

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

 Index. No. **33854**
 (For London Office only.)

19 JAN 1933

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having a Tare Castle - Bridge and Poopdeck

(Type of Superstructures.)

Ship's Name M.V. TARAKAN	Nationality and Port of Registry Dutch AMSTERDAM	Official Number 8103	Gross Tonnage 1930	Date of Build 12 mo
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Moulded Dimensions: Length 46.50 Breadth 6.20 Depth 3.4 3/4 **11.094**

Moulded displacement at moulded draught = 85 per cent. of moulded depth 10312 **18150 M³** tons

Coefficient of fineness for use with Tables .718

Port of Survey Amsterdam

Date of Survey 18th January '33

Name of Surveyor H. P. Jonker

Particulars of Classification +100 A1

Depth for Freeboard (D) **11.094**

Moulded depth ... Amidships ... **3.4 3/4**

Stringer plate ... **11**

Sheathing on exposed deck

$T \left(\frac{L-S}{L} \right) = 70 \times 4.468$ **31**

Depth for Freeboard (D) = **11.136**

Depth correction

(a) Where D is greater than Table depth (D-Table depth) R = **8.33(11.136-9.449)30 = 422**

(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) **18.90 6.20**

Standard Round of Beam = $\frac{B \times 12}{50} = 378$

Ship's Round of Beam = **381.75**

Difference **3**

Restricted to

Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S}{L}\right) = \frac{3^2}{4} \times (.4632) = .11$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	<u>12.31</u>	12.31	<u>2.36</u>		12.31	Standard Height of Superstructure <u>2.290</u>
„ overhang ...	<u>4.0 1/2</u>		<u>4.9</u>			„ „ R.Q.D.
R.Q.D. enclosed ...						Deduction for complete superstructure <u>1.067</u>
„ overhang ...						Percentage covered $\frac{S}{L} = 55.32$
Bridge enclosed...	<u>46.53</u>	46.53	<u>3.44</u>		46.53	„ „ $\frac{S_1}{L} = 54.20$
„ overhang aft ...	<u>1.52</u>	1.54	<u>1.14</u>		1.54	„ „ $\frac{E}{L} = 54.20$
„ overhang forward	<u>3.18</u>	.40	<u>.40</u>		.40	Percentage from Table, Line A.
Fore enclosed ...	<u>56.63</u>	15.63	<u>2.36</u>		15.63	(corrected for absence of forecastle (if required))
„ overhang ...	<u>1.60</u>	.80	<u>.80</u>		.80	Percentage from Table, Line B. <u>40.20</u>
Trunk aft ...						(corrected for absence of forecastle (if required))
„ forward ...						Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...						Deduction = -429.
„ „ forward						
Total ...	<u>78.40</u>	<u>76.81</u>			<u>76.81</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product	
A.P. ...	1,435	1	1,435	<u>54 5/8</u>	1,419	1	1,419	Mean actual sheer aft = <u>Deficient 775%</u>
1/4 L from A.P. ...	637	4	2,548	<u>23 7/8</u>	584	4	2,336	Mean actual sheer forward = <u>Excess</u>
3/4 L „ ...	159	2	318	<u>2 3/4</u>	71	2	142	Mean standard sheer forward
Amidships ...	✓	4	✓	0	✓	4	✓	Length of enclosed superstructure forward of amidships = <u>7.1 L</u>
3/4 L from F.P. ...	319	2	638	<u>19</u>	467	2	934	„ „ aft of „ = <u>7.1 L</u>
1/4 L „ ...	1,275	4	5,100	<u>64 1/2</u>	1,600	4	6,400	
F.P. ...	2,869	1	2,869	<u>133 3/8</u>	3,343	1	3,343	
Total ...			<u>12,908</u>				<u>14,574</u>	

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{1,666}{18} (.75 - .2766) = -.44$$

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 = 11.105

Summer freeboard = 2.310

Moulded draught (d) = 8.795

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{48}$ inches = 183 = 18 cm.

Addition for Winter North Atlantic Freeboard (if required =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 16,978 \text{ M}^3$

Tons per inch immersion at summer load water line

$T = 21.76$

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

= 19.51

= 20 cm.

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... 422

Deduction for superstructures ... 429

Sheer correction ... 44

Round of Beam correction ... 31

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

2,329.

2,394.

	+	-
Depth Correction	422	
Deduction for superstructures		429
Sheer correction		44
Round of Beam correction		
Correction for Thickness of Deck amidships		31
Other corrections, scantlings, etc.		
	422	504

Summer Freeboard = 2,312.

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

Tropical Fresh Water Line above Centre of Disc ...	<u>38 cm</u>	Tropical Fresh Water Freeboard ...	<u>231 cm</u>
Fresh Water Line „ „ ...	<u>20</u>	Fresh Water „ „ ...	<u>193</u>
Tropical Line „ „ ...	<u>18</u>	Tropical „ „ ...	<u>211</u>
Winter Line below „ „ ...	<u>18</u>	Winter „ „ ...	<u>213</u>
Winter North Atlantic Line „ „ ...	<u>18</u>	Winter North Atlantic „ „ ...	<u>249</u>

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	N1	N2	N3	N4	N5	N6	N7	N8	N9
Dimensions of Hatchway	24-0 x 30-0	32-0 x 20-0	32-0 x 20-0	20-0 x 20-0	26-0 x 20-0	24-0 x 18-0	32-0 x 20-0	20-0 x 20-0	
COAMINGS									
Height above Deck	30	30	9	30	30	30	30	30	
Thickness	.44	.44	.44	.44	.44	.44	.44	.44	
Stiffeners	4 x 3 x .40	4 x 3 x .40	4 x 3 x .40	4 x 3 x .40	4 x 3 x .40	4 x 3 x .40	4 x 3 x .40	4 x 3 x .40	
Brackets, Stays	3	3	none	3	3	3	3	3	
HATCH BEAMS									
Number	4	5	5	2	4	4	5	5	
Spacing	5-5"	5-5"	5-5"	5-5"	5-5"	5-5"	5-5"	5-5"	
Scantling and Sketch	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	
Top angle	19/2 x .36	19/2 x .36	19/2 x .36	19/2 x .36	19/2 x .36	19/2 x .36	19/2 x .36	19/2 x .36	
Bottom angle	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	
Bearing Surface	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	15	15	15	15	15	15	15	15	
Spacing	30	30	30	30	30	30	30	30	
Unsupported Length	30	30	30	30	30	30	30	30	
Scantling and Sketch	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	4 x 3 x .44	
Bearing Surface	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	
HATCH COVERS									
Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	
Thickness	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	
How fitted	Longitudinal	Longitudinal	Longitudinal	Longitudinal	Longitudinal	Longitudinal	Longitudinal	Longitudinal	
Bearing Surface	3	3	3	3	3	3	3	3	
Spacing of Cleats	24	24	24	24	24	24	24	24	
Number of Tarpaulins	400	400	400	400	400	400	400	400	

Particulars of fiddle, funnel and ventilator coamings: — Fiddle hatches on casing top fitted with steel hinged covers. Engine room skylight of steel strongly constructed. Fiddle and funnel ventilators in efficient condition.

Particulars of Flush Bunker Scuttles: — Companionways

Companionway on Freeboard deck in forward well to tween decks. W.T. steel door in fore castle bulkhead 3-4 x 5-9" sill 10" above wood deck. door operated from one side. Hatchway in forward well to tween deck 2-6" x 4-3" coaming L 10 x 3/2 x .44 W.T. steel cover. 44

Particulars of Companionways: — Hatchway on Fore castle deck 4-3" x 4-3" coaming L 10 x 3/2 x .46 W.T. steel cover. 40. On Bridge deck: steel companionway; wood door 26 x 60 x 1 1/2" thick, sill 16" door closed, operated from both sides. On Hatchway 6-0 x 4-0, coaming 29 x 40 hatches 2 3/4" pine bearing 3" battening down arrangement fitted as required. On Hatchway 6-0 x 4-0 and one 3-6 x 2-0 coaming L 10 x 3/2 x .46 W.T. steel cover. 40. On Poop deck, steel deck house, wood door 61/2 x 25 x 1 1/2" thick sill 9" door closed and operated from both sides.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks: — On Fore castle deck goose neck ventilators 20 x 6" diam vent: 32 x 18" diam x .40 and 32 x 12" diam x .36. to holds, tween decks and store rooms above peak tank. On Bridge deck: vent: 33 x 18" diam x .40, vent: 33 x 12" diam x .40 and goose neck vent: 20 x 6" diam to holds and tween decks and vent: 30 x 24" diam x .40 to motor room. On Poop deck: vent: 33 x 18" diam x .40 and 33 x 12" diam x .40. 2 goose neck vent 20 x 6" diam to holds and tween decks. On forward and after well vent: 33 x 20" diam, 16" diam, and 8" diam x .40 and goose neck ventilators 20 x 6" diam to holds and tween decks.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks: — On Fore castle deck air pipes to tanks 24 x 4" diam. On forward well air pipes to tanks 26" to 34 x 3 1/2" diam. On Bridge deck air pipes to tanks 26 x 3 1/2" diam. On after well air pipes to tanks 26 x 3 1/2" diam. On Poop deck air pipes to tanks 26 x 3 1/2" diam. All air pipes and goose neck vent: are provided with canvas covers for closing the openings. All ventilators are provided with wooden hatches and canvas cover as required.

Particulars of Gangway Cargo and Coaling Ports: —

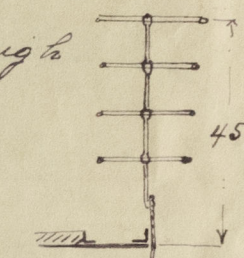
Particulars of Scuppers and Sanitary Discharge Pipes — Foreward and after well discharged through shipside by scupper pipes 4" diam. All sanitary discharge pipes discharged through shipside below freeboard deck and are provided with storm valves as required.

Particulars of Side Scuttles: —

Side scuttles to spaces below superstructure decks and freeboard deck are provided with deadlights permanently attached in their proper position.

Particulars of Guard Rails: —

Open rail on Fore castle and Poop deck 45" high. Bulwork on Bridge deck 46" high.



Particulars of Gangways, Lifelines, etc.: —

Life line fitted in forward and after well as required.

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	117-4"	45"	8'- x 2'- 12'- x 2'-	1 2	63 ft ²	24 ft ²
Forward Well	96-1"	45"	12'- x 2'-	3	72 ft ²	20 ft ²

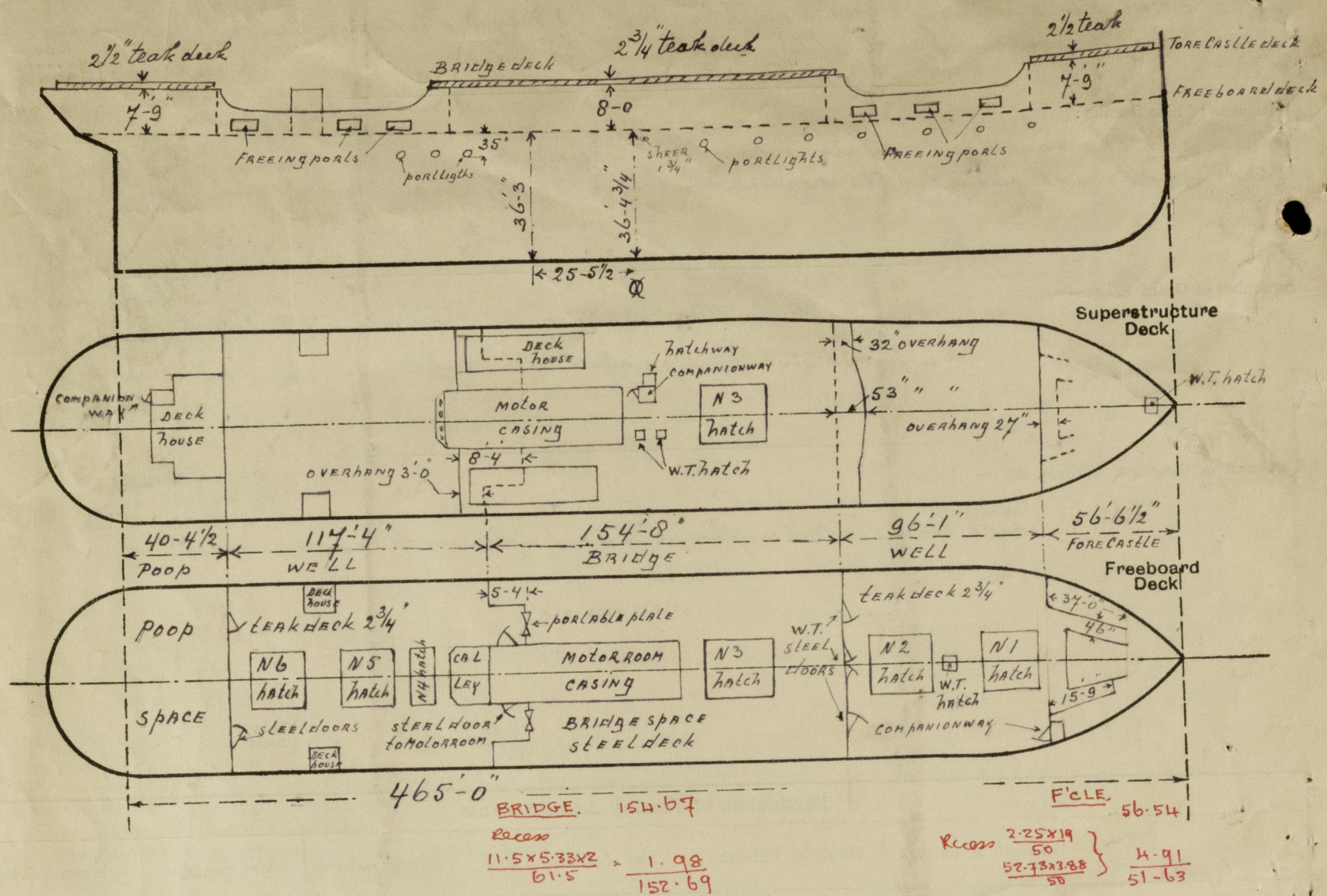
State position of each freeing port ... After Well: — height above deck edge 9"
(F. and A. position and height above deck edge) Forward Well: — height above deck edge 9"
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — bars fitted spaced 6 1/2" apart
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	10 x 3/2 x .46	.40	6 x 3 x .42	36	angle lugs top & bottom	24 x 69"	8"	4-9
Raised Quarter Deck Bulkhead	10 x 3/2 x .46	.40	6 x 3 x .42	36	angle lugs top & bottom	24 x 69"	8"	4-9
Bridge, After Bulkhead	10 x 3/2 x .46	.24	3 x 2 1/2 x .28	10"	none	5-0" x 5-11"	6"	8-0
Bridge, Forward Bulkhead	10 x 3/2 x .50	.40	9 x 3/2 x .56	24 to 30	angle lugs top & bottom	2-6" x 5-4"	13"	8-0
Forecastle Bulkhead	10 x 3/2 x .46	.24	2 1/2 x 2 1/2 x .28	30	none	3-10" x 4-9"	none	4-9
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard	10 x 1.50	.30	4 x 2 1/2 x .30	32	continuous	3-0" x 4-10"	2"	8-0
Exposed Machinery Casings on Superstructure Decks	10 x 1.34	.30	4 x 2 1/2 x .30	32	" " "	none	"	4-9
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	10 x 1.50	.30	4 x 2 1/2 x .30	32	" " "	none	"	8-0
Deckhouses on Flush Deck Ships								

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

Poop Bulkhead	Steel hinged doors capable of being closed and operated from both sides.
Raised Quarter Deck Bulkhead	Steel hinged doors capable of being closed and operated from both sides.
Bridge, After Bulkhead	Portable plate fastened with hook bolts spaced ± 14" apart not passing through the bulkhead.
Bridge, Forward Bulkhead	Steel hinged W.T. doors capable of being manipulated from one side.
Forecastle Bulkhead	Openings not closed (opening gangway see sketch).
Exposed Machinery Casings on Freeboard	Steel hinged doors capable of being closed and operated from both sides.
Exposed Machinery Casings on Superstructure Decks	no openings.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	no openings.
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 shown on the following sketches:—



The vessel has been examined afloat

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

But will be placed in dry dock on 21st of January 1933

Builder's name and yard number. *Maats. Tjensoord Rotterdam Yard N° 310*

Names of sister ships. *M.S. Tawali, Tajandoen, Tabian, Tabenta, Talisse*

Owners. *N.V. Stoomvaart Maatschappij Nederland.*

Fee £ 192:—

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