

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

23 JAN 1935

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *a combined Fore castle, Trunk and Poop deck*Port of Survey *Amsterdam*

(Type of Superstructures.)

Date of Survey *whilst building*

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<i>TWIN. S.S. "ROSA"</i>	<i>Dutch</i> <i>WILLEMSTAD</i> <i>(CURACAO)</i>	<i>✓</i>	<i>3145.26</i>	<i>1935</i>
Moulded Dimensions: Length <i>102.106</i> Breadth <i>17.070</i> Depth <i>4.500</i> ^{m/m}				
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>5585</i> ⁵⁵⁴⁰ <i>16</i> ³ tons				
Coefficient of fineness for use with Tables <i>.831</i> ^{.836}				

Name of Surveyor *H. P. Jonker*Particulars of Classification *+100A1*

Depth for Freeboard (D) ^{m/m}	Depth correction	Round of Beam correction
Moulded depth ... <i>4500</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>✓</i>	Moulded Breadth (B) <i>17.070</i> ^{m/m}
Stringer plate ... <i>11 1/2</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>8.33(6.807 - 4.519) × 25.78 = -491</i> ^{3.288}	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{341}{50} = 6.82$ ^{m/m}
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <i>✓</i>	If restricted by superstructures	Ship's Round of Beam = <i>.357</i> ^{m/m}
Depth for Freeboard (D) = <i>4519</i>		Difference <i>5.463</i> ¹⁶ ^{m/m}
		Restricted to
		Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{16}{4} \times .234 = -1.72$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S) ^{m/m}	Equivalent Enclosed Length (S ₁)	Height ^{m/m}	Height Correction	Effective Length (E)
Poop enclosed ...	<i>26.570</i>	<i>26.570</i>	<i>2.121</i>	<i>✓</i>	<i>26.570</i>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...	<i>12.008</i>	<i>12.008</i>	<i>2.121</i>	<i>✓</i>	<i>12.008</i>
" overhang ...					
Trunk aft ...	<i>39.597</i>	<i>39.597</i>	<i>2.121</i>	<i>✓</i>	<i>39.597</i>
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<i>38.578</i>	<i>78.175</i>			<i>78.175</i>

Standard Height of Superstructure *2090* [✓]" " R.Q.D. *✓*Deduction for complete superstructure *957* [✓]Percentage covered $\frac{S}{L} = 37.78\%$ " $\frac{S_1}{L} = 76.56\%$ " $\frac{E}{L} = 76.56\%$ *Tanker*Percentage from Table, Line A. *Tanker*(corrected for absence of forecastle (if required)) *71.00%*

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = $957 \times .7107 = -679$ ⁶⁸⁰

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>1105</i>	<i>1</i>	<i>1105</i>	<i>452</i>	<i>452</i>	<i>1</i>	<i>452</i>	<i>1</i>	<i>452</i>
$\frac{1}{2}$ L from A.P. ...	<i>491</i>	<i>4</i>	<i>1964</i>	<i>2</i>	<i>2</i>	<i>4</i>	<i>8</i>	<i>4</i>	<i>8</i>
$\frac{2}{3}$ L " ...	<i>123</i>	<i>2</i>	<i>246</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>-</i>	<i>2</i>	<i>-</i>
Amidships ...	<i>-</i>	<i>4</i>	<i>-</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>-</i>	<i>4</i>	<i>-</i>
$\frac{2}{3}$ L from F.P. ...	<i>245</i>	<i>2</i>	<i>490</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>-</i>	<i>2</i>	<i>-</i>
$\frac{1}{2}$ L " ...	<i>982</i>	<i>4</i>	<i>3928</i>	<i>134</i>	<i>134</i>	<i>4</i>	<i>536</i>	<i>4</i>	<i>536</i>
F.P. ...	<i>2210</i>	<i>1</i>	<i>2210</i>	<i>1370</i>	<i>1370</i>	<i>1</i>	<i>1370</i>	<i>1</i>	<i>1370</i>
Total ...			<i>9943</i>				<i>2366</i>		

Mean actual sheer aft = *Deficient*Mean actual sheer forward = *Deficient*Length of enclosed superstructure forward of amidships = *Nil*" " aft of " = *Nil*Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{7577}{18} \left(.75 - \frac{1889}{5611} \right) = +236$ 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 = *4519* ^{Ft.}

Summer freeboard = *430* ^{Ft.}

Moulded draught (d) = *4089* ^{Ft.}

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{48} \text{ inches} = \frac{4089}{48} = 85.2 = 9 \text{ cms}$

Addition for Winter North Atlantic Freeboard (if

required) = $85 + 84 = 169 \text{ cms} = 17 \text{ cms}$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 6076$

Tons per inch immersion at summer load water line

 $T = 39.95$ Deduction = $\frac{\Delta}{40T} \text{ inches} = \frac{6076}{40 \times 39.95} = 3.80$ = *10 cms*

TABULAR FREEBOARD corrected for Flash Deck (if required)

Correction for coefficient $\frac{.836 - .831 + .68}{1.36} = \frac{.685}{1.36} = .504$ ^{1.511}Depth Correction ... *491* [✓]Deduction for superstructures ... *679* [✓]Sheer correction ... *236* [✓]Round of Beam correction ... *1* [✓]Correction for Thickness of Deck amidships ... *-*Other corrections, scantlings, etc. ... *-*Summer Freeboard = *428* [✓]

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

Tropical Fresh Water Line above Centre of Disc ...	<i>7 1/2</i> ... <i>19 cms</i>
Fresh Water Line " " ...	<i>4</i> ... <i>10 cms</i>
Tropical Line " " ...	<i>3 1/2</i> ... <i>9 cms</i>
Winter Line below " " ...	<i>3 1/2</i> ... <i>9 cms</i>
Winter North Atlantic Line " " ...	<i>6 3/4</i> ... <i>17 cms</i>

Tropical Fresh Water Freeboard ...	<i>24 cms</i>
Fresh Water " " ...	<i>33 cms</i>
Tropical " " ...	<i>34 cms</i>
Winter " " ...	<i>52 cms</i>
Winter North Atlantic " " ...	<i>60 cms</i>

29 JAN 1935

5m, 9.32.

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MARKING FORM

25 MAR 1939

RECEIVED 8 FEB 1935

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS TO BE									
On Trunk deck									
Description of Hatchway	To dry Cargo hold forward	To centre Cargo tanks	To forward Cofferdam	To cross bunker	To store room	To fore peak space	To wing tanks		
Dimensions of Hatchway	1830 x 2948	915 x 915	1830 x 1220	610 x 450	1525 x 1220	1220 x 1200	610 x 610	1830 x 462	m
COAMINGS	Height above Deck	230	230	230	180	230	230	1220	m
	Thickness	230 x 90 x 12 1/2	230 x 90 x 12 1/2	180 x 75	230 x 90 x 12 1/2	230 x 90 x 12 1/2	230 x 90 x 12 1/2	12 1/2	m
	Sides	230 x 90 x 12 1/2	230 x 90 x 12 1/2	180 x 75	230 x 90 x 12 1/2	230 x 90 x 12 1/2	230 x 90 x 12 1/2	12 1/2	m
	Stiffeners	230 x 90 x 12 1/2	230 x 90 x 12 1/2	180 x 75	230 x 90 x 12 1/2	230 x 90 x 12 1/2	230 x 90 x 12 1/2	12 1/2	m
HATCH BEAMS	Number	230	230	180	230	230	230	1220	m
	Spacing	230	230	180	230	230	230	12 1/2	m
	Scantling and Sketch	230	230	180	230	230	230	12 1/2	m
	Bearing Surface	230	230	180	230	230	230	12 1/2	m
FORE AND AFTERS	Number	230	230	180	230	230	230	1220	m
	Spacing	230	230	180	230	230	230	12 1/2	m
	Unsupported Lengths	230	230	180	230	230	230	12 1/2	m
	Scantling* and Sketch	230	230	180	230	230	230	12 1/2	m
HATCH COVERS	Material	Steel W.T.	Steel O.T.	Steel W.T.	Steel O.T.	Steel W.T.	Steel O.T.	Steel O.T.	Colled main hole cover 508 x 380 m
	Thickness	12 1/2 m	12 1/2 m	12 1/2 m	12 1/2 m	12 1/2 m	12 1/2 m	12 1/2 m	12 1/2 m
	How fitted	Hinged cover	Hinged cover	Hinged cover	Hinged cover	Hinged cover	Hinged cover	Hinged cover	Hinged cover
	Bearing Surface	12 1/2 m	12 1/2 m	12 1/2 m	12 1/2 m	12 1/2 m	12 1/2 m	12 1/2 m	12 1/2 m
Spacing of Cleats									
Number of Tarpaulins									
*Are wood fore and afters steel shod at all bearing surfaces?									
Are battens and wedges efficient and in good condition?									
Are tarpaulins in good condition and in accordance with rule requirements?									
Are lashings provided in accordance with rule requirements?									

Particulars of fiddle, funnel and ventilator coamings:— *Piccolley hatches on casing top angle coaming 75 x 75 x 7/2 provided with steel hinged covers.*
Engine room skylight of steel strongly constructed.
Funnel and ventilator coamings in good and efficient condition.

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways:— *Steel companionway to Fore castle space (accommodation crew) 1800 x 850 x 1220 m plating 6 1/2 m Steel W.T. door 1470 x 650 sill 245 m, operated from both sides.*
Steel companionway to pump room, deckhouse 3074 x 1700 x 2286 m plating 7 1/2 m stiffeners 1100 x 65 x 9 1/2 m no brackets, spaced 734 to 585 m. Steel W.T. door 1370 x 685 sill 460 m operated from both sides.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— *No ventilators on Freeboard deck.*
On Fore castle deck to accom. crew ventilator coamings 915 x 200 m diam x 7 1/2 m and one ventilator coaming to fore castle 1170 x 250 m diam x 8 m bracketed to deck.
On Poop deck to store room ventilator coamings 915 x 200 m diam x 7 1/2 m, to Engine room 3400 x 610 m diam x 10 m bracketed to deckhouse.
On Trunk deck to pump room ventilator coamings 9320 x 460 m diam x 10 m bracketed to deck, to forward hold 915 x 350 m diam x 9 m.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— *On Freeboard deck air pipe to No 1 and 4 wing tank 2640 m x 130 m diam bracketed to trunk sole, Cargo tanks (wing tanks No 2 & 4) and all centre cargo tank (trunk deck) have a combined gas escape pipe 100 m diam extending 14700 m above trunk deck bracketed to forward mast.*
On Fore castle deck to fore peak tank one air pipe 460 m x 45 m diam On Trunk deck to forward cofferdam two air pipes 460 m x 45 m diam one air pipe to oil fuel bunker 2640 m x 130 m diam bracketed to front bulkhead boiler room casing.
On Poop deck one air pipe to afterpeak tank 460 x 45 m diam To fresh water tanks two air pipes 460 x 50 m diam.
On Fore castle deck goose neck ventilators to W.C. and wash places 920 x 75 m diam

Particulars of Gangway Cargo and Coaling Ports:—

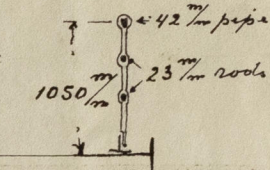
All ventilators are provided with steel covers screwed down for closing the openings, except some ventilators to store rooms in fore and after ship which are provided with wooden hatches and canvas covers.
Air pipes to oil tanks are provided with steel hinged covers for closing the openings.
Remainder air pipes and goose neck ventilators are provided with canvas covers for closing the openings.

Particulars of Scuppers and Sanitary Discharge Pipes:— *Freeboard deck discharge over deck by 6 scuppers on SB, PS and one scupper pipe on SB, PS near Poop front, discharge through ship side 1300 m below freeboard deck, fitted with storm valve in steel casing to shell.*
Freeboard deck in way of Fore castle and Poop space discharge through ship side 1300 m below freeboard deck, fitted with storm valve in steel casing to shell, and are also provided with brass screwed deck plug for closing the opening.
Scupper pipes accom. on Poop deck discharging through ship side below freeboard deck are fitted with storm valve in steel casing to shell.
Scupper pipes accom. on Poop deck discharging through ship side just above freeboard deck no storm valve, fitted.
W.C. and wash places in Fore castle space and in deckhouses on Poop deck discharge through ship side below freeboard deck storm valve fitted in steel casing to shell.

Particulars of Side Scuttles:—

Guard Rails

Open rail on Freeboard deck, Fore castle, Trunk and Poop deck.
stanchions spaced 1450 m.



Particulars of Guard Rails:— *side Scuttles*

Side scuttles in fore castle and Poop space are fitted with dead light permanently attached.

Particulars of Gangways, Lifelines, etc.:—

not fitted.

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	59,868 m					
Forward Well	Open rail					
State position of each freeing port (F. and A. position and height above deck edge) After Well:— Forward Well:—						
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—						
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								
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead at side	460 x 8 1/2	7 1/2	75 x 65 x 7 1/2	600	none	1500 x 610	460	2121
Trunk, Aft	11 1/2	11 1/2	150 x 75 x 8 1/2	606	only at top	no openings		2121
Trunk, Forward			in conjunction with web frames					
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	160 x 160 x 14	8	100 x 10	600	none	1554 x 792	460	2436
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Poop	150 x 75 x 8	8	100 x 10	1000	none	1370 x 915	610	2121
Deckhouses on Flush Deck Ship	160 x 160 x 14	8	100 x 10	990	bracket fitted top & bottom	1554 x 792	460	2121

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

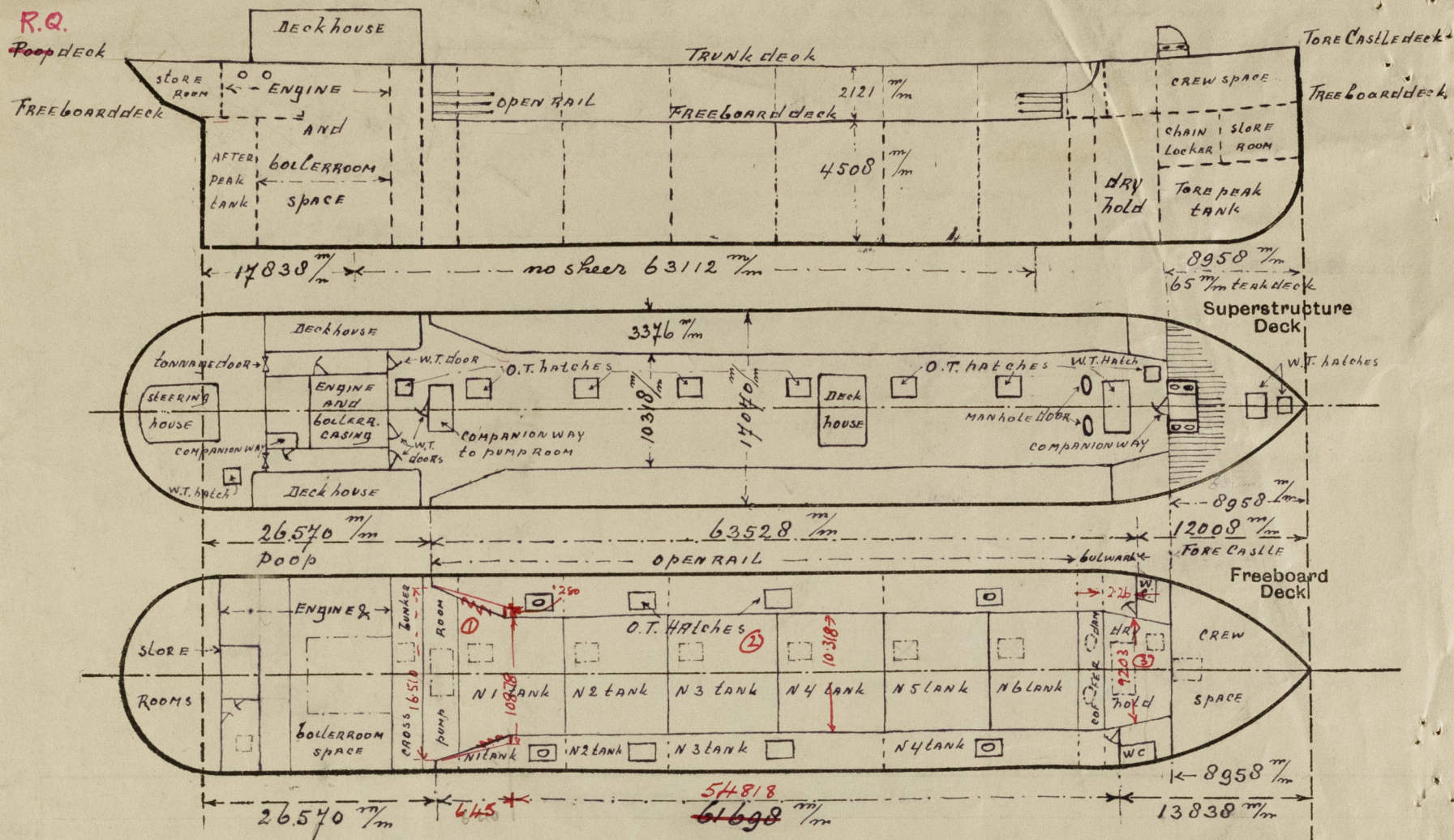
Poop Bulkhead	Poop and trunk combined.
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead at side	Fore castle and trunk combined at centre.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Primary steel hinged doors closed and operated from both sides.
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Steel hinged W.T. door operated from both sides.
Deckhouses on Poop	after bulkhead opening closed by portable plate fastened with hook bolts.
Deckhouses on Flush Deck Ship	front bulkhead steel hinged W.T. door 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 shewn on the following sketches:—



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

The vessel has been built in accordance with the approved plans

Displacement in saltwater at Summer load waterline as per preliminary assignment letter dated 14th of May 1934 = 6046 tons
Tons per inch immersion at Summer load waterline = 35,42 tons

$$\text{Trunk. ①. } 6.45 \times \frac{13.694}{17.07} = 5.174 \checkmark$$

$$\text{②. } 54.818 \times \frac{10.318}{17.07} = 33.131 \checkmark$$

$$\text{③. } 2.26 \times \frac{9.76}{17.07} = \frac{1.292}{39.597} \checkmark$$

Builder's name and yard number *N.V. Nederlandsche Scheepsbouw Maatschappij Yard N° 232*

Names of sister ships

Owners *Curacaose Scheepsvaart Maatschappij N.V.*

Fee *168.—*

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