

# WRECK SECTION

## Lloyd's Register of Shipping.

### SURVEYS FOR FREEBOARD.

Index No. 31538  
(For London Office only)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

BRIDGE - FORECASTLE

Port of Survey

ROTTERDAM

(Type of Superstructures.)

Date of Survey

12 NOVEMBER 1932

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

EMMAPLEIN

DUTCH  
ROTTERDAM

5436

1926-12

Name of Surveyor

H. van der Nijl

Moulded Dimensions: Length

114,298

Breadth

15,849

Depth

10,050

Moulded displacement at moulded draught = 85 per cent. of moulded depth

12,712

tons

Coefficient of fineness for use with Tables

.813

Particulars of Classification

I, 100 R. 1

S.S. R. 1-30

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... .. 10,050	(a) Where D is greater than Table depth (D - Table depth) R = 4.33 (10.071 - 7.62) 28.865 = 589	Moulded Breadth (B) 15,849
Stringer plate ... .. 0.013	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 18}{50} = 317$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ SEE SKETCH	If restricted by superstructures	Ship's Round of Beam = 0,330
Depth for Freeboard (D) = 10,071		Difference = 13
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{13}{4} \times (1 - \frac{5.18}{15.849}) = 2.4$

## 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 ... ..	✓				
" overhang ... ..	✓				
Bridge enclosed ... 29,971	29,971	29,971	2,206		29,971
EXCLUDING overhang aft 2,324	0,851	.638			.638
" overhang forward					
Fore enclosed overhangs SEE SKETCH	9,785	9,182	2,206		9,182
" overhang ... ..					
Trunk aft ... ..	✓				
" forward ... ..	✓				
Tonnage opening aft ... ..	✓				
" " forward					
Total ... ..	40,004	39,791			39,791

Standard Height of Superstructure	2,213
" " R.Q.D.	
Deduction for complete superstructure	1,025
Percentage covered $\frac{S}{L} =$	35.00
" " $\frac{S_1}{L} =$	34.82
" " $\frac{E}{L} =$	24.82
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B. 23.10	
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	237

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	1206	1		1,206	1,302	1,302	1		1,302
$\frac{1}{2}$ L from A.P. ... ..	536	4		2,144	581	581	4		2,324
$\frac{2}{3}$ L " ... ..	133	2		266	146	146	2		292
Amidships ... ..	✓	4		✓	✓	✓	4		✓
$\frac{2}{3}$ L from F.P. ... ..	266	2		532	298	298	2		596
$\frac{1}{2}$ L " ... ..	1073	4		4,292	1,216	1,216	4		4,864
F.P. ... ..	2412	1		2,412	2,807	2,807	1		2,807
Total ... ..				10,852					12,185

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$  $\frac{1,333}{18} (75 - 175) = 43$ 

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 = 10,071

Summer freeboard = 2,090

Moulded draught (d) = 7,981

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{48}$  inches = 17.4

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 

Tons per inch immersion at summer load water line

T =

Deduction =  $\frac{\Delta}{40}$  inches

17.9 = 17

PAGE 4

OBTAINED FROM BUILDERS

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ... ..	589	
Deduction for superstructures ... ..		237
Sheer correction ... ..		43
Round of Beam correction ... ..		2
Correction for Thickness of Deck amidships ... ..		
Other corrections, scantlings, etc. ... ..		
	589	282

Summer Freeboard = 2,089

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

Tropical Fresh Water Line above Centre of Disc ... ..	34	Tropical Fresh Water Freeboard ... ..	1,75
Fresh Water Line " " ... ..	17	Fresh Water " " ... ..	1,92
Tropical Line " " ... ..	17	Tropical " " ... ..	1,92
Winter Line below " " ... ..	17	Winter " " ... ..	2,26
Winter North Atlantic Line " " ... ..		Winter North Atlantic " " ... ..	

W387-0341(112)



## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS												
Description of Hatchway			WELLS				IN BRIDGE		ON BRIDGE DECK		SCORING	
Dimensions of Hatchway			I	II	IV	V	III	III	CROSSBUNKER	IN BRIDGE	SCORING	
COAMINGS	Height above Deck	...	4'-0" x 2'-0"	4'-0" x 2'-0"	5'-6" x 2'-0"	5'-11 1/2" x 2'-0"	4'-4" x 2'-0"	4'-9" x 3'-0"	5'-0" x 10'-6"	6'-0" x 2'-0"		
	Thickness	Sides		2'-8"			BA. 10 x 3/2	1'-6"	1'-8"	BA. 9 x 5 x .46		
		Ends		.50				.46	.40			
	Stiffeners	...		.50				.46	.40			
	Brackets, Stays	...		BA. 11" x 3/2	x .54							
w.l. STAYS			8	8	6	6						
HATCH BEAMS	Number	...	7	7	7	7	3	3				
	Spacing	...	7	7	7	7	3	3				
	Scantling and Sketch	...			EQUAL							
	Bearing Surface	...										
FORE AND AFTERS	Number	...										
	Spacing	...										
	Unsupported Lengths	...										
	Scantling* and Sketch	...										
	Bearing Surface	...										
HATCH COVERS	Material	...										
	Thickness	...										
	How fitted	...										
	Bearing Surface	...										
	Spacing of Cleats	...	MAX 24"	MAX 24"	MAX 24"	MAX 24"	MAX 24"	MAX 24"	MAX 24"	MAX 24"	MAX 24"	
Number of Tarpaulins			3	3	3	3	3	3	3	2		

\*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 casings:— Casing protected by bridge. Above bridge deck casing partly exposed, partly protected by strong steel deck case.  
Fiddle, funnel, engine room light, ventilator casings and crutch (2 shoots) of an efficient construction and in good condition. Complete draining down arrangement.  
Gratings fitted with hinged shutters.

Particulars of Flush Bunker Scuttles :—

None fitted

Particulars of Companionways:— Entrance to crew's quarters aft, in strong steel deckhouse. Each side an ordinary hinged steel door, operated from both sides. Height of sill 18".

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

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :-						
<u>Foredeck:</u>	2	Units.	Ant. 8.	Coaming	36" x 36"	to fore.
						Construction complete with
						vent.
<u>Torwell.</u>	2	"	" 15"	"	36" x 40"	" "
<u>Forewell.</u>	2	"	" 15"	"	36" x 40"	" "
<u>Bridge deck</u>	2	"	" 12"	"	31" x 40"	" "
	2	"	" 14"	"	31" x 40"	" "
<u>Afterwell.</u>	4	"	" 15"	"	36" x 40"	" "
	1	"	" 11 1/2"	"	36 1/2" x 36 1/2"	" "

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—

Particulars of All Types in Export Possession			
<u>Yorlsted</u>	1	air	R.P.T. 6" x 6"
<u>Forwell</u>	1	"	O.B.T. 6" x 36"
"	4	"	" 8 1/2 x 36"
<u>Butzgedick</u>	10	"	" 3 1/2 x 7"
<u>Wierdick</u>	4	"	" 3 1/2 x 30"

Wood plings available.

Particulars of Gangway Cargo and Coaling Ports :—

None fitted.

Particulars of Scuppers and Sanitary Discharge Pipes:— All sanitary discharge pipes lead from spaces situated above the foreboard deck and are fitted with Storm valves on the ship's sides.

Particulars of Side Scuttles:— Lowest forehatch in crew's quarters aft. of a substantial construction and fitted with hinged steel deadlights. Set of openings 29" below the foreboard deck.

Particulars of Guard Rails:—  
 Round footstock 3 rods. Riveted stanchions 41" x 4'-0"  
 Bridge bulwarks at sills form no wells H. 38½" 67" x 7'-3"  
 Rail of present bridge also foot stock.  
 Round wimper 3 rods. Riveted stanchions 39" x 6'-0"  
 Bulwarks in wells. 3'-2½" flat 26" 67" x 40" x 4'-6"

Particulars of Gangways, Lifelines, etc.:— Crew only berthed aft. There are deck ladders between the hatches I and II and III and IV. Lifelines are available, which are fastened amidships from bulwark over hatches to fore-castle and after-cabin.

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 ... ..	117-9 120 SEE SKETCH.	3'-2 1/2"	4'-0" x 1'-8"	4	32 f <sup>2</sup>	24.0	x
Forward Well ... ..	118-9	3'-2 1/2"	4'-5" x 1'-8"	5	46.8 f <sup>2</sup>	23.77	✓
State position of each freeing port ... .. } After Well:— SEE SKETCH (F. and A. position and height above deck edge) } Forward Well:— EDGES 11" 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.							

	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 ... ..	24" x 36"	30"	4 5" x 3" x 30"	34"	LUGS.	2 4'0" x 3'0" -	22"	
Bridge, Forward Bulkhead ... ..	24" x 44"	40"	3 1/2" x 3" x 30"	30"	BRACKETS.	2 4'0" x 3'0" -	24"	
Forecastle Bulkhead ... ..	VERTICAL.	28"	4 3 1/2" x 3" x 34"	34"	✓	2 4'1" x 3'1" -	24"	
Trunk, Aft ... ..	✓							
Trunk, Forward ... ..	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super-structure Decks ... ..	18" x 36"	30"	4 3" x 3" x 30"	36"	✓	2 5'0" x 2'0" -	18"	7'6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	36"	30"	4 3" x 3" x 30"	36"	✓	ONLY 3/8" DOORS TO TRUNK, CROSS-VENTILATOR.	18"	
Deckhouses on Flush Deck Ships ...	✓							

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

Poop Bulkhead ... ..	✓	At centre 2 ordinary hinged steel doors to fore & aft cabins, operated from both sides, Sills 19"
Raised Quarter Deck Bulkhead ...	✓	
Bridge, After Bulkhead ... ..	✓	Portable hinged steel doors, fastened outside by 8 toggles.
Bridge, Forward Bulkhead ... ..	✓	Hinged steel doors, permanently attached, fastened outside by 12 toggles.
Forecastle Bulkhead ... ..	✓	Stormboards in raised E over full height of opening.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓	
Exposed Machinery Casings on Super-structure Decks ... ..	✓	Ordinary hinged steel doors, operated from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	✓	Trunk cross-bunker. 2 ordinary hinged steel doors, hinges horizontal at top & bottom.
Deckhouses on Flush Deck Ships ...	✓	

51. Small escape door 14" x 20", sill 26" Ordin. Lined steel door



Hand-drawn technical drawing of a ship's hull and deck layout. The drawing shows the side profile of the hull with dimensions: 30'5", 34'6", 29'3", 7'10", 7'4", 14'9", 24'6", 24'3", 22'9". Below the hull is a plan view of the Superstructure Deck and Freeboard Deck. The Superstructure Deck includes a SALOON, WC, and ACCOMMODATION. The Freeboard Deck includes DECK TANK, STORES, and various compartments. Dimensions for the deck layout are provided, including 98'4", 118'9", 1,390, 9,182, 29.971, 114.298, and 43'2". The drawing is labeled "FORECASTLE" and "FREEBOARD DECK".

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

State any special features in the construction of the ship:—  
 2 Access ladders B on deck tanks. (22"). 2'-6" x 2'-6". Coaming B.R. 9" x 9" x .48"  
 Complete battening down arrangement. ✓  
 Store hatch C aft. 5'-2" x 3'-0". Coaming 30". Complete battening down arrangement. ✓  
 and covers.  
 Ranges D of coalhooks through foreboard deck. Sill 17". Rectangles  
 for wood covers. Complete battening down arrangement. ✓

Builder's name and yard number.

N.V. Maschinenfabrik & Schiffsverf. v. P. Smit jr Rotterdam  
N<sup>o</sup> 375.

Names of sister ships

Owners.

20. Schepvaart Mr. Mulligen

Fee £

163:20

: Will be Received by me

Roller Name G<sup>H</sup> Dec. 1932

Leaf 1.00

M. van der Neel