19 ft ²
... on S.B.	13-8	48	3, x 1, 45	1	5 1/4 ft ²	7 1/2 ft ²
Forward Well ...	45-0	48	3, - x 1, 45	2	10 1/2 ft ²	11 ft ²

State position of each freeing port ... After Well: — height above deck edge 15" (F. and A. position and height above deck edge) Forward Well: — height above deck edge 15" State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — Bars fitted spaced 6" 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 ...	12 x 45	.35	6 x 3 x 40	30" to 43"	angle lugs top & bottom	24 x 68	12"	4-9
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	12 x 45	.35	4 x 3 x 44	27 to 39	angle lugs top & bottom	37 x 75	12"	8-6
Bridge, Forward Bulkhead ...	12 x 55	.45	5 x 3 1/2 x 56	30"				8-6
Forecastle Bulkhead ...	12 x 38	.35	4 x 2 1/2 x 30	30		4-3 x 7-9		4-9
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks ...	12 x 35	.26	4 x 2 1/2 x 36	27	continuous			8-0
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...								
Deckhouses on Freeboard Deck Ships ...	12 x 45	.35	4 x 3 x 44	27 to 39		37 x 75	12"	8-6 to 7-9

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

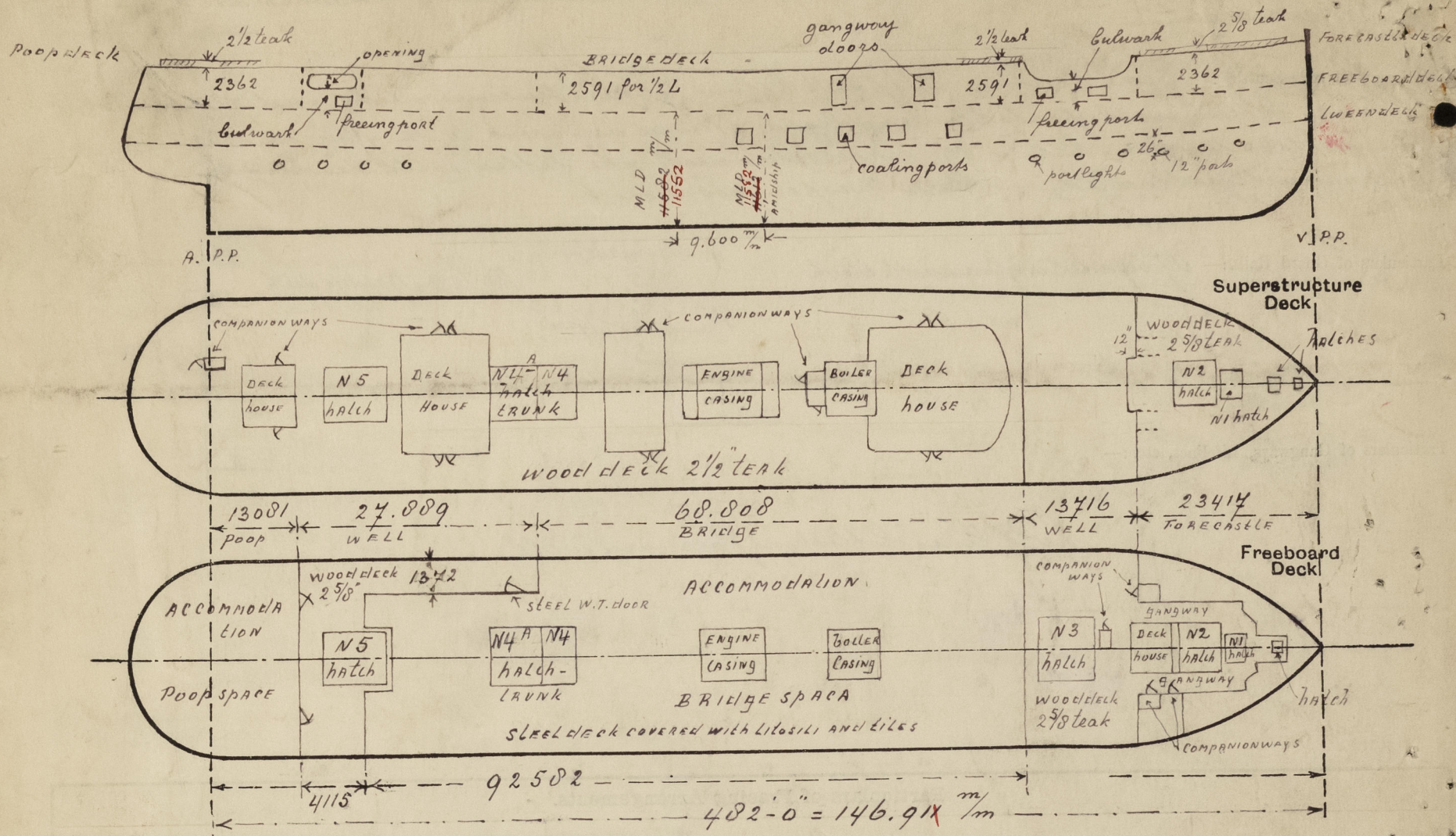
Poop Bulkhead ...	wood doors 1 1/2" teak closed and operated from both sides
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	W.T. steel door closed and operated from both sides
Bridge, Forward Bulkhead ...	no openings
Forecastle Bulkhead ...	gangway opening not protected
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks ...	no openings
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	
Deckhouses on Freeboard Deck Ships ...	W.T. steel door closed and operated from both sides

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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 in dry dock and submitted for Special Survey No. 3. Scale of displacement sent herewith

Depth to top of upper deck at side 11.595 metres
 8.78
 Height of bottom of lowest sidelight } = 29'-4"
 above top of keel } = 2.82 metres
 Maximum permissible moulded }
 draught corresponding to position } = 28'-10"
 of lowest sidelight }

Builder's name and yard number *Nederlandsche Scheepsbouw Mf. Amsterdam Yard No 150*

Names of sister ships

Owners *N.V. Stoomvaart Maatschappij "Nederland"*

Fee *£ 200/-*

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