

KOTA RADJA.

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

16 JUN 1932
Index. No. 32480
(For London Office only.)

N^o 21176.

Computation of Freeboard for Steamer, ^{motor ship} ~~Sailing Ship, Tanker~~

having Poys, bridge and forecastle

(Type of Superstructures.)

Port of Survey Rotterdam

Date of Survey 3/6 - 1932

Name of Surveyor J. V. Verwey

Particulars of Classification + 100 A1

Ship's Name KOTA INTEN Nationality and Port of Registry Dutch Rotterdam Gross Tonnage 7191 Date of Build 1927

Moulded Dimensions: Length 448'4" Breadth 60'6" Depth 33'6"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 16110 M³ tons

Coefficient of fineness for use with Tables 737 = 35.315 Cargo oiler above 150 ft. in depth tanks.

Depth for Freeboard (D) 33'50" 33'6"

Moulded depth ... 33'50" 33'6"

Stringer plate ... 04 .44

Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$.08

$\left(\frac{107.5 + 87}{448.32} \right) \cdot 18$

Depth for Freeboard (D) = 33'62"

Depth correction

(a) Where D is greater than Table depth (D-Table depth) R = (33'62" - 29'89") 3 = + 11'19"

(b) Where D is less than Table depth (if allowed) (Table depth-D) R =

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) 60'6" ✓

Standard Round of Beam = $\frac{B \times 12}{50} =$ 14'52" ✓

Ship's Round of Beam = 15' ✓

Difference .48 ✓

Restricted to

Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right) =$.48 $\left(1 - \frac{53'3}{448} \right) =$ -.06 ✓

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	<u>58.08</u>	<u>58.08</u>	<u>7.43</u>	<u>7.43</u>	<u>57.54</u>	✓
„ overhang ...	<u>58.1</u>		<u>7.25</u>	<u>7.5</u>		
R.Q.D. enclosed ...						
„ overhang ...	<u>122.50</u>					
Bridge enclosed ...	<u>130.</u>	<u>122.50</u>	<u>7.75</u>		<u>122.50</u>	✓
„ overhang aft ...	<u>5.</u>	<u>3.75</u>			<u>3.75</u>	✓
„ overhang forward ...	<u>2.5</u>	<u>4.25</u>			<u>1.25</u>	✓
F'cle enclosed ...	<u>65.75</u>	<u>44.83</u>	<u>7.68</u>		<u>44.83</u>	✓
„ overhang ...	<u>44.83</u>	<u>10.46</u>	<u>7.5</u>		<u>10.46</u>	✓
Trunk aft ...	<u>20.92</u>					
„ forward ...						
Tonnage opening aft ...						
„ „ forward ...						
Total ...	<u>253.83</u>	<u>240.87</u>			<u>240.33</u>	✓

Standard Height of Superstructure 7.50 ✓

„ „ R.Q.D.

Deduction for complete superstructure 42.0 ✓

Percentage covered $\frac{S}{L} =$ 56.62 ✓

„ „ $\frac{S_1}{L} =$ 53.73 ✓

„ „ $\frac{E}{L} =$ 53.61 ✓

Percentage from Table, Line A. (corrected for absence of forecastle (if required))

Percentage from Table, Line B. (corrected for absence of forecastle (if required)) 39.61 ✓

Interpolation for bridge less than 2L (if required)

Deduction = 42 + .3961 = - 16.64 ✓

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<u>54.83</u>	1		<u>54.83</u>	<u>2'9"</u>	<u>33'0</u>	1		<u>33.00</u>	✓
$\frac{1}{2}$ L from A.P. ...	<u>24.40</u>	4		<u>97.60</u>	<u>1'22"</u>	<u>14'61</u>	4		<u>58.44</u>	✓
$\frac{3}{4}$ L „ ...	<u>6.03</u>	2		<u>12.06</u>	<u>35/8</u>	<u>3'64</u>	2		<u>7.28</u>	✓
Amidships ...		4					4			
$\frac{3}{4}$ L from F.P. ...	<u>12.06</u>	2		<u>24.12</u>	<u>1'3"</u>	<u>14'91</u>	2		<u>26.42</u>	✓
$\frac{1}{2}$ L „ ...	<u>48.80</u>	4		<u>195.20</u>	<u>4'11 5/8</u>	<u>59'64</u>	4		<u>212.64</u>	✓
F.P. ...	<u>109.66</u>	1		<u>109.66</u>	<u>10'11 1/4</u>	<u>131'75</u>	1		<u>118.54</u>	✓
Total ...				<u>493.47</u>					<u>456.32</u>	✓

Mean actual sheer aft = deficient

Mean standard sheer aft

Mean actual sheer forward = 2 excess

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = .154

„ „ aft of „ = .119

$\frac{S}{L} =$ 54.83 33.00

$\frac{S_1}{L} =$ 24.40 14.41 3 73.20 43.83

$\frac{E}{L} =$ 6.03 3.64 3 18.09 10.92

$\frac{S}{L} =$ 146.12 87.75

$= 60.05\%$

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ $\frac{37.15}{18} (.75 - .2831) = + .96$ ✓

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 33'54 ✓

Summer freeboard = 4'06 ✓

Moulded draught (d) = 26'48 ✓

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6'62 ✓

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line $\Delta =$ 15026 ✓

Tons per inch immersion at summer load water line $T =$ 54.1 ✓

Deduction = $\frac{\Delta}{40T}$ inches = 6'94 ✓

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{737 + 68}{136} = \frac{1.417}{1.36}$ ✓

Depth Correction ... 11'19 ✓

Deduction for superstructures ... 16'64

Sheer correction96 ✓

Round of Beam correction06 ✓

Correction for Thickness of Deck amidships96 ✓

Other corrections, scantlings, etc. ...

12.15 17.66 - 5.51

Summer Freeboard = 84.71 ✓

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

Tropical Fresh Water Line above Centre of Disc	<u>13'56</u>	<u>24</u>	Tropical Fresh Water Freeboard	<u>71'15</u>	<u>187'160</u>
Fresh Water Line	<u>6'94</u>	<u>18</u>	Fresh Water	<u>77'77</u>	<u>197</u>
Tropical Line	<u>6'62</u>	<u>17</u>	Tropical	<u>78'09</u>	<u>198</u>
Winter Line below	<u>6'62</u>	<u>17</u>	Winter	<u>91'33</u>	<u>2320</u>
Winter North Atlantic Line	<u>6'62</u>	<u>17</u>	Winter North Atlantic	<u>91'33</u>	<u>2320</u>

10 JUN 1932

5m, 3, 32.

MARKING FORM
RECEIVED 10 FEB 1936
Lloyd's Register
RECEIVED 22.8.33
003458-003465-0089 1/2

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	...	...	N ^o 1	N ^o 2	N ^o 3	N ^o 4				
Dimensions of Hatchway	...	...	22'-6" x 16'-0"	30'-0" x 16'-0"	35'-0" x 16'-0"	24'-6" x 16'-0"				
COAMINGS	{ Height above Deck Thickness { Sides Ends Stiffeners Brackets, Stays	...	30"	30"	30"	30"				
		...	.44	.44	.44	.44				
		...	.44	.44	.44	.44				
		...	2	2	3	2				
HATCH BEAMS	{ Number Spacing Scantling and Sketch 7 1/2 14 x 34 3 1/2 x 3 x .42	...	44'-6"	5'-0"	5'-0"	4'-11"				
		...	14 x 34	for all hatchways	for all hatchways	for all hatchways				
		...	3 1/2	3 1/2	3 1/2	3 1/2				
		...	3 1/2	3 1/2	3 1/2	3 1/2				
FORE AND AFTERS	{ Number Spacing Unsupported Lengths Scantling* and Sketch Bearing Surface	...								
		...								
		...								
		...								
HATCH COVERS	{ Material Thickness How fitted Bearing Surface	...	2 1/2	2 1/2	2 1/2	2 1/2				
		...	2 1/2	2 1/2	2 1/2	2 1/2				
		...	3 1/2	3 1/2	3 1/2	3 1/2				
		...	3 1/2	3 1/2	3 1/2	3 1/2				
Spacing of Cleats	...	...	24	24	24	24				
Number of Tarpaulins	...	...	two	two	two	two				
*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/> none fitted Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/> Yes Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/> Yes Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/> Yes										

Particulars of fiddley, funnel and ventilator coamings:—

main casing top in efficient condition
funnel and ventilators in efficient condition.
main skylight of steel with steel hinged flaps
strongly constructed.

Particulars of Flush Bunker Scuttles:—

none fitted

Particulars of Companionways :—

One in way of bridge and one in way of fore-castle
(see sketch) strongly constructed with steel w.t. don
on hinges, screw down arrangement.
height of tiller 21" size of don 4'10" x 2'6"

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

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

An pump	An forecstle 3 ventilators	3'6" x 14" x .36	and one	3'0" x 18" x .38	to forepeak space and hold
2 ventilators 30" x 12" x .36"	in forewell {	8 " "	3'0" x 18" x .40 "	2	3'0" x 14" x .40 to holds
1 " 30" x 20" x .40	" {	2 " "	30'0" x 26" x .50		to hold. clerich ports supported and stayed.
to hold and tween deck	will aft {	4 " "	10'6" x 8" x .36 "	" "	supported
		8 " "	3'0" x 18" x .40 "	" "	
		1 " "	3'0" x 2'0" x .50 "	" "	
		1 " "	12'0" x 18" x .44 "	✓ "	supported. all strongly constructed & service panel closed by

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

es in exposed positions on freeboard, raised quarter, or superstructure decks:—

An fore-castle	1	goose-neck	27" to mouth	to bottom tanks and forepeak	covered.
" forewell	{ 6	"	26" to 32" to mouth	" "	strong
	{ 4	"	31" to mouth	to deep tank close with	steel hinges
on well aft	{ 4	"	31" " "	" " " "	" air tight flaps
	{ 7	"	32" to 36" "	to bottom tanks.	all goose necks strongly constructed double
On poop.	4	"	30" to mouth	to bottom tanks close of forepeak.	closed by covers

Particulars of Gangway Cargo and Coaling Ports :—

name

Particulars of Scuppers and Sanitary Discharge Pipes :— 2 scuppers in forewell 3 feet above tween deck
4 " " well aft 3 " " "
1 " " from bridge deck 1 1/2 " " "
Sanitary discharge pipes with non return valves on ship side
for position see sketch. 2'-0" above tween deck
on S.B. 5 on P.S. 4.

Particulars of Side Scuttles :— In tween deck aft and forward, poop, forecabin and bridge
side scuttles of substantial construction with cleancights
permanently attached.

Particulars of Guard Rails :— 6 1/2 x 3 x .40 steel bulwark 4'-0" height
4'-0" 3° 7 x 3/8 spaced 4'-6" double angles

On poop forecabin and bridge guard rail height 4'-3" x 4'-7" x 7

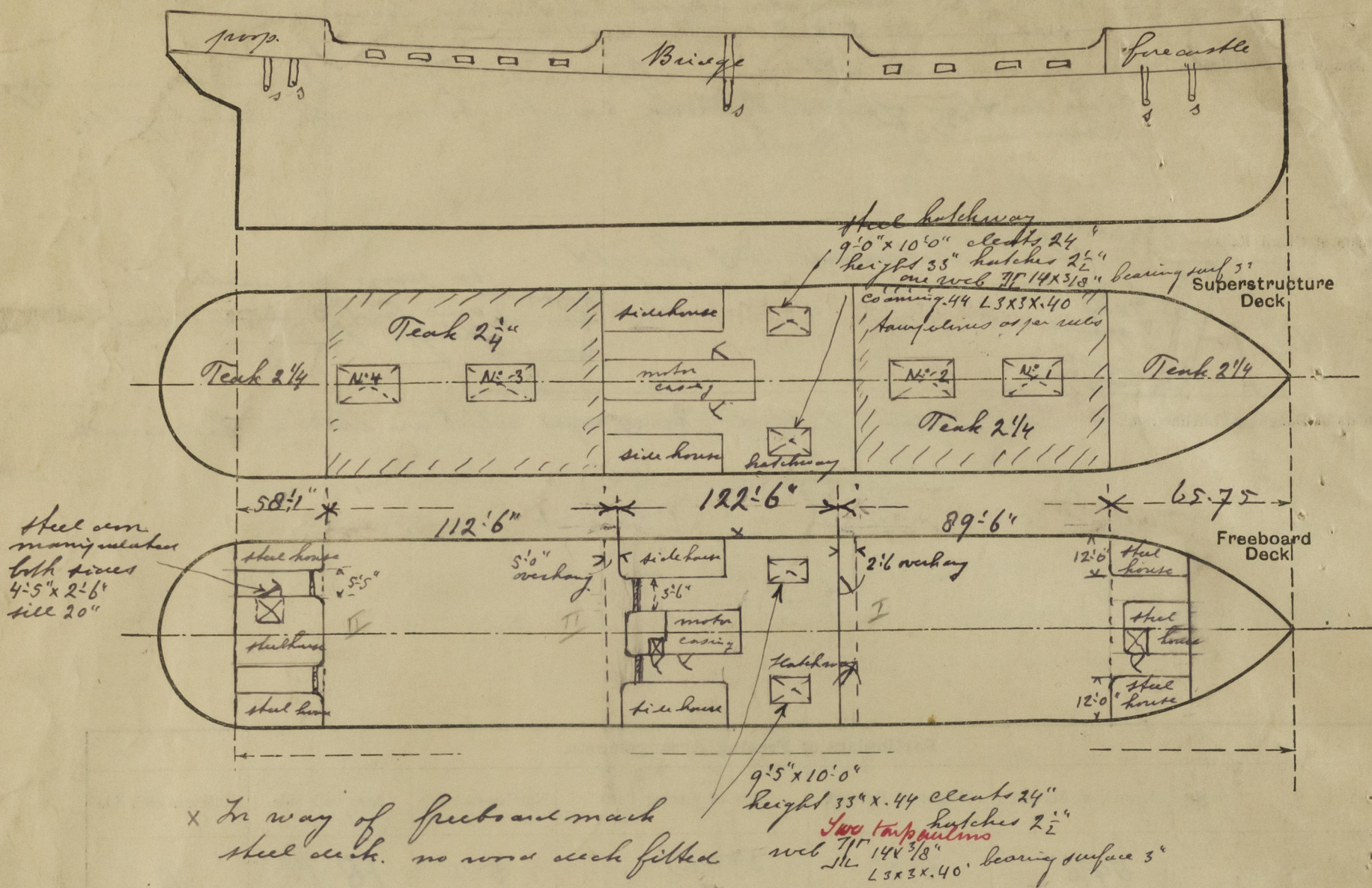
Particulars of Gangways, Lifelines, etc. :— Lifelines fitted hemp ropes which are used in bad weather.

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	89'-6"	4'-0"	3'-0" x 1'-5"	4 5 4	18 ft ²	18 ✓
Forward Well	112'-5"	4'-0"	3'-0" x 1'-5"	5 4 5	22 ft ²	23 or 8.
State position of each freeing port } After Well :— 12" above deck (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 :— open, one rod, and angle rims 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 1/2"	10"	C 170 x 75 x 9 1/2"	720"	large top bottom	5'-5" x 7'-6"	none	
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead	8"	6"	L 75 x 90 x 10	785"	none	3'-6" x 7'-6"	none	
Bridge, Forward Bulkhead ... ..	.44	.40	C 240 x 90 x 12 1/2"	30"	large top. btm	4'-0" x 4'-9"	22	
Forecastle Bulkhead	8"	6"	L 90 x 90 x 10	750"	none			
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	.30	.26	L 5 x 2 1/2 x .40	30"	top	4'-4" x 2'-0"	18	16'-6"
Exposed Machinery Casings on Super-structure Decks bridge deck	.30	.26	L 5 x 2 1/2 x .40	30"		4'-10" x 2'-3"	18	above bridge deck
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	wood shifting boards in riveted channel for full height of opening. can be supported in centre
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead	wood shifting boards in riveted channel for full height of opening
Bridge, Forward Bulkhead	steel w. t. hinged door manipulated from both sides
Forecastle Bulkhead	open see sketch.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	steel door manipulated from both sides
Exposed Machinery Casings on Super-structure Decks bridge deck	steel " " " " " "
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:—

The vessel has been encased in dry dock
Displacement on present displacement scale in way of summerloadwaterline 15000 tons in salt water.
Tons per inch in way of summerloadwaterline 54.1

$$\frac{50}{10.05 \div 25} = 60.05\%$$

$$= 40.21\%$$

ord	4	5	6	7
act	0	14.61	59.64	131.75
std	0	12.06	48.80	109.66
diff		2.55	10.84	22.09
x 40.21%		1.05	4.36	8.88
stand		12.06	48.80	109.66
		13.21	53.16	118.54

Builder's name and yard number *Maatschappij van Scheeps en Werktuigbouw Teynond*

Names of sister ships *Applicatie form sent herewith*

Owners *Rotterdamsche Lloyd.*

Fee *not yet charged* Received by me



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