

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

 Index. No. 31629
 (For London Office only.)

Computation of Freeboard for Steamer <i>Sailing Ship</i> , Tanker					Port of Survey <i>Rouen</i>	
having <i>Poop and Forecastle</i>					Date of Survey <i>9-1-32</i>	
(Type of Superstructures.)						
Ship's Name <i>M.S. KATENDRECHT</i>	Nationality and Port of Registry <i>Dutch Rotterdam</i>	Official Number <i>-</i>	Gross Tonnage <i>5099</i>	Date of Build <i>1925</i>	Name of Surveyor <i>V. M. Linklater</i>	
Moulded Dimensions: Length <i>402.08</i> Breadth <i>53.0</i> Depth <i>28.0</i>					Particulars of Classification <i>+100 A1</i>	
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>11432</i> tons					<i>Camping petroleum in bulk</i>	
Coefficient of fineness for use with Tables <i>.789</i>						

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <i>28.00</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(28.04 - 26.81) x 3 = + 3.69</i>	Moulded Breadth (B) <i>53.0</i>
Stringer plate <i>.04</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>12.72</i>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <i>-</i>		Ship's Round of Beam = <i>13.25</i>
		Difference <i>.53</i>
Depth for Freeboard (D) = <i>28.04</i>	If restricted by superstructures <i>-</i>	Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.53}{4} \times .6614 = -.09$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<i>99.25</i>	<i>99.25</i>	<i>7.5</i>	<i>-</i>	<i>99.25</i>
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
Fore enclosed <i>equivalent</i>	<i>36.87</i>	<i>36.87</i>	<i>7.5</i>	<i>-</i>	<i>36.87</i>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	<i>136.12</i>	<i>136.12</i>			<i>136.12</i>

Standard Height of Superstructure *7.50*
 " " R.Q.D. *-*
 Deduction for complete superstructure *42.0*
 Percentage covered $\frac{S}{L} =$ *33.86%*
 " " $\frac{S_1}{L} =$ *33.86%*
 " " $\frac{E}{L} =$ *33.86%*
 Percentage from Table, Line A.
 (corrected for absence of fore-castle (if required))
 Percentage from Table, ~~Line B.~~ *TANKER* *24.86*
 (corrected for absence of fore-castle (if required))
 Interpolation for bridge less than .2L (if required) *✓*
 Deduction = *42 x .2486 = 10.44*

SHEER CORRECTION.

	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
... ..	<i>50.21</i>	<i>1</i>	<i>50.21</i>	<i>31.75</i>	<i>31.75</i>	<i>1</i>	<i>31.75</i>		
... ..	<i>22.34</i>	<i>4</i>	<i>89.36</i>	<i>8.75</i>	<i>8.75</i>	<i>4</i>	<i>35.00</i>		
$\frac{3}{4}L$	<i>5.52</i>	<i>2</i>	<i>11.04</i>	<i>1.56</i>	<i>1.56</i>	<i>2</i>	<i>3.12</i>		
Amidships	<i>-</i>	<i>4</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>4</i>	<i>-</i>		
$\frac{1}{4}L$ from F.P.	<i>11.05</i>	<i>2</i>	<i>22.10</i>	<i>3.12</i>	<i>3.12</i>	<i>2</i>	<i>6.24</i>		
$\frac{1}{4}L$	<i>44.68</i>	<i>4</i>	<i>178.72</i>	<i>18.44</i>	<i>18.44</i>	<i>4</i>	<i>73.76</i>		
F.P.	<i>100.42</i>	<i>1</i>	<i>100.42</i>	<i>64.00</i>	<i>64.00</i>	<i>1</i>	<i>64.00</i>		
Total			<i>451.85</i>				<i>213.87</i>		

Mean actual sheer aft = *Deficient*
 Mean standard sheer aft = *Deficient*
 Mean actual sheer forward = *Deficient*
 Mean standard sheer forward = *Deficient*
 Length of enclosed superstructure forward of amidships = *✓*
 " " aft of " = *✓*

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{237.98}{18} (.75 - .1693) = +7.68$$

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 = <i>28.04</i> Summer freeboard = <i>5.74</i> Moulded draught (d) = <i>22.30</i> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>5.57</i> Addition for Winter North Atlantic Freeboard (if required) = <i>4.02</i>	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ <i>10705 tons</i> Tons per inch immersion at summer load water line $T =$ <i>43</i> Deduction = $\frac{\Delta}{40 T}$ inches = <i>6.22</i>	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{289 + .68}{1.36} = \frac{1.469}{1.36}$ <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td><i>3.69</i></td> <td><i>-</i></td> </tr> <tr> <td>Deduction for superstructures</td> <td><i>-</i></td> <td><i>10.44</i></td> </tr> <tr> <td>Sheer correction</td> <td><i>7.68</i></td> <td><i>-</i></td> </tr> <tr> <td>Round of Beam correction</td> <td><i>-</i></td> <td><i>.09</i></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td><i>-</i></td> <td><i>-</i></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td><i>-</i></td> <td><i>-</i></td> </tr> <tr> <td></td> <td><i>11.37</i></td> <td><i>10.53</i></td> </tr> </table> Summer Freeboard = <i>68.89</i>		+	-	Depth Correction	<i>3.69</i>	<i>-</i>	Deduction for superstructures	<i>-</i>	<i>10.44</i>	Sheer correction	<i>7.68</i>	<i>-</i>	Round of Beam correction	<i>-</i>	<i>.09</i>	Correction for Thickness of Deck amidships	<i>-</i>	<i>-</i>	Other corrections, scantlings, etc.	<i>-</i>	<i>-</i>		<i>11.37</i>	<i>10.53</i>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc <i>11.79" = 30 cm</i>	Tropical Fresh Water Freeboard ... <i>57.10" = 145 "</i>
Fresh Water Line " " <i>6.22" = 16 "</i>	Fresh Water " " <i>62.67" = 159 "</i>
Tropical Line " " <i>5.57" = 14 "</i>	Tropical " " <i>63.32" = 161 "</i>
Winter Line below " " <i>5.57" = 14 "</i>	Winter " " <i>74.46" = 189 "</i>
Winter North Atlantic Line " " <i>9.59" = 24 "</i>	Winter North Atlantic " " <i>78.48" = 199 "</i>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway			Main Cargo Tank Hatchways				Summer Tank Hatchways		
Dimensions of Hatchway			6'4" x 4'2"				6' x 3'6"		
COAMINGS	{	Height above Deck ...	220 x 85 x 13 L				36"		
		Thickness { Sides ...					10 mm		
		Stiffeners							
		Brackets, Stays							
HATCH BEAMS	{	Number	✓				✓		
		Spacing Scantling and Sketch ...							
FORE AND AFTERS	{	Number	✓				✓		
		Spacing Unsupported Lengths ... Scantling* and Sketch ...							
		Bearing Surface							
HATCH COVERS	{	Material	Steel						
		Thickness How fitted Bearing Surface	50 Skipped on top by welded strips 3"x1" Paws fastenings 30 to 32 mm dia, distance 18" to 14"						
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 fiddley, funnel and ventilator coamings:—

2 Stout fidley covas, permanently attached

Particulars of Flush Bunker Scuttles:—

Pump Room Companion of steel, efficiently
lined. W.T. Dorr 18" sill. operated from
both sides

Particulars of Companionways :—

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

enlargers of Ventilators in exposed positions on freeboard and superstructure decks:—
 on Forecastle. 2 detach. posts carried down to upper deck, with ventilator
 holes below the fore deck, ventilating the fore space only.
 Height above fore 3-20 ft. 40 cu. dia., 10 man high.
 on Roop. leading to stow below Roop deck. 8" dia., 6 1/2 man high, 24" height of coaming
 ventilating motor space 35" dia., 8" high, 36" height of coaming

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

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

2 air pipes on Bopp from F.W.D.B tanks 70 up dia., 600 up height & opening
A.P. tanks and F.W.L tanks 50 up dia " " " "

4 -
→ 6 patent air pipes on Bopp from oil tankers, D.B. tankers & engine oil D.B tanks
640 up height & opening

Air pipes closed by Canvas Covers.

Particulars of Gangway Cargo and Coaling Ports:—

how

Particulars of Scuppers and Sanitary Discharge Pipes

ular ^{of} Scuppers and Sanitary Discharge Pipes -
Sanitary discharge pipes from houses on Roops, carried down below
platform deck and a few above platform deck a way
motor space. fitted with C.S. connection at shell & storm valves
- Scuppers in poop space, draining workshops etc under Poop deck
have effective means of closing fitted.

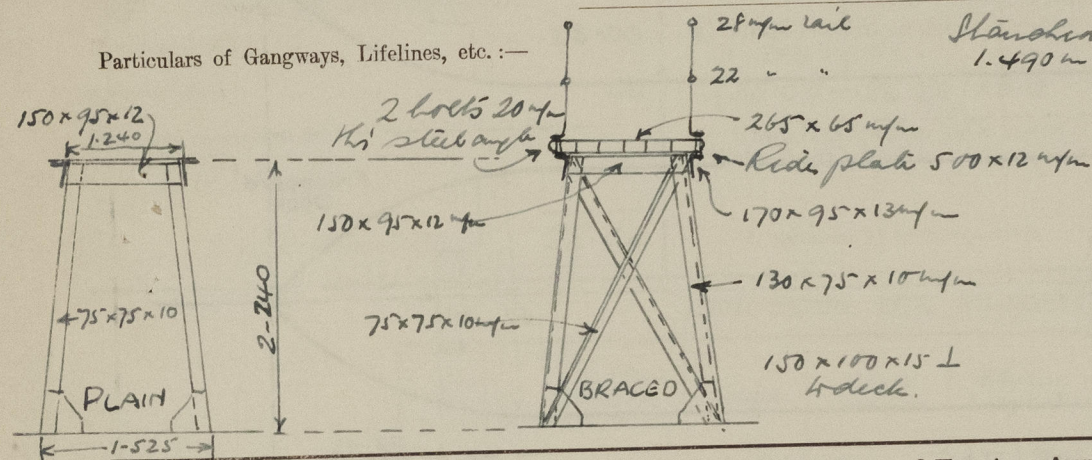
Particulars of Side Scuttles :

None below foreboard deck.
all side scuttles fitted with deadlights.

Particulars of Guard Rails :—

Hanchowia 4-6 apart height 3' 6".
3 was (top 1' 4" + 7/8")

Particulars of Gangways, Lifelines, etc. :—



The Row is berthed aft the
gangway extends from poop to bridge.
Supports spaced 2-570 in apart,
baced and plain alternately
no fore and aft bacing.
no gangway forward of
bridge.

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	op spar rail 99'-8"				99'-8" spar rail.	
Forward Well	bulwark aft 9'-10" Bridge 24'-2" bulwark fore 73'-3"	1-050	36" x 26"	6	36 sq.	

State position of each freeing port ... } After Well:—
(F. and A. position and height above deck edge) } Forward Well:—
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— no shutters
2 bars fitted.

Additional area where sheer is less than standard.

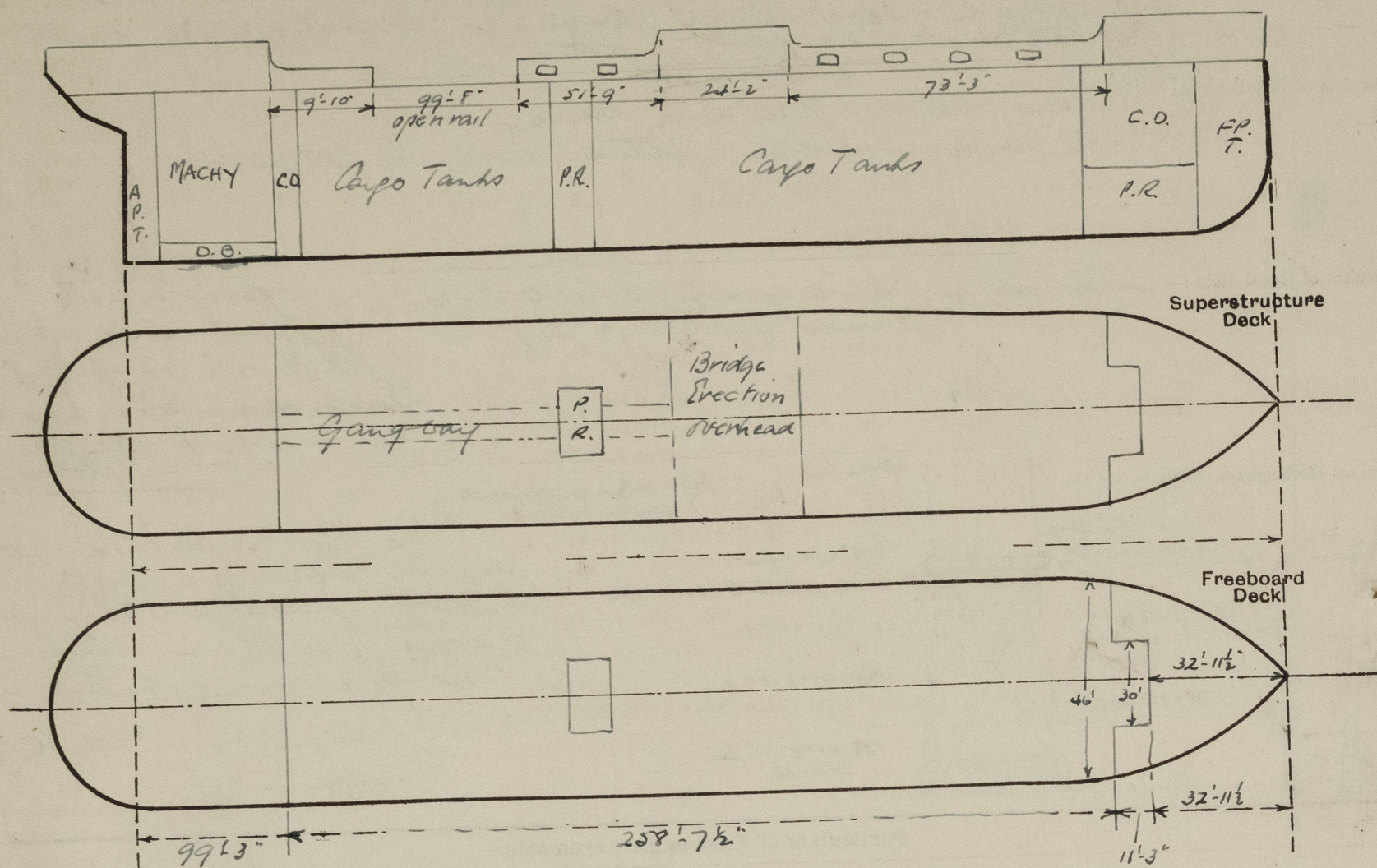
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	610 ym	12 ym	220 x 100 x 17 ym	560 ym	340 top 4600 mm 580 x 630 x 11 ym	1370 x 670 ym	610 ym	2-260
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead	} none Bridge sections overhead							
Bridge, Forward Bulkhead								
Forecastle Bulkhead	-	8 ym	103 x 70 x 8 ym	575 ym	none	1-445 x 680 ym	460 ym	2-330
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super- structure Decks	- { Front sides	.40"	8 x 3 1/2 x .64 C	34"	-		18"	
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ... ..		.30	7 x 3 x .62 C and 40 x 20 x 9	act. 48"				
Deckhouses on Flush Deck Ships ...								

[illegible]

Particulars				Closing App.
Poop Bulkhead	...	...	...	2 H.T. steel hinged doors operated from both sides
Raised Quarter Deck Bulkhead	...			
Bridge, After Bulkhead	...	...
Bridge, Forward Bulkhead	...	...
Forecastle Bulkhead	...	...	...	1 H.T. steel hinged door operated from both sides
Exposed Machinery Casings on Free-board or Raised Quarter Decks	...	...	...
Exposed Machinery Casings on Superstructure Decks	...	...	...	Steel door in alleyway operated from both sides
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:—



FILE. — 32.96
 Side Hrs. 16 x 11.25 — 3.91
 46
 Equiv. bld. 36.87

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

Note. Sheer flat for 23'-10" aft of amidships
 " " " 17'-5" fwd " "

Builder's name and yard number

Maats Eysenrood, Rotterdam

Names of sister ships

Owners

N. V. Maats Motorschips "Katendrecht"
 (N. V. Rhs. van Ommereus's Schep, Beek)

Fee £

Received by me



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