

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

15 APR 1936

Computation of Freeboard for Tankerhaving POOP, BRIDGE & FORECASTLEPort of Survey ROTTERDAM

(Type of Superstructures.)

Date of Survey BUILDING

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>M. S. "ETREMA"</u>	<u>Dutch</u> <u>'s Gravenhage</u>		<u>not yet measured</u> <u>6285.75</u>	<u>1935-36</u>
Moulded Dimensions: Length <u>129.54 M.</u> Breadth <u>16.54 M.</u> Depth <u>9.449 M.</u>				
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>13330 M<sup>3</sup></u>				
Coefficient of fineness for use with Tables <u>.445</u>				

Name of Surveyor L. VUYK.Particulars of Classification +100 A1  
"CARR. PETR. IN BULK"

(CLASS CONTEMPL)

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	9.449	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	16.54
Stringer plate	18	$8.33/9.464 - 8.636/30 = (+) 208$		Standard Round of Beam = $\frac{B \times \square}{50}$	331
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	343
$T \left( \frac{L-S}{L} \right) =$		If restricted by superstructures		Difference	EXCESS 12
Depth for Freeboard (D) =	9.464			Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right)$	$= \frac{12}{4} \times \frac{5803}{6866} = (-) 2$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <u>SEE SKETCH</u>	<u>26.82</u>	<u>26.82</u>	<u>2341</u>		<u>26.82</u>
" overhang ...	<u>27.22</u>	<u>27.22</u>			<u>27.22</u>
R.Q.D. enclosed					
" overhang ...					
Bridge enclosed <u>DQ.</u>	<u>12.02</u>	<u>12.02</u>	<u>2279</u>	<u>2279/2290</u>	<u>12.39</u>
" overhang aft ...					<u>11.90</u>
" overhang forward					
F'cle enclosed	<u>14.41</u>	<u>14.41</u>	<u>2341</u>		<u>14.41</u>
" overhang ...					
Trunk aft					
" forward					
Tonnage opening aft					
" forward	<u>54.38</u>	<u>54.38</u>			<u>54.32</u>
Total	<u>53.55</u>	<u>53.55</u>			<u>53.49</u>

Standard Height of Superstructure 2290

" " R.Q.D.

Deduction for complete superstructure 1064Percentage covered  $\frac{S}{L} = 41.34.97$ "  $\frac{S_1}{L} = 41.34.97$ "  $\frac{E}{L} = 41.29.93$ 

Percentage from Table, Line A

(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) DOES NOT APPLYDeduction =  $.3293 \times 1064 = 351$ TANKER  
32.29.93

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	1333	1	1333	1361	1361	1	1361
$\frac{1}{4}$ L from A.P. ...	592	4	2368	604	604	4	2416
$\frac{2}{4}$ L " ...	148	2	296	154	154	2	314
Amidships ...		4				4	
$\frac{3}{4}$ L from F.P. ...	296	2	592	298	298	2	596
$\frac{1}{4}$ L " ...	1185	4	4740	1194	1194	4	4788
F.P. ...	2666	1	2666	2740	2740	1	2740
Total			11995				12215

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{220}{18} \left( .75 - \frac{53.55}{2 \times 129.54} \right) = (-) 4$ If limited on account of midship superstructure. TANKER.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 = 9.464  
 Summer freeboard = 1.710  
 Moulded draught (d) = 7.754

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{48} = 16 \text{ c.m.}$ 

Addition for Winter North Atlantic Freeboard (■)

=  $16 + 11 = 27 \text{ c.m.}$ 

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 12987 \text{ TONS}$ 

Tons per immersion at summer load water line

T = 18.46Deduction =  $\frac{\Delta}{40 T} = 17 \text{ c.m.}$ 

TABULAR FREEBOARD

Correction for coefficient  $\frac{.445 + .68}{1.36} = \frac{1.125}{1.36}$ 

Depth Correction ... 208  
 Deduction for superstructures ... 351  
 Sheer correction ... 1  
 Round of Beam correction ... 2  
 Correction for Thickness of Deck amidships ...  
 Other corrections, scantlings, etc. ...

Summer Freeboard = 1712SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ... 33 c.m.  
 Fresh Water Line " " ... 14  
 Tropical Line " " ... 16  
 Winter Line below " " ... 16  
 Winter North Atlantic Line " " ... 24

Tropical Fresh Water Freeboard ... 138  
 Fresh Water " " ... 154  
 Tropical " " ... 155  
 Winter " " ... 187  
 Winter North Atlantic " " ... 198

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## HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Particulars of fiddley, funnel and ventilator coamings:— Fiddley casing, funnel and ventilators in efficient condition. Motorroom skylight all steel with steel flaps strongly constructed. — gratings on fiddley casing fitted with strong steel hinged covers. —

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

Particulars of Companionways:— One steel companionway on foreboard deck in forewell 8'5" x 13'10" x 7'6" high leading to forward pumproom with steel hinged watertight door on after side 4'7" x 2'6" sill 14" capable of being operated from both sides.— One steel companionway on foreboard deck in afterwell 8'5" x 13'10" x 7'6" high leading to after pumproom with steel hinged watertight door on after side 4'7" x 2'6" sill 14" capable of being operated from both sides.—

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—						
On fore-castle deck	-	1 vent	12" dia.	coaming	36" x 36	led to fore-cabin
		6 vents	10" "	"	36" x 32	" " enclosed fore-castle
		7 vents	6" "	"	36" x 28	" " "
On bridge deck	-	8 vents	6" "	"	30" x 28	" " " bridge-space
On poop deck	-	3 vents	12" "	"	20" x 36	" " " poop-space
		2 vents	10" "	"	30" x 32	" " "
		4 vents	6" "	"	30" x 28	" " "

} all ventilators constructed in accordance with the Rules and coamings closed with lead plugs and canvas covers

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

on forecath deck	7 air pipes	5' dia.	× 36" high	from forepeak and displacement	} all air pipes are fitted with gauge and canvass covers as provided. ✓
on poop deck	5 " "	5' dia.	× 30" high	from double bottom tanks	
	2 " "	3½' dia.	× 30" high	from afterpeak tank	

Air pipes from centre and wing tanks are led up foremast and mainmast

Particulars of Gangway Cargo and Coaling Ports:— *None fitted.*

Forewell 4 scuppers cut through stringer angle.

Particulars of Scuppers and Sanitary Discharge Pipes — Afterwell 5 scuppers cut through stringer angle.

Sanitary discharges from accommodation:

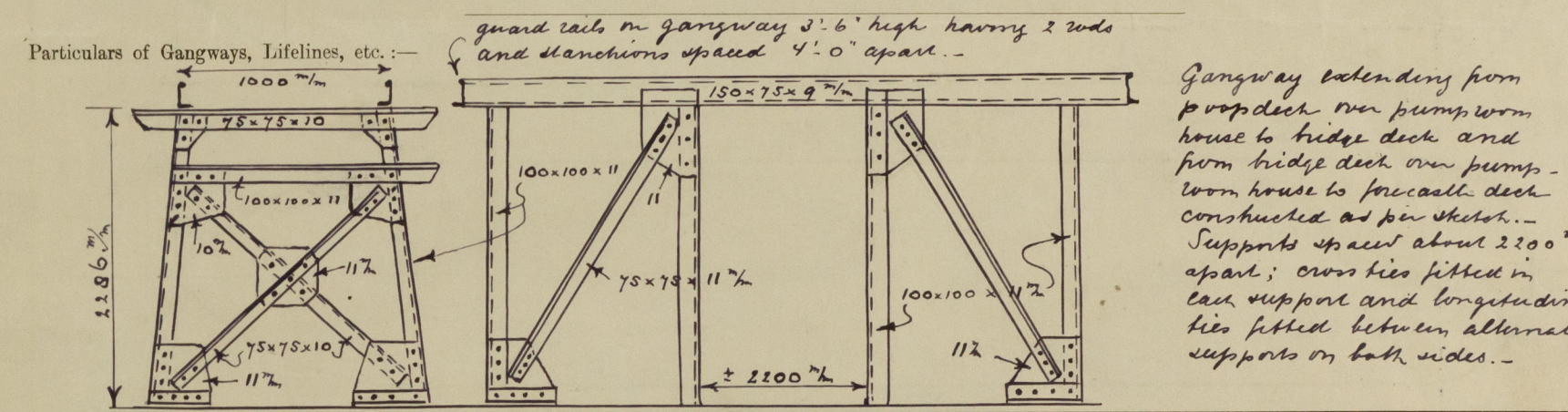
in forecabin port	one 5" and one 4" dia.	below 2 <sup>nd</sup> deck
	Starboard one 5" and one 4" dia.	" " "
in bridge	port — one 2 1/2" dia.	above futtock deck
	Starboard two 4", one 3" & one 2 1/2" dia.	" " "
in poop	port — four 4", one 3" & one 2" dia.	below futtock deck
	Starboard two 4" and two 3" dia.	below futtock deck
scuppers from poop deck	port four 3" and one 2" dia.	below futtock deck
	Starboard three 3" and two 2" dia.	below futtock deck

} all sanitary discharges fitted below futtock deck have cast steel valve chest in ship side and metal stormvalves, in addition sluice valves are fitted to all sanitary discharges in way poop. —

Particulars of Side Scuttles:

Side Scuttles to accommodation and storerooms in forecabin, bridge and poop are all of substantial construction and fitted with permanently attached deadlights. —

Particulars of Guard Rails:— Part deck bulwarks on foreboard deck in afterwell and in forewell as per sketch on page 4  
3' 7" high efficiently constructed and supported.  
Guard rails on precast deck 3' 6" high having 3 ends and stanchions spaced 3' 9" apart.  
" " " bridge deck 3' 6" " " 3 " " " 4' 0" "  
" " " poop deck 3' 6" " " 3 " " " 4' 3" "



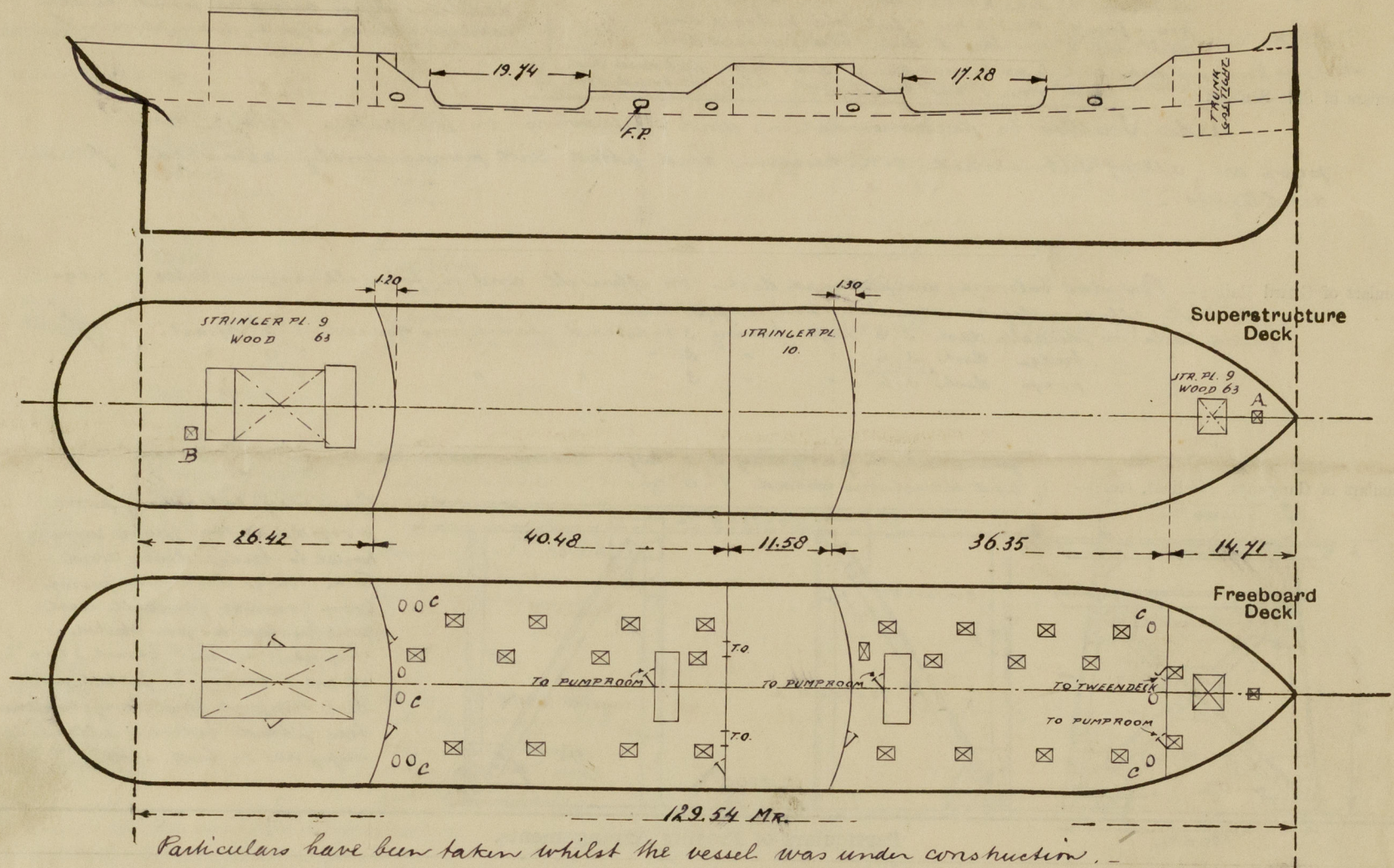
1800 ~ 1/2 m				Particulars of Freeing Arrangements.			
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side	
After Well ... ..	40.48 M <sup>2</sup>	1.10 M <sup>2</sup>	9.4 x 5.0 d M. OVAL 19.74 M <sup>2</sup> OPEN RAIL.	3	111 d M <sup>2</sup>	✓	
Forward Well ... ..	36.35 M <sup>2</sup>	1.10 M <sup>2</sup>	9.4 x 5.0 d M. OVAL 17.28 M <sup>2</sup> OPEN RAIL	2	74 d M <sup>2</sup>		
State position of each freeing port ... .. } After Well:— (F. and A. position and height above deck edge) } Forward Well:— } 320 m above deck edge State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 3 vertical bars 1" m dia.							
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 ... ..	✓	vertical plating 11 7/8"	130 x 90 x 12 BA & division bulkhead	770-825.	bottom braced top up to beams.	1300 x 760.	610.	2286.
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead ... ..	✓	vertical plating 7.5 7/8"	120 x 75 x 9 A & division bulkheads	760.	none	1300 x 950.	610.	2286.
Bridge, Forward Bulkhead ... ..	✓	vertical plating 11 7/8"	130 x 90 x 12 BA & division bulkheads	825.	bottom braced top up to beams.	1525 x 760.	500.	2286.
Forecastle Bulkhead ... ..	✓	610 x 9	7.5 7/8"	120 x 75 x 8 A	760.	none	1375 x 760.	610.
Trunk, Aft ... ..	✓							
Trunk, Forward ... ..	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super-structure Decks ... ..	✓	650 x 8	7.5 7/8"	100 x 65 x 8 A	660.	braced on top only.	none	2440.
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 ... ..	steel hinged watertight doors operated from both sides. - ✓
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ... ..	steel portable plates fastened with hook balls 1" in dia. spaced 360° apart. - ✓
Bridge, Forward Bulkhead ... ..	steel hinged watertight door operated from both sides. - ✓
Forecastle Bulkhead ... ..	2 steel hinged watertight doors to twin deck & pump room } all capable of being ✓ 8 steel hinged doors to accommodation } manipulated from both sides. -
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Super-structure Decks ... ..	no openings. - ✓
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:—

Small hatches on forecath deck A 2'6" x 2'6" coaming 9" Bulbangle closed with steel cover fastened with toggles.  
 on poop deck B 2'4" x 2'4" coaming 9 1/2" Bulbangle closed with steel cover fastened with toggles.  
 Cofferdam hatches on freeboard deck C 2'0" x 1'6" coaming 10" channel closed with steel bolted covers.  
 3/4" bolts spaced 3 1/4" apart

Poop 26.42

Bridge 11.58

$$1.20 \times \frac{2}{3} = \frac{.80}{27.22}$$

$$1.30 \times \frac{2}{3} = \frac{.87}{12.45}$$

Builder's name and yard number Rotterdamse Droogdok Maatschappij Yard number 193.

Names of sister ships /

Owners Petroleum Maatschappij "La Corona" N.V.

Fee f 204.00 will be Received by me L. Wuyt



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