

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

No 21430.

 Computation of Freeboard for ^{Motor -} ~~Steamer, Sailing Ship, Tanker~~
 having poop, bridge and forecastle
Port of Survey Rotterdam

(Type of Superstructures.)

Date of Survey 9/15/9-32

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
M.S. "KOTA GEDE"	Dutch Rotterdam Batavia		7227	9 ^m 1928

Name of Surveyor R. Keesenburg
 Moulded Dimensions: Length 44'8" = 136.64 Breadth 6'6" = 18.44 Depth 33'6" = 10.21^m
 Moulded displacement at moulded draught = 85 per cent. of moulded depth 16110 ^{cu} m tons
 Coefficient of fineness for use with Tables .737
Particulars of Classification + 100 A1

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>10.210</u> ✓	(a) Where D is greater than Table depth (D - Table depth) R = <u>8.33(10.245 - 9.109)30 = +.284</u>	Moulded Breadth (B) <u>18.440</u> Standard Round of Beam = $\frac{B \times 2}{50} = \frac{36.88}{50} = \underline{.7376}$ Ship's Round of Beam = <u>.737</u> Difference = <u>.0006</u>
Stringer plate <u>.011</u> ✓	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Restricted to
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = 57(.416) = \underline{23.8}$ ✓	If restricted by superstructures	Correction = $\frac{\text{Diff}^e}{4} \times (1 - \frac{S_1}{L}) = \frac{.0006}{4} (1 - .572) = \underline{-.0001}$ ✓
Depth for Freeboard (D) = <u>10.245</u> ✓		

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>15.392</u>	<u>15.423</u>	<u>2.243</u>	<u>2.243</u>	<u>15.108</u>
" overhang	<u>15.423</u>			<u>2.240</u>	
R.Q.D. enclosed					
" overhang	<u>45.429</u>	<u>45.429</u>	<u>2.393</u>	<u>2.362</u>	<u>45.429</u>
Bridge enclosed	<u>45.410</u>				
" overhang aft	<u>2.90</u>	<u>2.18</u>			<u>2.18</u>
" overhang forward	<u>7.40</u>	<u>3.70</u>			<u>3.70</u>
Fore enclosed	<u>18.691</u>	<u>15.440</u>	<u>2.317</u>	<u>2.286</u>	<u>15.440</u>
" overhang	<u>15.440</u>	<u>1.271</u>			<u>1.271</u>
Trunk aft	<u>2.542</u>				
" forward					
Tonnage opening aft					
" " forward					
Total	<u>79.864</u>	<u>78.151</u>			<u>77.836</u>

Standard Height of Superstructure 2.290 ✓

" " R.Q.D.

Deduction for complete superstructure 1067 ✓Percentage covered $\frac{S}{L} = \frac{78.151}{136.64} = \underline{.5720}$ ✓" " $\frac{S_1}{L} = \frac{77.836}{136.64} = \underline{.5697}$ ✓" " $\frac{E}{L} = \frac{77.836}{136.64} = \underline{.5697}$ ✓Percentage from Table, Line A.
(corrected for absence of forecastle (if required))Percentage from Table, Line B. 42.97 ✓
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = 1067 + 42.97 = -459

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>1392</u>	1		<u>1392</u>	<u>840</u>	<u>840</u>	1		<u>840</u>
$\frac{1}{4}$ L from A.P.	<u>620</u>	4		<u>2480</u>	<u>367</u>	<u>367</u>	4		<u>1468</u>
$\frac{2}{4}$ L "	<u>153</u>	2		<u>306</u>	<u>91</u>	<u>91</u>	2		<u>182</u>
Amidships		4			<u>0</u>		4		
$\frac{3}{4}$ L from F.P.	<u>306</u>	2		<u>612</u>	<u>380</u>	<u>335</u>	2		<u>670</u>
$\frac{1}{4}$ L "	<u>1239</u>	4		<u>4956</u>	<u>1515</u>	<u>1346</u>	4		<u>5384</u>
F.P.	<u>2784</u>	1		<u>2784</u>	<u>3347</u>	<u>3001</u>	1		<u>3001</u>
Total				<u>12530</u>					<u>11545</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{985}{18} \left(.75 - \frac{2922}{2784} \right) = \underline{+ 25.4}$

If limited on account of midship superstructure.

Mean actual sheer aft = divert ✓
Mean standard sheer aftMean actual sheer forward = less ✓
Mean standard sheer forwardLength of enclosed superstructure forward of amidships = .159" " aft of " = .175

Sheer aft	S.	1392	840	1392	840
	S.	620	367	1239	1515
	S.	153	91	306	380
	S.			459	273
	S.			3711	2214
	S.			59.66	59.66
	S.			9.66	38.64

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 = 10.221 ✓
 Summer freeboard = 2.114 ✓
 Moulded draught (d) = 8.107 ✓

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{48}$ inches = 16.9 ^{mm} ✓

Addition for Winter North Atlantic Freeboard (if required) = ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = \underline{15160}$

Tons per inch immersion at summer load water line

T = 54.1Deduction = $\frac{\Delta}{40T}$ inches= 7.01= 18 ^{cm} ✓

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{.737 + .68}{1.36} = \frac{1.417}{1.36}$

	+	-
Depth Correction	<u>284</u>	
Deduction for superstructures		<u>459</u>
Sheer correction	<u>25</u>	
Round of Beam correction		<u>1</u>
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.	<u>9</u>	<u>24</u>
	<u>309</u>	<u>484</u>

Summer Freeboard = 2.116 = 83.32 ✓SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	<u>35</u> ✓
Fresh Water Line " "	<u>18</u> ✓
Tropical Line " "	<u>17</u> ✓
Winter Line below " "	<u>17</u> ✓
Winter North Atlantic Line " "	<u>1</u> ✓

Tropical Fresh Water Freeboard	<u>177</u> ✓
Fresh Water " "	<u>194</u> ✓
Tropical " "	<u>195</u> ✓
Winter " "	<u>229</u> ✓
Winter North Atlantic " "	<u>212</u> ^{cm} ✓

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway			N ^o I	N ^o II	N ^o III	N ^o IV				
Dimensions of Hatchway			22'-6" x 18'	30'-0" x 18'	35'-0" x 18'	22'-6" x 18'				
COAMINGS	{	Height above Deck ...	30" for all halfways -							
		Thickness { Sides ...	4 1/2"	"	"	"				
		{ Ends ...	4 1/2"	"	"	"				
		Stiffeners ...	2-7 x 3 x 40	"	"					
		Brackets, Stays ...	P ...	2	2	3	2			
HATCH BEAMS	{	Number	4	5	6	4.				
		Spacing	4'-6"	5'-0"	5'-0"	4'-6"				
		Scantling and Sketch ...	16 x 36 plate for all halfways -							
			75 x 100 x 1 1/2" do. do.							
		Bearing Surface ...	3 1/2"							
FORE AND AFTERS	{	Number								
		Spacing								
		Unsupported Lengths ...								
		Scantling* and Sketch ...								
		Bearing Surface ...								
HATCH COVERS	{	Material	Pin all halfways.							
		Thickness	2 1/4"	do	do					
		How fitted	2 longitudinal -	do						
		Bearing Surface ...	3 1/2"	do						
Spacing of Cleats			24"							
Number of Tarpaulins			two	do.						
*Are wood fore and afters steel shod at all bearing surfaces? no fore and afters -										
Are battens and wedges efficient and in good condition? Yes.										
Are tarpaulins in good condition and in accordance with rule requirements? Yes.										
Are lashings provided in accordance with rule requirements? Yes -										

Particulars of fiddle, funnel and ventilator coamings:— *All parts efficiently constructed and good—*

Particulars of Flush Bunker Scuttles:— *None filled.*

Particulars of Companionways:—

One for tween deck entrance under forecabin, under bridge and under poop. See sketch 4'-6" x 30": side 20" to 18" strong wth door hinged and closed at sea not manipulated from both sides.

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

On forecabin deck -	5 th 8 th 15 th 18 th	Coaming . 36" 40	Height 36"	} Bridge Deck Ventilators located above boat deck all post. properly constructed, closed by steel caps and secured combs
In forewell -	9 th 15 th 18 th 20 th 24 th	" " " "	" "	
In afterwell -	8 th 18 th 20 th 24 th	" " " "	" "	
On poop	1 st 20 th	" 40	Height 36"	

further all deck foot. strong and well stayed.

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

Air pipes goosenecks from peak, deep tanks and $\frac{1}{2}$ m tanks on the fore-castle in the wells on the bridge deck and the poop deck 30" to 36" height can all be closed by hinged lids or canvas covers—

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

Particulars of Scuppers and Sanitary Discharge Pipes:— The scuppers are strong steel pipes without non return valves leading 3 feet above turn of the hull.

The sanitary discharge pipes are fitted as per rules efficiently constructed and with non return valves to ship's sides.

Particulars of Side Scuttles:— Side scuttles all of substantial construction. In twin deck and bridge space all rigged deadlights. In fore-castle and poop space all portable deadlights.

Particulars of Guard Rails:—

Steel Bulwark 4 ft. height.

Location	Height	Top Width	Bottom Width
On Forecastle	3	46"	52"
On Bridge	4	44"	48"
On poop	4	42"	52"

Subsidiary constructed

Particulars of Gangways, Lifelines, etc.:— *Ropes rigged up in bad weather.*

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	95 ft.	4'-0"	3'-0" x 1'-5"	4	18 ft ²	19 ft ²
Forward Well	91'-6"	4'-0"	3'-0" x 1'-5"	4	18 ft ²	18.5 ft ²

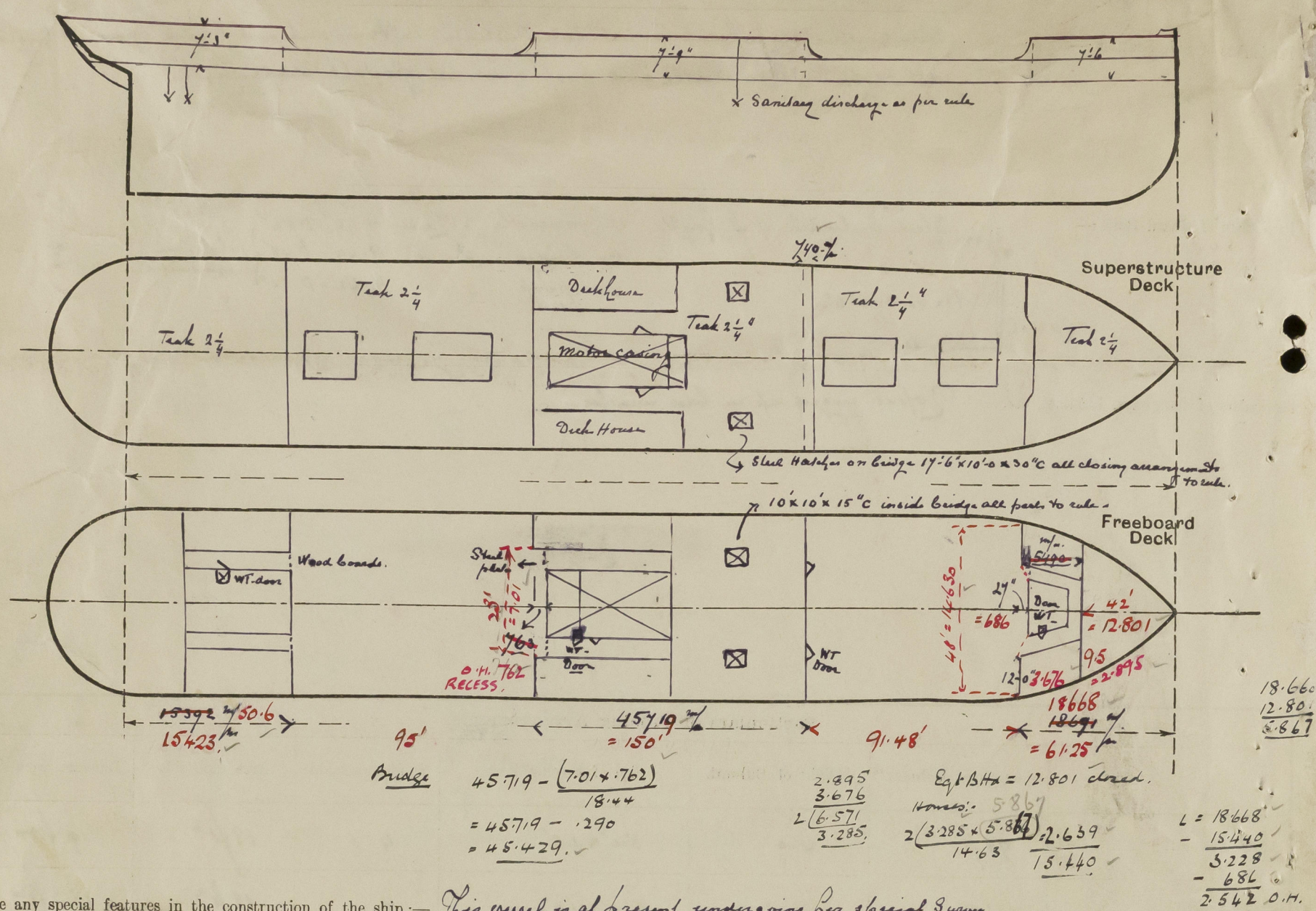
State position of each freeing port equal divided } After Well:— 12" above gunwale
(F. and A. position and height above-deck edge) } Forward Well:— 12" " "
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Guns one strong rod

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	$11\frac{1}{2}$ $\frac{m}{in}$	10 $\frac{m}{in}$	$\angle 170 \times 75 \times 9\frac{1}{2}$	720 $\frac{m}{in}$	large top & bottom	$4'3" \times 4'6"$	none	$7'8"$
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead	8 $\frac{m}{in}$	6 $\frac{m}{in}$	$\angle 75 \times 90 \times 10$	785	none	$3'6" \times 4'9"$	$20"$	$7'9"$
Bridge, Forward Bulkhead	11 $\frac{m}{in}$	10 $\frac{m}{in}$	$\angle 240 \times 90 \times 12\frac{1}{2}$	$30"$	large top and bottom	$4'0" \times 4'9"$	$23"$	"
Forecastle Bulkhead	8 $\frac{m}{in}$	6 $\frac{m}{in}$	$\angle 90 \times 90 \times 10$	750 $\frac{m}{in}$	none -	see sketch		
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	$30"$	26	$\angle 5 \times 2\frac{1}{2} \times 40$	$30"$	$\frac{1}{4}$ top legs	$24" \times 4'4"$	18	
Exposed Machinery Casings on Super-structure Decks	30	26	$\angle 5 \times 2\frac{1}{2} \times 40$	$30"$	"	$30" \times 4'10"$	18	$12'6"$ above Bridge
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).	
Pool Bulkhead	Wood slitting boards in riveted channels 2½" can be supported in centre full height
Raised Quarter Deck Bulkhead ... ✓	
Bridge, After Bulkhead	Portable steel plates closed by hook bolts
Bridge, Forward Bulkhead	Strong WT steel doors on hinges manipulated from outside
Forecastle Bulkhead	Open on shell Open all ways
Exposed Machinery Casings on Free-board or Raised Quarter Decks ... ✓	Steel doors manipulated from both sides
Exposed Machinery Casings on Super-structure Decks	Do
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Do
Deckhouses on Flush Deck Ships ...	Do

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:— This vessel is at present undergoing her special Survey
She is a sister vessel of the M.S. Kota Inden and
built after the same body plan—

Builder's name and yard number. *Maats. Tjennoord. Rotterdam.*

Names of sister ships. *Kota Inden*

Owners. *Rotterdamse Lloyd.*

Fee *f. 183.60.* : Will be Received by me *B. Koenenburgh.*



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Foundation