

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 34097
(For London Office only.)

24 DEC 1931

 Computation of Freeboard for ~~Steamer~~ *Sailing Ship*, Tanker *MOTOR*.
 having *Poop, Bridge and Forecastle*
Port of Survey *Rotterdam*

(Type of Superstructures.)

Date of Survey *During Building*Ship's Name
*"MALVINA"*Nationality and Port of Registry
Dutch The Hague

Official Number

Gross Tonnage
*8249.36*Date of Build
*1931*Name of Surveyor
*R. Leuvenburg
J. van Herwerden*
 Moulded Dimensions: Length *450* Breadth *61'9"* Depth *34'0"*
 Moulded displacement at moulded draught = 85 per cent. of moulded depth *18030 cubic metres = 18190 tons*
 Coefficient of fineness for use with Tables *.493*

 Particulars of Classification *+100 A1-class*
Carrying Petroleum in bulk
Longitudinal Bulkhead and St.

Depth for Freeboard (D)				Depth correction		Round of Beam correction	
Moulded depth	<i>34'0"</i>	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	<i>61'9"</i>
Stringer plate	<i>.06'</i>	$(34.06 - 30.00) \times 3 = +12.18$		Standard Round of Beam = $\frac{B \times 12}{50}$	<i>14.82</i>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$				(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	<i>= 15.50"</i>
Depth for Freeboard (D) =			<i>34'06"</i>	If restricted by superstructures	<i>/</i>	Difference	<i>.68</i>
						Restricted to	
						Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	<i>= .68 \times .60 = -.10</i>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>102.50</i>	<i>102.50</i>	<i>7.25</i>	$102.5 \times \frac{7.25}{7.50}$	<i>99.06</i>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	<i>34.89</i>	<i>34.89</i>	<i>7.25</i>	$34.89 \times \frac{7.25}{7.50}$	<i>33.42</i>
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...	<i>42.58</i>	<i>42.58</i>	<i>7.50</i>	<i>/</i>	<i>42.58</i>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	<i>149.94</i>	<i>149.94</i>			<i>145.36</i>

Standard Height of Superstructure	<i>7.50</i>
" " R.Q.D.	<i>/</i>
Deduction for complete superstructure	<i>42.00</i>
Percentage covered $\frac{S}{L} =$	<i>39.99</i>
" " $\frac{S_1}{L} =$	<i>39.99</i>
" " $\frac{E}{L} =$	<i>38.94</i>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<i>/</i>
Percentage from Table, Line B. <i>Lanker</i>	<i>39.94</i>
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than .2L (if required)	
Deduction =	<i>42.00 \times .2994 = -12.59</i>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>55.00</i>	<i>1</i>	<i>55.00</i>	<i>60.12</i>	<i>60.12</i>	<i>1</i>	<i>60.12</i>		
$\frac{1}{6}L$ from A.P. ...	<i>24.44</i>	<i>4</i>	<i>97.88</i>	<i>26.88</i>	<i>26.88</i>	<i>4</i>	<i>104.52</i>		
$\frac{2}{6}L$ " ...	<i>6.05</i>	<i>2</i>	<i>12.10</i>	<i>7.34</i>	<i>7.34</i>	<i>2</i>	<i>14.44</i>		
Amidships ...	<i>-</i>	<i>4</i>	<i>/</i>	<i>/</i>	<i>/</i>	<i>4</i>	<i>/</i>		
$\frac{3}{6}L$ from F.P. ...	<i>12.10</i>	<i>2</i>	<i>24.20</i>	<i>14.50</i>	<i>14.50</i>	<i>2</i>	<i>29.00</i>		
$\frac{4}{6}L$ " ...	<i>48.95</i>	<i>4</i>	<i>195.80</i>	<i>51.62</i>	<i>51.62</i>	<i>4</i>	<i>206.48</i>		
F.P. ...	<i>110.00</i>	<i>1</i>	<i>110.00</i>	<i>120.00</i>	<i>120.00</i>	<i>1</i>	<i>120.00</i>		
Total ...			<i>494.98</i>				<i>534.86</i>		

 Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{42.88}{18} \times (.45 - .20) = -1.31$

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 = *34.06*
 Summer freeboard = *6.63*
 Moulded draught (d) = *27.43*

 Deduction for Tropical freeboard and addition for
 Winter freeboard = $\frac{d}{4}$ inches = *6.86*

 Addition for Winter North Atlantic Freeboard (if required) = *4.50*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 14,400$
 Tons per inch immersion at summer load water line

 $T = 56.6$
 Deduction = $\frac{\Delta}{40T}$ inches
 $= 4.69$

TABULAR FREEBOARD corrected for Flush Deck (if required)

 Correction for coefficient $\frac{.493 + .68}{1.36} = \frac{1.173}{1.36}$

	+	-
Depth Correction	<i>12.18</i>	<i>/</i>
Deduction for superstructures	<i>/</i>	<i>12.59</i>
Sheer correction	<i>/</i>	<i>1.31</i>
Round of Beam correction	<i>/</i>	<i>.10</i>
Correction for Thickness of Deck amidships	<i>/</i>	<i>/</i>
Other corrections, scantlings, etc.	<i>/</i>	<i>/</i>
	<i>12.18</i>	<i>14.00</i>
		<i>- 1.82</i>
		<i>Summer Freeboard = 49.33</i>

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:—
 Tropical Fresh Water Line above Centre of Disc *14.55" = 34 cms*
 Fresh Water Line " " *4.69" = 20*
 Tropical Line " " *6.86" = 14*
 Winter Line below " " *6.86" = 14*
 Winter North Atlantic Line " " *11.36" = 29*

 Tropical Fresh Water Freeboard ... *49.53" = 2.02 Metres*
 Fresh Water " " *44.98" = 1.65*
 Tropical " " *41.84" = 1.82*
 Winter " " *42.64" = 1.85*
 Winter North Atlantic " " *36.39" = 2.19*
90.89" = 2.31

25 JAN 1932

10m, 2.31

005075-005081-0101 1/2

RECEIVED
13 DEC 1935

MARKING FORM

RECEIVED 5.4.32

Foundation

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Particulars of fiddle, funnel and ventilator coamings:— *Fiddle top .32 well supported.*

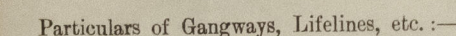
Particulars of Flush Bunker Scuttles:— *none fitted*—

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

Three on forecabin deck for spaces below freeboard deck forming
12' x 34" height. 36" pitch rind to the 4th closed by wood plug and canvas cover. On upper deck next to fore hold for
deep tank and forehold. Here, plate. 34" height. 36" pitch rind to the 4th. Steel cover with light and wood plug and canvas.
Two ventilators for pump room. 24' x 40" height. 14" wood slayard rind to the pitch 4th. Steel lid for closing.
On poop deck forward of deck house. Comings. 6' x 30" height. 30" one 12' x 34" height. 24" aft of deck house. Two 6' x 30" height. 30" five 12' x 34" height. 24" one 18' x 28" " 30" all rind to the 4th pitch wood plug and canvas cover for closing.

Particulars of Gangway Cargo and Coaling Ports:— *none filled.*

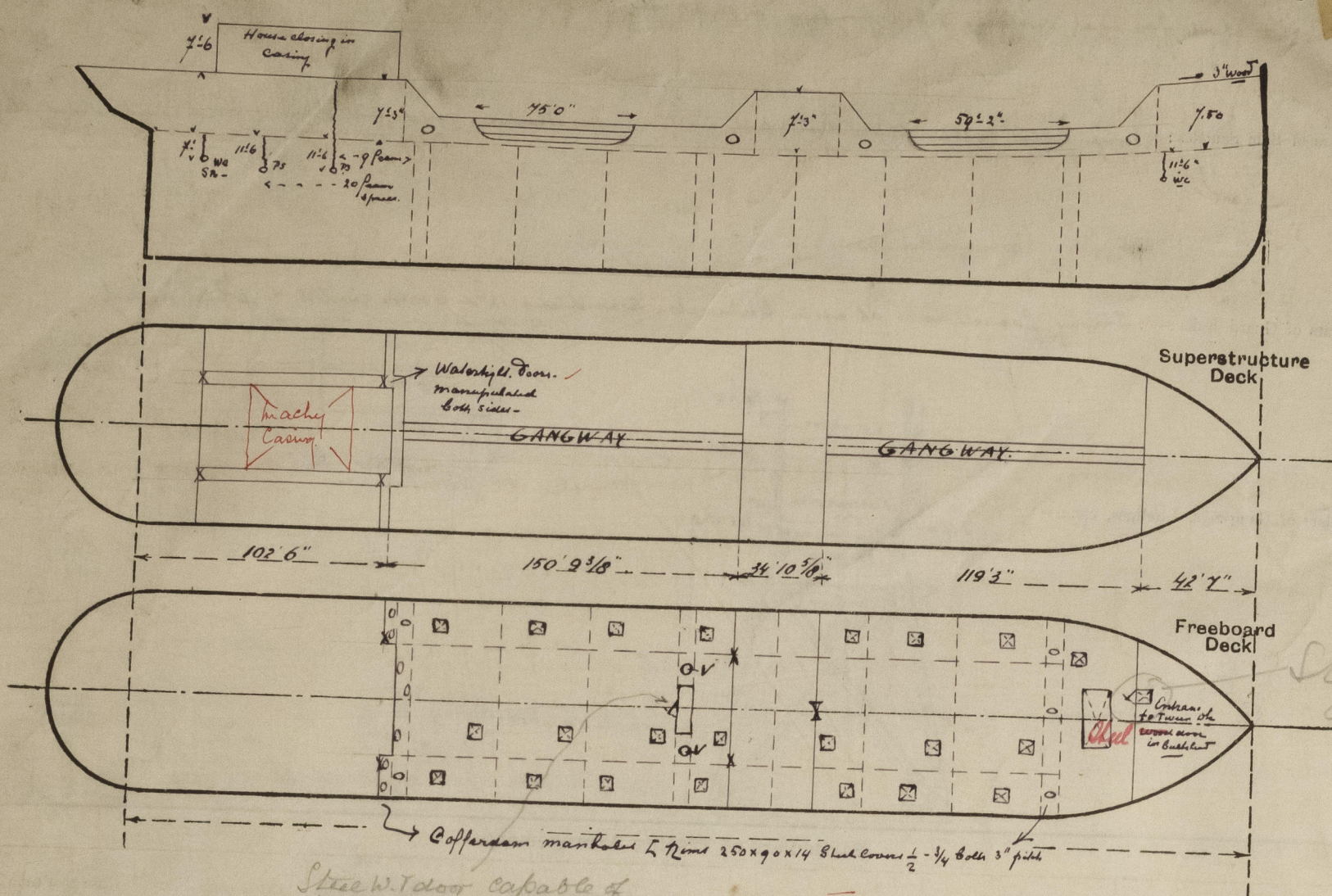
Particulars of Guard Rails:— Strong guard rails at open bulwark. Slanetons 12" in board riveted to \perp bars on deck.



	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	18"x44"	40x44"	2 9 1/2" x 3 1/2" x 50"	30"	brackets	2 x 4'-3" x 30"	24"	4'-3"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead	24"x40"	30"	2 7" x 3 x 40"	30"	brackets	2 x 4'-3" x 34"	24"	4'-3"
Bridge, Forward Bulkhead	24"x40"	40"	2 9" x 3 1/2" x 40"	30"	brackets	1 x 5'-0" x 30"	18"	4'-3"
Forecastle Bulkhead	24" x 30"	30"	1 10" x 6 5" x 9'-0" on forward side	main 30"	"	4'-6" x 24"	24"	4'-6"
Trunk, Aft			2'-6 5" x 6 5" x 4'					to wood deck
Trunk, Forward								
Exposed Machinery Casings on Free-board or Raised Quarter Decks	See poop front							
Exposed Machinery Casings on Super-structure 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	Watertight doors capable of being manipulated from both sides ✓
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead	Portable steel plates fastened with Cook bolts. 1" distance 14" framing through
Bridge, Forward Bulkhead	Watertight doors capable of being manipulated from both sides. ^{door plates only}
Forecastle Bulkhead	Peak wood solid doors. 1 1/2" steel doors
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	No openings ✓
Exposed Machinery Casings on Super-structure 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:—

Fore well 119.25.
open rails equiv. to 118.33
 $92 \times 3.5 \times 25\% = .8 \text{ ft.}$
Freeing ports 9.0 ft.
Excess 8.2 ft.

Aft well 150.80.
open rails equiv. to 150.00
 $80 \times 3.5 \times 25\% = .7 \text{ ft.}$
Freeing ports 9.0 ft.
Excess 8.3 ft.

Builder's name and yard number Maatschappij Scheeps- & Werktuigbouw Rotterdam Rotterdam Yard No 320.

Names of sister ships "Mamuna" "Murena" "Maya" "Magdala" "Mauba" built Rotterdam District Mamvankere Merula

Owners Amsterdam District

Received by me

R. Leuninger
J. H. H. H. H.



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