

21 OCT 1935

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Motor Steamer, Sailing Ship, Tanker

having Poop and Forecastle

(Type of Superstructures) Signal Letters

Ship's Name "MARINA" Nationality and Port of Registry Hamburg Official Number L.J.B.F. Gross Tonnage 9898 Date of Build 1935

Moulded Dimensions: Length 147.61m Breadth 20.04m Depth 10.95m

Moulded displacement at moulded draught = 85 per cent. of moulded depth 21822 tons

Coefficient of fineness for use with Tables 0.7856

Port of Survey Hamburg

Date of Survey 16 Oct. 1935

Name of Surveyor H. Goring

Particulars of Classification +100 A1
carrying Petroleum in bulk.

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	10.95m	(a) Where D is greater than Table depth 3.71		Moulded Breadth (B)	20.04m
Stringer plate	2.3m	(D-Table depth) R = (36.00 - 32.29) 3.00		Standard Round of Beam = $\frac{B \times 12}{50}$	15.78"
Sheathing on exposed deck		= + 11.13"		Ship's Round of Beam	0.40m 15.75"
T $\left(\frac{L-S}{L}\right)$		(b) Where D is less than Table depth (if allowed)		Difference	Deficient .03"
Depth for Freeboard (D) =	36.00	(Table depth-D) R =		Restricted to	
		If restricted by superstructures		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right)$	$\frac{.03}{4} \times .6236 = \text{Nil}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	113.52	113.52	8.01		113.52
" overhang	none				
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft			7.61		
" overhang forward					
Fore enclosed	20.96m	68.77	22.90		68.77
" overhang	68.77				
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	182.29	182.29			182.29

Standard Height of Superstructure 7'-6"

" " R.Q.D. ✓

Deduction for complete superstructure 42.00"

Percentage covered $\frac{S}{L} = 37.64\%$

" $\frac{S_1}{L} = 37.64\%$

" $\frac{E}{L} = 37.64\%$

Percentage from Table, Line A. Tanker 28.64%

(corrected for absence of forecastle (if required))

Percentage from Table, Line B. ✓

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) ✓

Deduction = $42.00 \times .2864 = -12.03"$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	58.43	1		58.43	42.91	42.91	1		42.91
$\frac{1}{8}L$ from A.P.	26.00	4		104.00	18.90	18.90	4		75.60
$\frac{2}{8}L$ "	6.43	2		12.86	5.31	5.31	2		10.62
Amidships		4			0	0	4		
$\frac{3}{8}L$ from F.P.	12.86	2		25.72	10.43	10.43	2		20.86
$\frac{4}{8}L$ "	52.00	4		208.00	35.43	35.43	4		141.72
F.P.	116.86	1		116.86	85.43	85.43	1		85.43
Total	525.87			525.87					377.14

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L}\right) = \frac{148.73}{18} \left(75 - \frac{1882}{2 \times 147.61}\right) = +4.64"$

If limited on account of midship superstructure.

Mean actual sheer aft = Deficient

Mean standard sheer aft

Mean actual sheer forward = Deficient

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = } Deficient

" " aft of " = } Sheers.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 36.00

Summer freeboard = 7.83

Moulded draught (d) = 28.17

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 7.04 = 7"

Addition for Winter North Atlantic Freeboard (if required) = $\frac{d}{4}$ inches = 7.04 = 7"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 20035$

Tons per inch immersion at summer load water line

T = 65.50

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

= $7.65 = 7\frac{3}{4}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

+	-
11.13	
	12.03
4.64	
15.77	12.03
	+ 3.74
Summer Freeboard = 93.99	

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

Tropical Fresh Water Line above Centre of Disc ... $14\frac{3}{4} = 375$

Fresh Water Line " " ... $7\frac{3}{4} = 197$

Tropical Line " " ... $7 = 178$

Winter Line below " " ... $7 = 178$

Winter North Atlantic Line " " ... $11\frac{3}{4} + 12 = 305$

7'-10" = 2388

6'-7 $\frac{1}{4}$ " = 2013

7'-2 $\frac{1}{4}$ " = 2191

7'-3" = 2210

8'-5" = 2566

8'-9 $\frac{3}{4}$ " = 2693

22'-10 $\frac{3}{4}$ " = 2886

MARKING FORM

RECEIVED

4 NOV 1935

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										ON POOP, ON FORECASTLE	
Description of Hatchway	Dimensions of Hatchway	1 OFF		4 OFF		9 OFF		PROVISION FORM			
		FORW.	STORE	OIL BUNKER AND COFFERS	Oil cargo tanks	Side tanks	Centre tanks	1000-1000	4000 mm		
COAMINGS	Height above Deck	810-600	400-400	2180	2180	2180	2180	800	800		
	Thickness	250%	250%	800%	800%	800%	800%	10%	10%		
	Sides	10%	10%	10%	10%	10%	10%	10%	10%		
	Ends	10%	10%	10%	10%	10%	10%	10%	10%		
	Stiffeners	10%	10%	10%	10%	10%	10%	10%	10%		
HATCH BEAMS	Number	none	none	none	none	none	none	none	none		
	Spacing	none	none	none	none	none	none	none	none		
	Scantling and Sketch	none	none	none	none	none	none	none	none		
	Bearing Surface	none	none	none	none	none	none	none	none		
	Number	none	none	none	none	none	none	none	none		
FORE AND AFTERS	Spacing	none	none	none	none	none	none	none	none		
	Unsupported Lengths	none	none	none	none	none	none	none	none		
	Scantling and Sketch	none	none	none	none	none	none	none	none		
	Bearing Surface	none	none	none	none	none	none	none	none		
	Number	none	none	none	none	none	none	none	none		
HATCH COVERS	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel		
	Thickness	10 mm	10 mm	10 mm	10 mm	10 mm	10 mm	10 mm	10 mm		
	How fitted	Hinged	Hinged	Hinged	Hinged	Hinged	Hinged	Hinged	Hinged		
	Bearing Surface	None	None	None	None	None	None	None	None		
	Spacing of Cleats	none	none	none	none	none	none	none	none		
Number of Tarpaulins		none	none	none	none	none	none	none	none		

- *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:— Fiddle top 2600 mm above the poop deck. Openings in fiddle top closed by steel hinged covers. Funnel and ventilator coamings efficiently fastened to fiddle top.

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways:—

Two companionways on poop deck to accommodate latrines, closed by steel hinged doors, capable of being manipulated from both sides. Height of the sill 460 mm above steel deck.

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

On forecastle deck two ventilators for fore. cargo hold 144" diam. coaming 36" x 36" thick. Two ventilators for fore. pump room 144" diam. coaming 36" x 36" thick. The ventilators are capable of being closed by steel covers and canvas covers.

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

Air pipe to fore peak tank 650 mm above forecastle deck. Air pipe to after peak tank 650 mm above poop deck. All air pipes of substantial construction and fitted with wooden plugs and canvas covers.

Particulars of Gangway Cargo and Coaling Ports:—

none!

Particulars of Scuppers and Sanitary Discharge Pipes:—

7 scuppers on each side above peak tank 100-90 mm. All sanitary discharge pipes are fitted with storm valves.

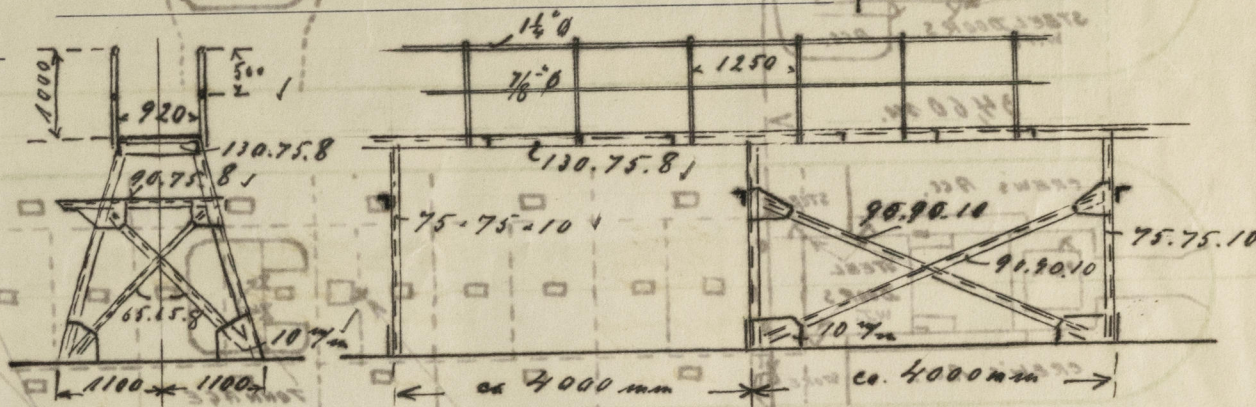
Particulars of Side Scuttles:—

No side scuttles fitted below peak tank. All side scuttles in the sides of the forecastle and poop are fitted with efficient dead latches.

Particulars of Guard Rails:—

On forecastle deck open rail fitted. On freeboard deck open rail fitted. On poop deck open rail fitted.

Particulars of Gangways, Lifelines, etc.:—



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			Open rail fitted.			
Forward Well						

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	127 mm	11.2	250.90.115	645-730	brackets top bottom	950-1150	460	8"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead	127 mm	7.5	100.75.75	700	none	950-1400	600	7'6"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	9	7.5	115.65.75	760	none	700-1540	460	8"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	9	6.5	115.75.95	760	none	700-1540	460	8"
Deckhouses on Flush Deck Ships								

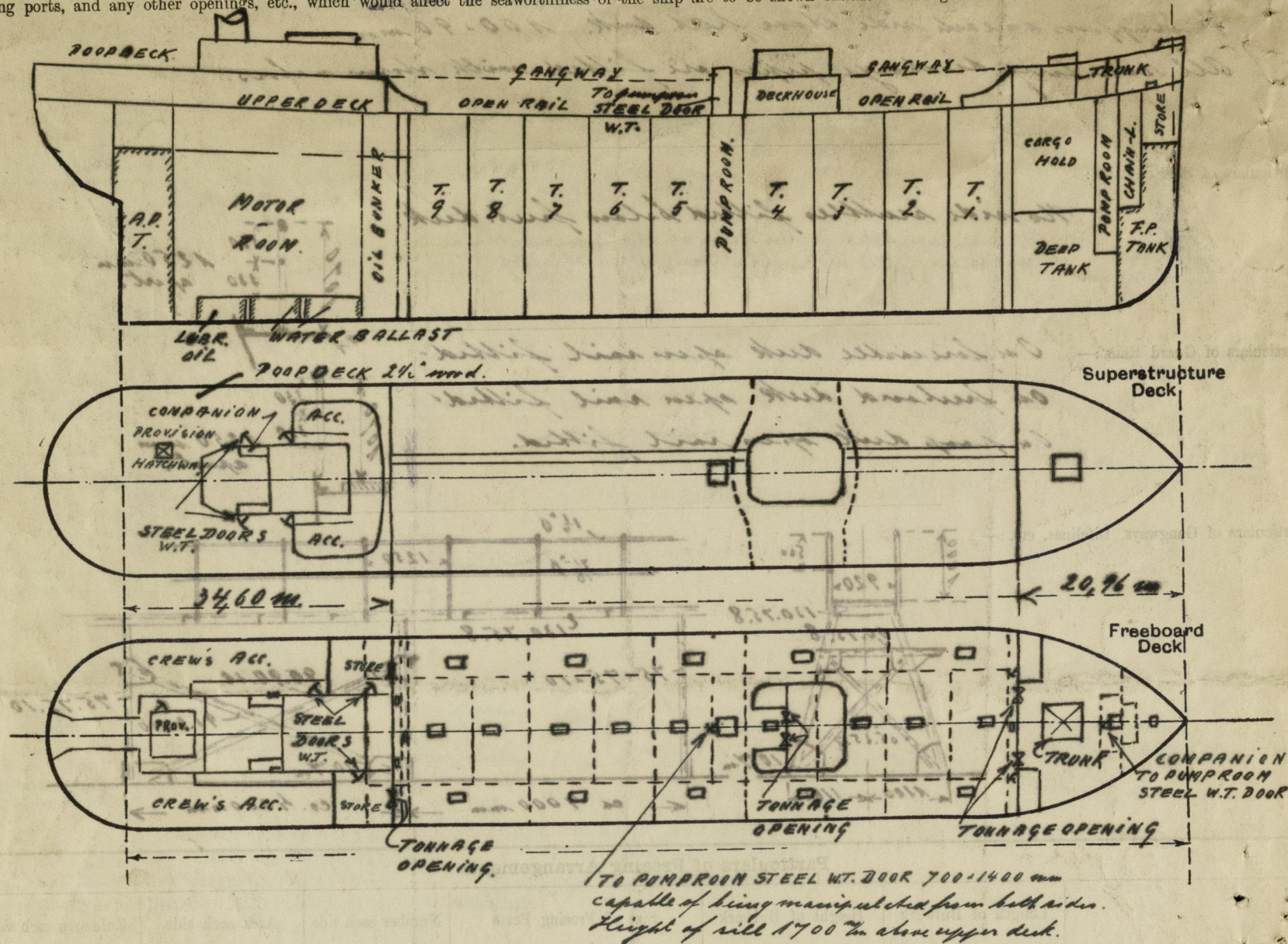
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	Two hinged openings, closed by portable plates with 76" hook bolts.
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead	Two hinged openings closed by storm boards, full height in channels.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	
Exposed Machinery Casings on Superstructure Decks	Two hinged steel doors, capable of being closed from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Two hinged steel doors, capable of being closed from both sides.
Deckhouses on Flush Deck Ships	

02472

Lloyd's Register Foundation

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:— *Tanker with two longitudinal bulkheads.*

This vessel has been surveyed during construction as she was and afloat.

Displacement in salt water at 27 draught = 18948 tons
 " " " 28 " = 19736 "
 " " " 29 " = 20522 "

Builder's name and yard number

Deutsche Werft A. G. Hamburg; Yard No. 161.

Names of sister ships

Owners

Thorvald Berg, Tinsberg.

Fee

RM. 400.—

Received by me

will be charged with First Entry.



© 2021

Lloyd's Register Foundation