

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

 No. 12858
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 (For London Office only.)

11 JAN 1933

 Computation of Freeboard for Steamer, Sailing Ship, Tanker
 having Tore castle, Bridge and Poopdeck
Port of Survey AmsterdamDate of Survey 10th January 1933Name of Surveyor H. P. JonkerParticulars of Classification + 100 A1
 (Type of Superstructures.)
 Ship's Name M.V. TABIAN Nationality and Port of Registry Netherlands Amsterdam Gross Tonnage 8151 Date of Build 1930
 Moulded Dimensions: Length 141.73 m Breadth 18.95 m Depth 36.44 m
 Moulded displacement at moulded draught = 85 per cent. of moulded depth 18370 16³ tons
 Coefficient of fineness for use with Tables 718

 Depth for Freeboard (D) M
 Moulded depth ... amidship ... 36.44
 Stringer plate ... 25-52 ABFT amidship ... 36.3
 Sheathing on exposed deck ... 11
 $T \left(\frac{L-S}{L} \right) = 70 \times .4468 = 31$
 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 59.3
 Standard Round of Beam = $\frac{B \times 12}{50} = 378$
 Ship's Round of Beam = 15 381
 Difference 3
 Restricted to
 Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{3}{4} \times .4632 = 1.1$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>12.31</u>	<u>12.31</u>	<u>2.36</u>	<u>4.9</u>	<u>12.31</u>
„ overhang ...	<u>40.4 1/2</u>				
R.Q.D. enclosed ...					
„ overhang ...	<u>46.53</u>		<u>2.44</u>		
Bridge enclosed ...	<u>154.8</u>	<u>46.53</u>	<u>8.0</u>		<u>46.53</u>
„ overhang aft ...	<u>1.52</u>	<u>1.52</u>			<u>1.14</u>
„ overhang forward ...	<u>2.81</u>	<u>40</u>	<u>2.36</u>		<u>40</u>
Fore enclosed ...	<u>56.63</u>	<u>15.63</u>	<u>4.9</u>		<u>15.63</u>
„ overhang ...	<u>see sketch</u>	<u>8.0</u>			<u>8.0</u>
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward					
Total ...	<u>78.40</u>	<u>76.81</u>			<u>76.81</u>

 Standard Height of Superstructure 2.290
 „ „ R.Q.D. ✓
 Deduction for complete superstructure 1067
 Percentage covered $\frac{S}{L} = 55.32$
 $\frac{S_1}{L} = 54.20$
 $\frac{E}{L} = 54.20$
 Percentage from Table, Line A. ✓
 (corrected for absence of forecastle (if required))
 Percentage from Table, Line B. 40.20
 (corrected for absence of forecastle (if required))
 Interpolation for bridge less than 2L (if required)
 Deduction = $1067 \times .402 = -429$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>1435</u>	1		<u>1435</u>	<u>5478</u>	<u>1419</u>	1		<u>1419</u>
1/2 L from A.P. ...	<u>637</u>	4		<u>2548</u>	<u>2378</u>	<u>584</u>	4		<u>2336</u>
2/2 L „ ...	<u>159</u>	2		<u>318</u>	<u>274</u>	<u>71</u>	2		<u>142</u>
Amidships ...	<u>—</u>	4		<u>—</u>	<u>0</u>	<u>—</u>	4		<u>—</u>
3/2 L from F.P. ...	<u>319</u>	2		<u>638</u>	<u>49</u>	<u>467</u>	2		<u>934</u>
1/2 L „ ...	<u>1275</u>	4		<u>5100</u>	<u>6472</u>	<u>1600</u>	4		<u>6400</u>
F.P. ...	<u>2869</u>	1		<u>2869</u>	<u>13378</u>	<u>3343</u>	1		<u>3343</u>
Total ...				<u>12908</u>					<u>14574</u>

 Mean actual sheer aft = Deficient > 75%
 Mean standard sheer aft

 Mean actual sheer forward = Excess
 Mean standard sheer forward

 Length of enclosed superstructure forward of amidships = > .1 L

 „ „ aft of „ = > .1 L

 Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{1666}{18} (.75 - .2766) = -44$
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 = 2.360
 Moulded draught (d) = 8.795

Deduction for Tropical freeboard and addition for

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

Addition for Winter North Atlantic Freeboard (if required =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 16978 \text{ m}^3$

Tons per inch immersion at summer load water line

T = 21.76Deduction = $\frac{\Delta}{40 T}$ inches= 19.5120 cm

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{7.18 + 6.80}{1.36} = \frac{13.98}{1.36}$ Depth Correction ... 422Deduction for superstructures ... 429Sheer correction ... 44Round of Beam correction ... 31Correction for Thickness of Deck amidships ... —Other corrections, scantlings, etc. ... —

422 504 = 82

Summer Freeboard = 2312

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

 Tropical Fresh Water Line above Centre of Disc ... 38
 Fresh Water Line „ „ ... 20
 Tropical Line „ „ ... 18
 Winter Line below „ „ ... 18
 Winter North Atlantic Line „ „ ... —

 Tropical Fresh Water Freeboard ... 193
 Fresh Water „ „ ... 211
 Tropical „ „ ... 213
 Winter „ „ ... 249
 Winter North Atlantic „ „ ... —

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
ON FREE BOARD DECK									
Description of Hatchway	N°1	N°2	N°3	N°4	N°5	N°6	N°7	N°8	N°9
Dimensions of Hatchway	27'-0" x 20'-0"	32'-0" x 20'-0"	32'-0" x 20'-0"	13'-4" x 20'-0"	26'-8" x 20'-0"	24'-0" x 18'-0"	32'-0" x 20'-0"	20'-0" x 20'-0"	20'-0" x 20'-0"
COAMINGS	Height above Deck	30	30	9	30	30	30	30	30
	Thickness	.44	.44	5/8 x 3/2	.44	.44	.44	.44	.44
	Sides	.44	.44	2.40	.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
HATCH BEAMS	Number	4	5	5	2	4	4	5	5
	Spacing	5'-5"	5'-4"	5'-4"	5'-4"	5'-4"	5'-4"	5'-4"	5'-4"
	Scantling and Sketch	4 x 3 x .44	19/2 x .36	same	19/2 x .36	15 x .36	19/2 x .36	14 x .36	14 x .36
	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	30	same	same	same	same	same	same
	Spacing	15	30	same	same	same	same	same	same
	Unsupported Lengths	15	30	same	same	same	same	same	same
	Scantling and Sketch	15	30	same	same	same	same	same	same
HATCH COVERS	Material	pine	same	same	same	same	same	same	same
	Thickness	2 3/4	same	same	same	same	same	same	same
	How fitted	long	same	same	same	same	same	same	same
	Bearing Surface	3	same	same	same	same	same	same	same
Spacing of Cleats	24	same	same	same	same	same	same	same	same
Number of Tarpaulins	two	same	same	same	same	same	same	same	same

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

Particulars of Flush Bunker Scuttles:— *Companionways*
Companion way on Freeboard deck in forward well to tween deck. W.T. steel door in fore-castle bulkhead 3'-4" x 5'-9" sill 8" above wood deck, door capable of being closed & operated from one side.
Hatchway in forward well to tween deck 2'-6" x 4'-3" coaming L 10 x 3 1/2 x .46 W.T. steel cover .40

Particulars of Companionways:— *Hatchway on fore-castle deck 4'-3" x 4'-2" coaming L 10 x 3 1/2 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 and operated from both sides
One hatchway 6'-0" x 4'-0" coaming 29 x .40 hatches 2 1/4" pine bearing 3" battening down arrangement fitted as required
One hatchway 6'-0" x 4'-0" and one 3'-6" x 2'-0" coaming L 10 x 3 1/2 x .46 steel W.T. cover .40
On Poop deck steel deck house, wood door 69 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 vent: 24" x 6" diam vent: 36" x 18" diam x .40 and 36" x 12" diam x .36 to hold, tween decks and store rooms above fore-peak tank*
On Bridge deck vent: 30" x 18" diam x .40, vent: 36" x 12" diam x .36 and goose-neck vent 24" x 6" diam to hold and tween decks, and vent: 30" x 24" diam x .40 to motor room
On Poop deck vent: 30" x 18" diam x .40 and 36" x 12" diam x .36 and goose-neck vent: 24" x 6" diam to hold & tween decks
In forward and afterwell vent: 36" x 18" diam, 16" diam and 4" diam x .40, and goose-neck ventilators 26" x 6" diam to hold and tween decks

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— *On fore-castle deck airpipes to tanks 2 1/2" x 4" diam*
In forward well airpipes to tanks 2 1/2" x 3 1/2" diam
On Bridge deck airpipes to tanks 2 1/2" x 3 1/2" diam
On Poop deck airpipes to tanks 2 1/2" x 3 1/2" diam

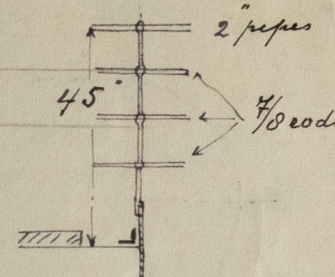
All airpipes and goose-neck ventilators are provided with canvas covers for closing the openings
All ventilators are provided with wooden hatches and canvas covers as required

Particulars of Gangway Cargo and Coaling Ports:—

Particulars of Scuppers and Sanitary Discharge Pipes:— *Forward and afterwell discharged through ship side by scupper pipes 4" diam. Bridge space discharged through ship side by 4" scupper pipes fitted with storm valve's all as required*
All sanitary pipes, discharged through ship side below freeboard deck and are provided with storm valve's all as required

Particulars of Side Scuttles:— *Side scuttles to space below freeboard deck and superstructure deck are fitted with dead lights permanently attached in their proper position*

Particulars of Guard Rails:— *Open rail on Fore-castle and Poop deck 45" high*
Bulwark on Bridge deck 46" high



Particulars of Gangways, Lifelines, etc.:—

Lifelines fitted in forward and afterwell for the protection of the crew 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"	46"	7.5 x 2.5 12.5 x 2.5	1 2	63 ft ²	24 ft ²
Forward Well	96'-1"	46"	12.5 x 2.5	3	72 ft ²	24 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 1/2 x .46	.40	6 x 3 x .42	36	angle lugs top & bottom	24" x 69"	8"	7'-9"
Raised Quarter Deck Bulkhead	4							
Bridge, After Bulkhead	10 x 3 1/2 x .46	.24	3 x 2 1/2 x .28	36	none	5'-0" x 5'-11"	6"	8'-0"
Bridge, Forward Bulkhead	9 x 3 1/2 x .50	.40	6 x 3 1/2 x .56	24 to 36	angle lugs top & bottom	2'-6" x 5'-4"	13	8'-0"
Fore-castle Bulkhead	10 x 3 1/2 x .46	.24	2 1/2 x 2 1/2 x .28	36	none	3'-10" x 4'-9"	none	7'-9"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	10 x .50	.30	4 x 2 1/2 x .30	.32	continuous	3'-0" x 4'-10"	2.2	8'-0"
Exposed Machinery Casings on Superstructure Decks	18 x .34	.30	4 x 2 1/2 x .30	.32	" "	none	"	7'-9"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	10 x .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	"
Bridge, After Bulkhead	Portable plates 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
Fore-castle Bulkhead	Openings not closed (open gangway see below)
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	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	

The drawing is a hand-drawn technical sketch of the USS Albatross (SS-218), showing three deck plans. The top deck plan shows the overall hull shape with dimensions for the teak deck (2 1/2" and 2 3/4"), freeing ports, 35" portlights, and the main hull depth (36'-3" and 36'-4 3/4"). The superstructure deck plan shows the internal layout with rooms like the Motor Room, Casing, and various hatches (N3, N4, N1, N2, N6). It also shows the companionway, deck houses, and the overhang (32" and 24"). The freeboard deck plan shows the lower level with rooms like the Motor Room, Casing, and various hatches (N1, N2, N3, N4, N5, N6). It also shows the companionway, deck houses, and the overhang (34'-0" and 15'-9"). The overall length of the ship is 465'-0".

Bridge 154.67.

Recus $\frac{11.5 \times 5.33 \times 2.}{61.5} = \frac{1.98}{152.69}$

Newcastle
 Recd 2.25×19
 $\underline{50}$
 52.73×3.88
 $\underline{50}$

} 4.91
 86.52
 4.91
 $\underline{57.63}$
 = 15.74 M.

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

The vessel has been examined ⁵⁰ afloat.

Owners. *N. V. Stoomvaart Maats. Nederland*

Fee £ 192 -

Received by me