

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

Index. No.

No. 12431  
22235

(For London Office only.)

No. 444

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having A Fore castle, Bridge and Raised quarterdeckPort of Survey Amsterdam

(Type of Superstructures.)

Date of Survey 5 October 1932

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

S.S. VLIE STROOMDULCH  
AMSTERDAM.65519123 moName of Surveyor H. P. JonkerMoulded Dimensions: Length 143.5 Breadth 28.0 Depth 13.5  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1143 tons  
Coefficient of fineness for use with Tables .424 1138 M<sup>3</sup>Particulars of Classification 100 A1S.S. Ann. No. 3-9.24S.S. Ann. No. 2-32

## Depth for Freeboard (D)

Moulded depth ... 13.5Stringer plate ... 4.089

Sheathing on exposed deck

 $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 4.098

## Depth correction

(a) Where D is greater than Table depth  
(D - Table depth) R =8.33 / 4.098 - 3.514 / 13.323 = 64(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) 28.0 8.53Standard Round of Beam =  $\frac{B \times 12}{50} =$  141Ship's Round of Beam = 178Difference excess 7

Restricted to

Correction =  $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{49}{4} \times .2435 = 14$ 

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...	<u>26.94</u>	<u>26.94</u>	<u>12.19</u>		<u>26.94</u>
" overhang ...					
Bridge enclosed ...	<u>4.44</u>	<u>4.44</u>	<u>3.194</u>		<u>4.44</u>
" overhang aft ...					
" overhang forward ...	<u>1.70</u>	<u>.28</u>	<u>2.194</u>		<u>.28</u>
* F'cle enclosed <u>EQUIV.</u> ...	<u>25.92</u>	<u>5.91</u>	<u>4.272</u>		<u>5.91</u>
" overhang ... " ...	<u>1.46</u>	<u>.73</u>			<u>.73</u>
* Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<u>39.34</u>	<u>38.33</u>			<u>38.33</u>

Standard Height of Superstructure 1830" " R.Q.D. 1061Deduction for complete superstructure 593Percentage covered  $\frac{S}{L} =$  44.56" "  $\frac{S_1}{L} =$  42.65" "  $\frac{E}{L} =$  42.65Percentage from Table, Line A.  
(corrected for absence of forecastle (if required)) 66.26Percentage from Table, Line B.  
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = .6626 x 593 = 393

## SHEER CORRECTION.

Actual height R.Q.D. 1219Standard 1061excess 158

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>693</u>	1		<u>693</u>	<u>1041</u>	<u>1199</u>	1		<u>1199</u>
$\frac{1}{2}$ L from A.P. ...	<u>308</u>	4		<u>1232</u>	<u>428</u>	<u>532</u>	4		<u>2128</u>
$\frac{2}{6}$ L " ...	<u>74</u>	2		<u>154</u>	<u>104</u>	<u>133</u>	2		<u>266</u>
Amidships ...	-	4		-	0	-	4		-
$\frac{2}{6}$ L from F.P. ...	<u>154</u>	2		<u>308</u>	<u>168</u>	<u>168</u>	2		<u>336</u>
$\frac{1}{2}$ L " ...	<u>616</u>	4		<u>2464</u>	<u>672</u>	<u>672</u>	4		<u>2688</u>
F.P. ...	<u>1384</u>	1		<u>1384</u>	<u>1473</u>	<u>1473</u>	1		<u>1473</u>
Total ...				<u>6238</u>					<u>8090</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{1852}{18} (.75 - .3728) = 139$ 

If limited on account of midship superstructure.

 $39 \times \frac{195}{200} = 38$ 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 R. Q. R. Deck = N.Summer freeboard = 5314Moulded draught (d) = 1340Moulded draught (d) = 3944

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{48}$  inches = 8 c. m.

Addition for Winter North Atlantic Freeboard (if required) =

5 c. m.

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$  1333 M<sup>3</sup>

Tons per inch immersion at summer load water line

T = 3.84Deduction =  $\frac{\Delta}{40 T}$  inches= 9 c. m.

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

.424 + .68 1.4041.36 1.36Depth Correction ... 64Deduction for superstructures ... 393Sheer correction ... 38Round of Beam correction ... RAISED ONCorrection for RAISED ON Deck amidships ... 1219

Other corrections, scantlings, etc. ...

1283 431 852Summer Freeboard = 1343SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, RAISED QUARTER, Steel, Deck: 134 c. m.Tropical Fresh Water Line above Centre of Disc ... 14 c. m.Fresh Water Line " " ... 9Tropical Line " " ... 8Winter Line below " " ... 8Winter North Atlantic Line " " ... 13Tropical Fresh Water Freeboard ... 114Fresh Water " " ... 125Tropical " " ... 126Winter " " ... 142Winter North Atlantic " " ... 144

120 OCT 1932

18/3/41

RECEIVED 28 DEC 1932

RECEIVED 8 DEC 1932

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# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS IN FORWARD WELL ON FREEBOARD DECK ON RAISED QUARTER DECK									
Description of Hatchway	...	...	N1 hatch	N2 hatch	N3 hatch	BUNKER HATCHES			
Dimensions of Hatchway	...	...	11'-0" x 9'-0"	10'-4" x 14'-0"	20'-2" x 14'-0"	3'-4" x 1'-6"			
COAMINGS	Height above Deck	...	35	35	30	10			
	Thickness	...	36	44	44	36			
	Sides	...	36	44	44	36			
	Stiffeners	...	4 x 3 x .40	4 x 3 x .40	4 x 3 x .40	4 x 3 x .40			
	Brackets, Stays	...	none	none	none	none			
HATCH BEAMS	Number	...	1	1	1				
	Spacing	...	5'-6"	9'-2"	10'-1"				
	Scantling and Sketch	...	3 x 3 x .40	3 x 3 x .40	3 x 3 x .40	none			
	Top angles	...	3 x 3 x .40	3 x 3 x .40	3 x 3 x .40	none			
	Plate	...	12 x .40	33 x .40	26 1/2 x .40	26 1/2			
FORE AND AFTERS	Bottom angles	...	3 x 3 x .40	3 x 3 x .40	3 x 3 x .40				
	Bearing Surface	...	3						
	Number	...	1	3	3				
	Spacing	...	4'-6"	3'-6"	3'-6"				
	Unsupported Lengths	...	5'-6"	9'-2"	9'-2"				
HATCH COVERS	Scantling and Sketch	...	4 x 4 1/2 pine	4 x 4 1/2 pine	8 x 4 1/2 pine	none			
	Center fore & afters	...	none	4 x 6 pine	4 x 6 pine				
	Side fore & afters	...	none	4 x 6 pine	4 x 6 pine				
	Bearing Surface	...	3 1/2"	3 1/2 x 3"	3 1/2 x 3"				
	Material	...	pine	pine	pine	pine			
HATCH COVERS	Thickness	...	2 1/2"	2 1/2"	2 1/2"	2 1/2"			
	How fitted	...	athwartships	athwartships	athwartships				
	Bearing Surface	...	3"	3"	3"	2 1/2"			
Spacing of Cleats	...	...	24	24	24	24			
Number of Tarpaulins	...	...	two	two	two	two			
*Are wood fore and afters steel shod at all bearing surfaces? <i>yes</i> Are battens and wedges efficient and in good condition? <i>yes</i> Are tarpaulins in good condition and in accordance with rule requirements? <i>yes</i> Are lashings provided in accordance with rule requirements? <i>yes</i>									

Particulars of fiddle, funnel and ventilator coamings:— *Fiddle hatch on casing top angle coamings provided with steel covers permanently attached in their proper position.*  
*Funnel and funnel ventilators in efficient condition.*  
*Engine room skylight of steel strongly constructed.*  
*Bunker hatch on casing top angle coaming 3 x 3 x .36 hatch 2 1/2 pine. Bearing surface 2 1/2"*  
*Battens, wedges, cleats, tarpaulins etc all fitted as required.*  
 Particulars of Flush Bunker Scuttles:—

Particulars of Companionways:— *On Raised quarter deck to accommodation crew in aftership.*  
*Wood companion way placed on steel hatch coaming 10 x .32 doors 30 x 32 x 1 1/4 pine*  
*sill 26" doors closed and operated from both sides.*  
*On Bridge deck companion way to accommodation officers in bridge space steel deck house 6-9 high*  
*wood door 23 x 54 x 1 1/2 inch. sill 9" door closed and operated from both sides.*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— *On fore castle deck to fore castle space two ventilators*  
*4 x 6 diam x .26 and two vent 1 1/4 x 6 diam x .26, to hold one ventilator: 10 1/2 x 14 1/2 diam x .36*  
*On forward well on freeboard deck two ventilators 36 x 14 1/2 diam x .36*  
*On Raised quarter deck aft: to hold: two ventilators 36 x 14 1/2 diam x .36, to tunnel recess one vent: 10 x 6 x .24"*  
*to accom. crew two vent: 10 x 6 diam x .24"*  
*On Bridge deck to accom: two mesh room vent: 4 x 6 diam x .24 and one goose neck vent: 11 x 4 diam*  
*All ventilators are provided with wooden hatches and canvas covers*  
 Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—  
*Air pipe to fore peak tank 6 x 2 1/2 diam (on fore castle deck)*  
*Air pipe to double bottom tanks on Raised quarter deck: 4 x 2 1/2 diam*  
*Air pipe to after peak tank " " " " " 9 x 2 1/2 diam*  
*The air pipes have no means for closing the openings canvas covers*

Particulars of Gangway Cargo and Coaling Ports:—

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Particulars of Scuppers and Sanitary Discharge Pipes — *Forward well and Raised quarter deck discharged over deck*  
*Scuppers in Forward well and Raised quarter deck on S.B. P.S.*  
*W.C. crew on freeboard deck in forward well discharged through ship side above freeboard deck without storm valve*  
*W.C. officers in bridge space on freeboard deck discharged through ship side just below freeboard deck one*  
*storm valve fitted.*

Particulars of Side Scuttles: *Side scuttles to spaces below Raised quarter deck and other*  
*superstructure deck are fitted with efficient cleat latches permanently*  
*attached in their proper position so that they can be effectively*  
*closed and secured watertight*

Particulars of Guard Rails:— *Open rail on fore castle deck*  
*Bulwark on Bridge deck 40" height.*

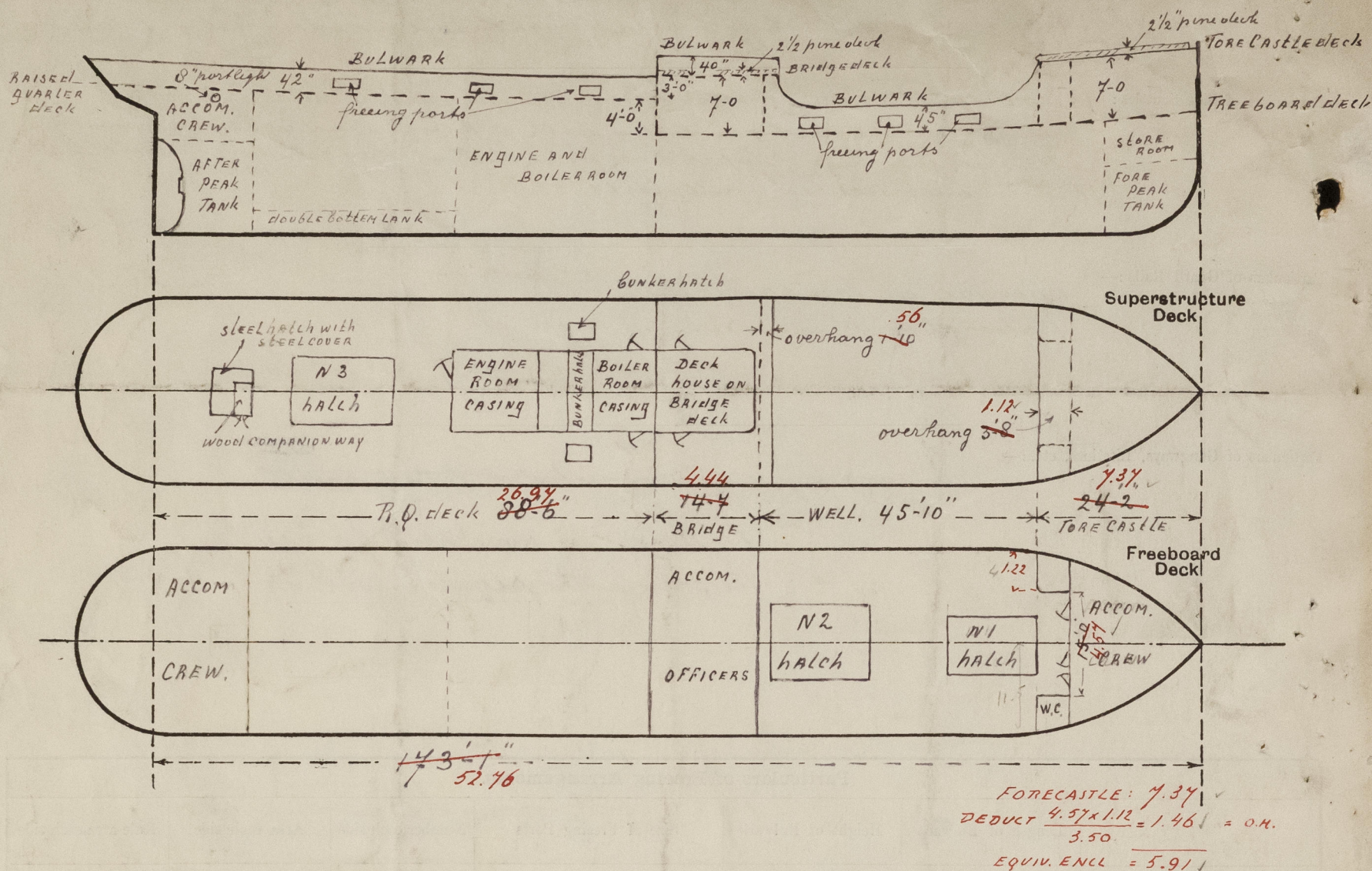
Particulars of Gangways, Lifelines, etc.:— *No gangway or life line fitted on forward well.*  
*Lifelines are available for use by*  
*the crew in the regular working of the ship*

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	08'-6"	42"	2,6 x 1,5	35	4.4 ft <sup>2</sup>	17 3/4 ft <sup>2</sup>
Forward Well	45'-10"	45"	2,6 x 1,5	3	11.4 ft <sup>2</sup>	11 1/2 ft <sup>2</sup>
State position of each freeing port ... After Well:— height above deck edge 9" (F. and A. position and height above deck edge) Forward Well:— height above deck edge 8 1/2" State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— shutters fitted 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	36 x .36	.36	brackets + diaphragms			none		3'-0"
Bridge, After Bulkhead								
Bridge, Forward Bulkhead	39 x .32	.32	6 x 3 x .36	30"	brackets top and bottom	none		4'-0"
Forecastle Bulkhead	36 x .32	.30	2 1/2 x 2 1/2 x .30	6'-0"	none	22 x 54	20"	4'-0"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	26 x .32	.30	2 3/4 x 3 x .36	30"	brackets at top only	21 x 54	19 1/2	6'-9"
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								



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 shewn on the following sketches:—



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

*Recommended*

Airpipe to fore peak tank on fore castle deck to be 18" high  
 Air pipes to afterpeak tank and double bottom tank on R. Q. deck to be made 30" high  
 Ventilator coverings on Superstructure deck to be made 30" high  
 Efficient means to be provided for closing the openings of all air pipes and gooseneck ventilators  
 Gangway, life lines or other satisfactory means to be provided for the protection of the crew in the forward well  
 Freeing ports on each side of the ship to be increased to 18 square feet on R. Q. deck.

$$\begin{array}{r} 11.41 \\ \times 1.08 \\ \hline 11.49 \end{array} \quad \begin{array}{r} 1154 \\ \times 6 \\ \hline 1148 \end{array}$$

*but for Corp  
 Mr. v. Dril*

Builder's name and yard number Van Vliet & Co., Yard Number 94.

Names of sister ships -

Owners N.V. Hollandsche Stoomboot Maatschappij.

Fee 81 : — : —

Received by me

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