

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

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

6 AUG 1932

10 21334

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
Ship, R. Q. deck, fire castle

(Type of Superstructures.)

Ship's Name *ANNALAND* Nationality and Port of Registry *Dutch Rotterdam* Official Number *2240* Date of Build *8-1916*

Length *82.90 M.* Breadth *12.14 M.* Depth *6.324 M.*
Moulded draught = 85 per cent. of moulded depth *4315 Mm* tons
Use with Tables *798*

Port of Survey *Rotterdam*
Date of Survey *3/8.32*
Name of Surveyor *J. v. Heerwaarden*
Particulars of Classification *7.100 A1*
S.S. Rot. No 3-7.29

board (D) *6.324 M.* Depth correction (a) Where D is greater than Table depth (D-Table depth) R = $\frac{8.33(6.324 - 5.52)}{20.74} = +142 \text{ mm}$
(b) Where D is less than Table depth (if allowed) (Table depth-D) R = *1*
If restricted by superstructures */*

Round of Beam correction
Moulded Breadth (B) *12.14 M.*
Standard Round of Beam = $\frac{B \times 2}{50} = .243$
Ship's Round of Beam = *0.254 M.*
Difference *Excess 11 mm*
Restricted to
Correction = $\frac{\text{Diff}^\circ}{4} \times (1 - \frac{S_1}{L}) = \frac{11}{4} \times 334 = -1 \text{ mm}$

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height M.	Height Correction	Effective Length (E)
<i>20.89</i>	<i>20.89</i>	<i>2.21</i>		<i>20.89</i>
<i>25.66</i>	<i>25.66</i>	<i>1.295</i>	<i>1295/1310</i>	<i>25.37</i>
<i>7.645</i>	<i>7.645</i>	<i>2.134</i>		<i>7.645</i>
<i>0.229</i>	<i>0.584</i>			<i>0.584</i>
<i>4.786</i>	<i>54.786</i>			<i>54.489</i>

Standard Height of Superstructure *1897*
" " R.Q.D. *1310*
Deduction for complete superstructure *844*
Percentage covered $\frac{S}{L} = 66.09\%$
" $\frac{S_i}{L} = 66.09\%$
" $\frac{E}{L} = 65.72\%$
Percentage from Table, Line A. (corrected for absence of forecastle (if required)) *55.72%*
Percentage from Table, Line B. (corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required)
Deduction = $844 \times 55.72 = -470 \text{ mm}$

SHEER CORRECTION.

Product	Actual Ordinate	Effective Ordinate	S M	Product
<i>945</i>	<i>966</i>	<i>1026</i>	<i>1026</i>	<i>1026</i>
<i>1680</i>	<i>350</i>	<i>379</i>	<i>379</i>	<i>1516</i>
<i>210</i>	<i>38</i>	<i>95</i>	<i>95</i>	<i>190</i>
<i>420</i>	<i>19</i>	<i>211</i>	<i>211</i>	<i>422</i>
<i>3360</i>	<i>850</i>	<i>845</i>	<i>845</i>	<i>3380</i>
<i>1890</i>	<i>2205</i>	<i>2200</i>	<i>2200</i>	<i>2200</i>
<i>8505</i>				<i>8734</i>

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 = *0.62 L*
" " aft of " = *0.5 L*
 $\frac{S}{L} = \frac{945}{1026} = 92.1$
 $\frac{S_i}{L} = \frac{1360}{1137} = 119.6$
 $\frac{E}{L} = \frac{715}{735} = 97.2$

sums of products $(.75 - \frac{S}{2L}) = \frac{229}{18} (.75 - .3304) = -5.34$

superstructure. $5.34 \times \frac{162}{200} = -4.34$ If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

board. *Water North*

board Deck = *7.632*
ard = *7.980*
raught (d) = *5.652*
reeboard and addition for
d. inches = *118*
th Atlantic Freeboard (if

Deduction for Fresh Water.
Displacement in salt water at summer load water line $\Delta = 4613 = 4686 \text{ Tonnes}$
Tons per inch immersion at summer load water line $T = 23 = 9.2 \text{ Tonnes per cm.}$
Deduction = $\frac{\Delta}{40 T} \text{ inches} = 12.7 \text{ cms.}$

TABULAR FREEBOARD corrected for Flush Deck (if required)
Correction for coefficient $\frac{798 + .68}{1.36} = \frac{1478}{1360}$

	+	-
Depth Correction	<i>142</i>	
Deduction for superstructures		<i>470</i>
Sheer correction		<i>4</i>
Round of Beam correction		<i>1</i>
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.	<i>1295</i>	
	<i>1437</i>	<i>475 + 962</i>

Summer Freeboard = *1983*

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

Tropical Fresh Water Line above Centre of Disc	<i>25 cms</i>	Tropical Fresh Water Freeboard	<i>173</i>
Fresh Water Line	<i>13 cms</i>	Fresh Water	<i>185</i>
Tropical Line	<i>12 cms</i>	Tropical	<i>186</i>
Winter Line below	<i>12 "</i>	Winter	<i>210</i>
Winter North Atlantic Line	<i>17 "</i>	Winter North Atlantic	<i>215</i>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
5. Sub. deck & R. Quarter									
Description of Hatchway		N:1	N:2	N:3	N:4				
Dimensions of Hatchway		39'2"x 18'0"x13'0"	39'2"x 18'0"	27'5"x 18'0"	27'5"x 18'0"				
COAMINGS	Height above Deck	21	21	21	21				
	Thickness	.60	.60	.50	.50				
	Stiffeners	.40	.40	.40	.40				
	Brackets, Stays	—	—	—	—				
HATCH BEAMS	Number	3	3	2	2				
	Spacing	32x.40	32x.40	32x.40	32x.40				
	Scantling and Sketch	4x3x.44	4x3x.44	4x3x.44	4x3x.44				
	Bearing Surface	3 1/2	3 1/2	3 1/2	3 1/2				
FORE AND AFTERS	Number	3	3	3	3				
	Spacing	equal	equal	equal	equal				
	Unsupported Lengths	8' 11"	8' 11"	8' 2"	8' 2"				
	Scantling and Sketch	bull plate	bull plate	11x.60	75x43x.44				
	Bearing Surface	3	3	3	3				
HATCH COVERS	Material	pine	pine	pine	pine				
	Thickness	2 1/2	2 1/2	2 1/2	2 1/2				
	How fitted	across	across	across	across				
	Bearing Surface	3	3	3	3				
Spacing of Cleats		24+6	24+6	24+6	24+6				
Number of Tarpaulins		2	2	2	2				

Particulars of fiddley, funnel and ventilator coamings:—

Stokehold gratings covered by strong hinges covers.
Tidy, funnel ventilator in efficient condition.
Engine skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:— *none fitted*

Particulars of Companionways:—

Steel companion or protractor steel king
Operated from one side of opening. size of
4 1/2" x 2 7/8"
size 1 7/8"

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

On free castle
1 Vent. ϕ 22" coaming 9'-6" original built as mast.
On freeboard deck.
2 Vent. ϕ 11" coaming 58' x 36'.
On R. Q. deck.
2 Vent. ϕ 11" coaming 13'-5" supported.
2 Vent. ϕ 11" " 36' x 36'.
and positions on freeboard, raised quarter or superstructure decks: —

all ventil
are construct
with the re
by wood p
canvases

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

On foredeck: 2 airpigs 7" height
 1 airpig 28" "

On foreboom deck: 2 airpigs 40" "

On trunkdeck in forewell 2 airpigs 40"

On R & C deck 3 airpigs height 30" & 79"

On trunkdeck of R & C deck 2 airpigs of 8" height
 On poop deck 3 airpigs 7" & 2 airpigs height

all airpigs close-plugs and cannot

Particulars of Gangway Cargo and Coaling Ports :-

Particulars of Gangway Cargo and Coaling Ports:—

Ports :—
nine filters.

and Sanitary Discharge Pipes :-

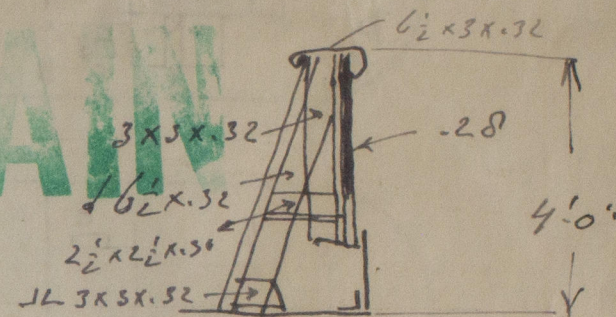
and Sanitary Discharge Pipes :-
 Superheaters from freedom deck and N.E. deck fitted without
return valves. for position see sketch. (c)
 italy discharge pipes fitted non return valves at ship's side
 sketch marked x

108. — *Microscutellus* in forewings and wing space (propagula)
fitted with hinged deadlights. Scuttles of substantial
construction

guard rail in forecable height 4'0" stanchions 36" apart 2 rods
and in way of R. & creek bulwark height 4'0" stanchions every
in way of casing bulwark height 3'3" stanchions every third frame
the guard rail height 3'3" stanchions 16" apart 2 rods.

Lifelines, etc. :—

board and R. G. each side
had shawls, lifelines fitted
with substantial supports.



Particulars of Freeing Arrangements.

Length of Bulwark	Height of Bulwark	Size of Frecing Ports	Number each side	Area each side	Rule area each side
84.25	4'-0"	11.15 x 2.15 11.15 x 2.15	1 1	47.9	16.85
92.25	4'-0"	5'-1 x 2.15 17'-0 x 2.15	1 1	47.5	18.45

freecing port ... } After Well:—
 and height above deck edge) Forward Well:—
 ing ports are fitted with shutters, bars, or rails, and give particulars of such:— each freecing port 2 bars,
 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
... ..	✓	.32 x 26	L 10½ x 3½ x .52	27"	brackets top & bottom	30" x 18"	12"	
bulkhead ...	✓	.30	L 9 x 3 x .50	27"	" "	none	"	
... ..	"	"						
head ...	"	"						
... ..	"	.24	4 3½ x 2½ x .30	28"	none	4'8" x 22" 4'5" x 39½"	18" 10"	
... ..	"	"						
... ..	✓	✓						
sings on Free- tier Decks ...	✓	✓						
sings on Super-	18 x .30	.20	4 3 x 2½ x .20	23	brackets top	4'10" x 25"	18	7'3"
on Superstruc- -lass I Closing		.20	4 3 x 2½ x .20		none	none		
... ..								
ock Ships ...	"	"						

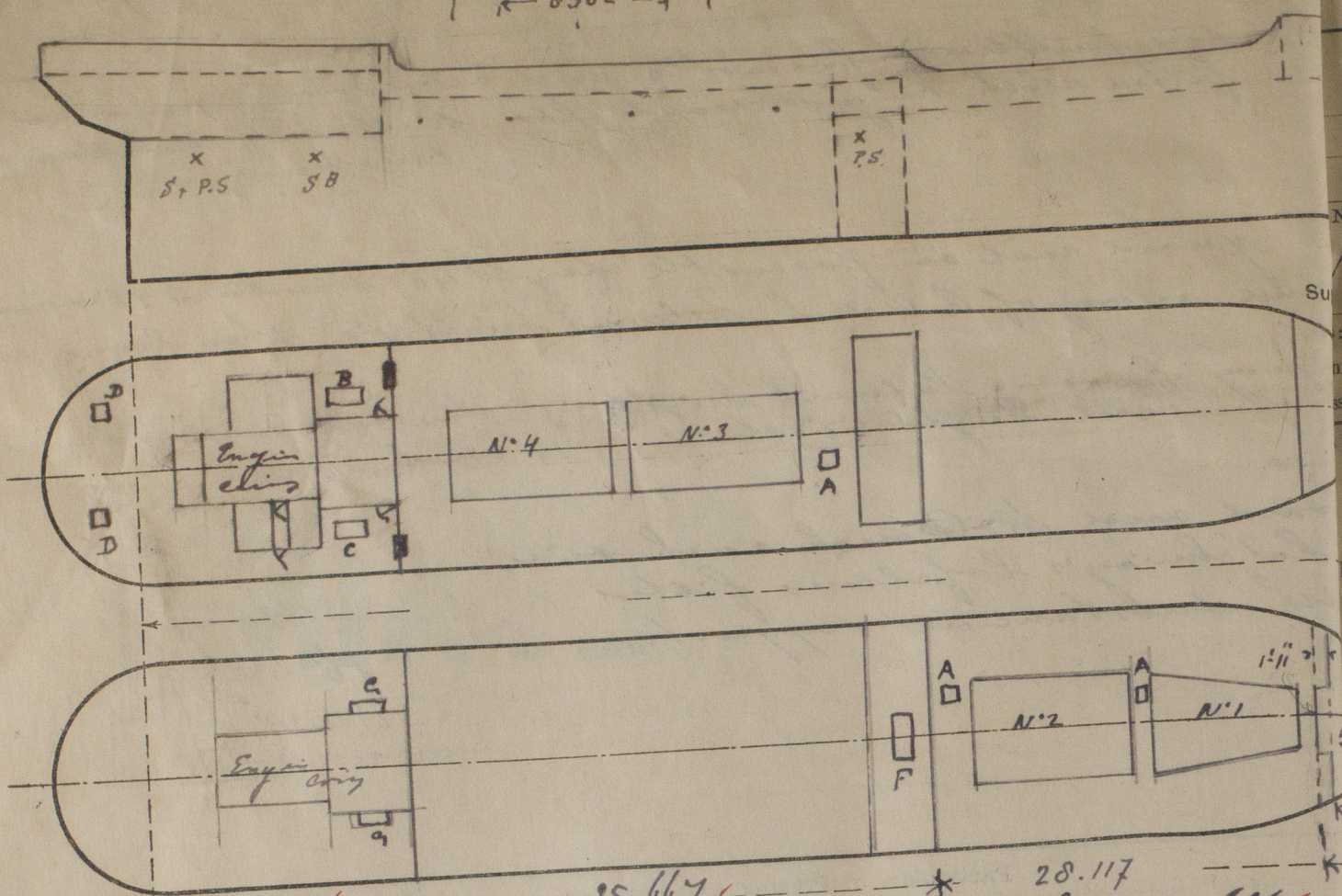
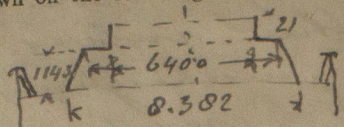
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

...	...	steel joints bolted with finer bolts $3\frac{1}{4}$ " 4" apart ✓
alkhead	...	✓
...	...	✓
ad	...	✓
...	...	steel hinges also operated from one side ✓
ings on Free-	...	✓
er Decks	...	
ings on Super-	...	steel hinges also operated from both sides. ✓
...	...	
1 Superstruc-	...	
ass I Closing	...	
...	...	
ck Ships	...	

A hand-drawn diagram of a trapezoidal structure, possibly a cross-section of a dam or a similar engineering feature. The diagram includes the following dimensions and labels:

- Top width:** 28'
- Bottom width:** 83.82
- Left side slope:** 114.9
- Internal horizontal dimension:** 64.0
- Right side slope:** 28'

The diagram is drawn with a horizontal line at the top and bottom, and two slanted lines on the sides. The dimensions are written in a cursive, handwritten style.



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

waterlight center keelson
Permanent bulwark are fitted. (see sketch) /
Access ^{will be} available at all times to all parts necessary for crew
handling the vessel. Lifelines will be lashed to the uprights
deck edges. The steering levers are all on the poop deck side.
The hand steering gear on the poop. Access to poop quarters through

expens. 1.00

Depreciation at present scale on
summer load in 4590 tons
tons per inch 25