

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No.

(For London Office only.)

AUG 18 1937.

34964.

Section 4

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Complete Superstructure Deck with Tonnage Opening
 Pole & Poop on Superstructure Deck.

(Type of Superstructures.)

Port of Survey

Copenhagen

Date of Survey

12th August 1937.

Name of Surveyor

J. D. Lydersee.

Particulars of Classification

100. A. 1.
 with freeboard.
 (Class. contemplated).

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
"ALEX. VAN OPSTAL"	Belgium	Not	5833 (Belgium) 5965 (Belgium)	1937
(Naksover Yard: 80) 420.00'	Antwerp	57.00'	29.26'	
Moulded Dimensions: Length 128.00 Met.	Breadth 17.37 Met.	Depth 8.97 Met.		
Moulded displacement at moulded draught = 85 per cent. of moulded depth		11,920	tons	
Coefficient of fineness for use with Tables	.701			

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth 29.26	(a) Where D is greater than Table depth (D - Table depth) R = (29.29 - 28.00) 3 = + 3.87"	Moulded Breadth (B) 57.00
Stringer plate (10.5%)03	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 13.68"$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = $35.0 \frac{1}{2} = 13.78"$
Depth for Freeboard (D) = 29.29		Difference = .10" excess
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.10}{4} \times .006 = \text{Nil}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	87.50	87.50	8.99	-	87.50
" overhang					
Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward	327.50	327.50	8.99	-	327.50
Deck enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft	5.00	2.50	2.50	-	2.50
" forward					
Total	420.00	417.50			417.50

Standard Height of Superstructure

7.5'

R.Q.D.

Deduction for complete superstructure

42"

Percentage covered $\frac{S}{L} = 100$ $\frac{S_1}{L} = 99.40$ $\frac{E}{L} = 99.40$

Percentage from Table, Line A.

(corrected for absence of forecastle (if required))

99.26

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = $42 \times .9926 = 41.69$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	52.00	1		52.00	132.1	52.00	1		69.88
from A.P. ...	23.14	4		92.56	585	23.03	4		124.36
" ...	5.72	2		11.44	145	5.71	2		15.38
amidships ...		4			0		4		
from F.P. ...	11.44	2		22.88	295	11.61	2		27.02
" ...	46.28	4		185.12	1155	45.47	4		218.64
F.P. ...	104.00	1		104.00	2666	104.94	1		122.82
Total ...				468.00					578.10

Mean actual sheer aft = excess
 Mean standard sheer aft = excess

Mean actual sheer forward = excess
 Mean standard sheer forward = excess

Length of enclosed superstructure forward of amidships = }
 " " aft of " = } 6.6.1.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{110.10}{18} \times .25 = -1.53"$

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 = 29.29
 Summer freeboard = 3.30
 Moulded draught (d) = 25.99

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.5" = 16.5 mm

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 12,800$

Tons per inch immersion at summer load water line

T = 46.30

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

= 6.8" = 173 mm

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{701 + .68}{1.36} = \frac{1.381}{1.36}$

	+	-
Depth Correction	3.87	-
Deduction for superstructures	-	41.69
Sheer correction	-	1.53
Round of Beam correction	-	-
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	3.87	43.22
Summer Freeboard =		39.65

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

Tropical Fresh Water Line above Centre of Disc ...	338 mm
Fresh Water Line " " ...	173 "
Tropical Line " " ...	165 "
Winter Line below " " ...	165 "
Winter North Atlantic Line " " ...	" "

Tropical Fresh Water Freeboard ...	1007 mm
Fresh Water " " ...	834 "
Tropical " " ...	842 "
Winter " " ...	1172 "
Winter North Atlantic " " ...	" "

24 AUG 1937

2m 10.30.

W467-0146 (1/3)

RECEIVED

6 SEP 1937

M/V "Alex. van Opstal" of Antwerp.
PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.											
			2nd deck.								
Description of Hatchway			N ^o 1	N ^o 2	N ^o 3	N ^o 4	N ^o 5	N ^o 6.			
Dimensions of Hatchway			7930 × 5500	7460 × 5500	9880 × 5500	6840 × 5500	10640 × 5500	8360 × 5500			
COAMINGS	{	Height above Deck	←		230	←		→			
		Thickness { Sides	←		12½	←		→			
			{ Ends	←		12½	←		→		
		Stiffeners	←		✓	←		→			
		Brackets, Stays	←		✓	←		→			
HATCH BEAMS	{	Number	5	4	6	4	6	5			
		Spacing	1322	1492	1411	1368	1520	1394			
		Scantling and Sketch									
		JL webplate:-	405 × 9	405 × 9	405 × 9	475 × 10	430 × 9	405 × 9			
		JL Angles:-	100 × 75 × 11	115 × 75 × 12	115 × 75 × 12	150 × 90 × 12	100 × 75 × 11	100 × 75 × 11			
		Bearing Surface	75	75	75	75	75	75			
FORE AND AFTERS	{	Number									
		Spacing									
		Unsupported Lengths									
		Scantling* and Sketch									
			None fitted								
	Bearing Surface										
HATCH COVERS	{	Material	←		Wood	←		→			
		Thickness	←	75	75 90	←	75	→			
		How fitted	←		Fore and aft.	←		→			
		Bearing Surface	←		75	←		→			
Spacing of Cleats			←		610	←		→			
Number of Tarpaulins			←		2	←		→			

*Are wood fore and afters steel shod at all bearing surfaces? *None fitted.*
 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!*



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Lloyd's Register
Foundation

W467-0146 (2/3)

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.										
Upper deck										
Description of Hatchway	N°1	N°2	N°3	N°4	N°5	N°6	Tonnage opening	On poop deck	On Fore deck	On Boat Deck
Dimensions of Hatchway	7320x5500	6700x5500	7600x5500	6080x5500	9880x5500	8360x5500	1520x5500	8360x5500	760x760	6080x5500
COAMINGS	Height above Deck	840	840	840	840	840	840	840	610	840
	Thickness	11	11	11	11	11	11	11	10	11
	Sides	11	11	11	11	11	11	11	10	11
	Stiffeners	11	11	11	11	11	11	11	10	11
HATCH BEAMS	Brackets, Stays	2	2	2	3	3	3	3	2	2
	Number	4	4	4	6	5	5	5	4	4
	Spacing	1464	1340	1520	1410	1395	1395	1395	1216	1216
	Scantling and Sketch	400x9	375x9	305x8	305x8	380x9	305x8	305x8	350x9	350x9
FORE AND AFTERS	Webplates	100	75	12	100	75	12	100	75	12
	Angles	75	75	75	75	75	75	75	75	75
	Bearing Surface	75	75	75	75	75	75	75	75	75
	Number	4	4	4	6	5	5	5	4	4
HATCH COVERS	Spacing	1464	1340	1520	1410	1395	1395	1395	1216	1216
	Unsupp'd Lengths	400x9	375x9	305x8	305x8	380x9	305x8	305x8	350x9	350x9
	Scantling and Sketch	100	75	12	100	75	12	100	75	12
	Bearing Surface	75	75	75	75	75	75	75	75	75
Spacing of Cleats	600	600	600	600	600	600	600	600	600	600
Number of Tarpaulins	3	3	3	3	3	3	3	3	3	3

Particulars of fiddle, funnel and ventilator coamings:—

No openings in fiddle top.
Funnel of substantial construction & well supported.
Engine room skylight of steel and substantially constructed.

Particulars of Flush Bunker Scuttles:—

None fitted.

Particulars of Companionways:—

Rise steel companionway on poop deck (on top of superstructure deck) leading to steering gear room; 7" thick plate, steel door 1400x600" to close watertight, sill 600" thick.
Entrance in steel house between Nos 2 & 3 Hatchways, opening 1410x660, 610" thick sill, steel door with rubber packing & turnbuckles, operated from outside only.

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

Forward of our berth of vessel's length	Forward of midship deck house	Aft of midship deck house	Poep
2 off, 305 diam, 910x8 1/2 coaming	2 off, 430 diam, 760x10 coaming	2 off, 300 diam, 760x8 1/2 coaming	2 off, 450 diam, 760x10 coaming
2", 450", 910x10	2", 710", 760x10	2", 430", 760x10	2", 300", 760x8 1/2
Upp deck 2", 430", 910x10	2", 450", 760x10	2", 450", 760x10	4", 200", 760x7 1/2
2", 450", 910x10	1", 230", 760x8 1/2	1", 150", 760x7 1/2	

Efficient closing appliances fitted to all ventilators.

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

Opening above deck 910" thick. Efficient closing appliances fitted to all air pipes.

Particulars of Gangway Cargo and Coaling Ports:—

None fitted.

Particulars of Scuppers and Sanitary Discharge Pipes:— No openings below 2nd deck, except from Tonnage Well.

Sanitary discharges fitted with storm valves of metal other than Cast Iron.

Scupper from Tonnage Well 5" p.s. geared to Upperdeck, & of metal other than Cast Iron.

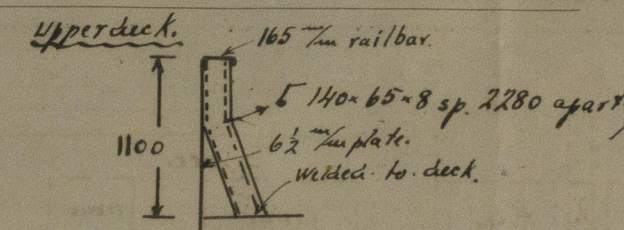
Five 3 1/2" scuppers are led from 2nd deck to engine room bilge.

Particulars of Side Scuttles:—

Side lights in ship's sides fitted with permanently attached, hinged deadlights of substantial construction.

Particulars of Guard Rails:—

Fore and poop.
Stanchions spaced about 1300 apart.



Particulars of Gangways, Lifelines, etc.:— None fitted.

Cow berthed in midship deck house.

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	✓					
Forward Well	✓					

State position of each freeing port (F. and A. position and height above deck edge) After Well:— ✓ Forward Well:— ✓
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— ✓
Additional area where sheer is less than standard. ✓

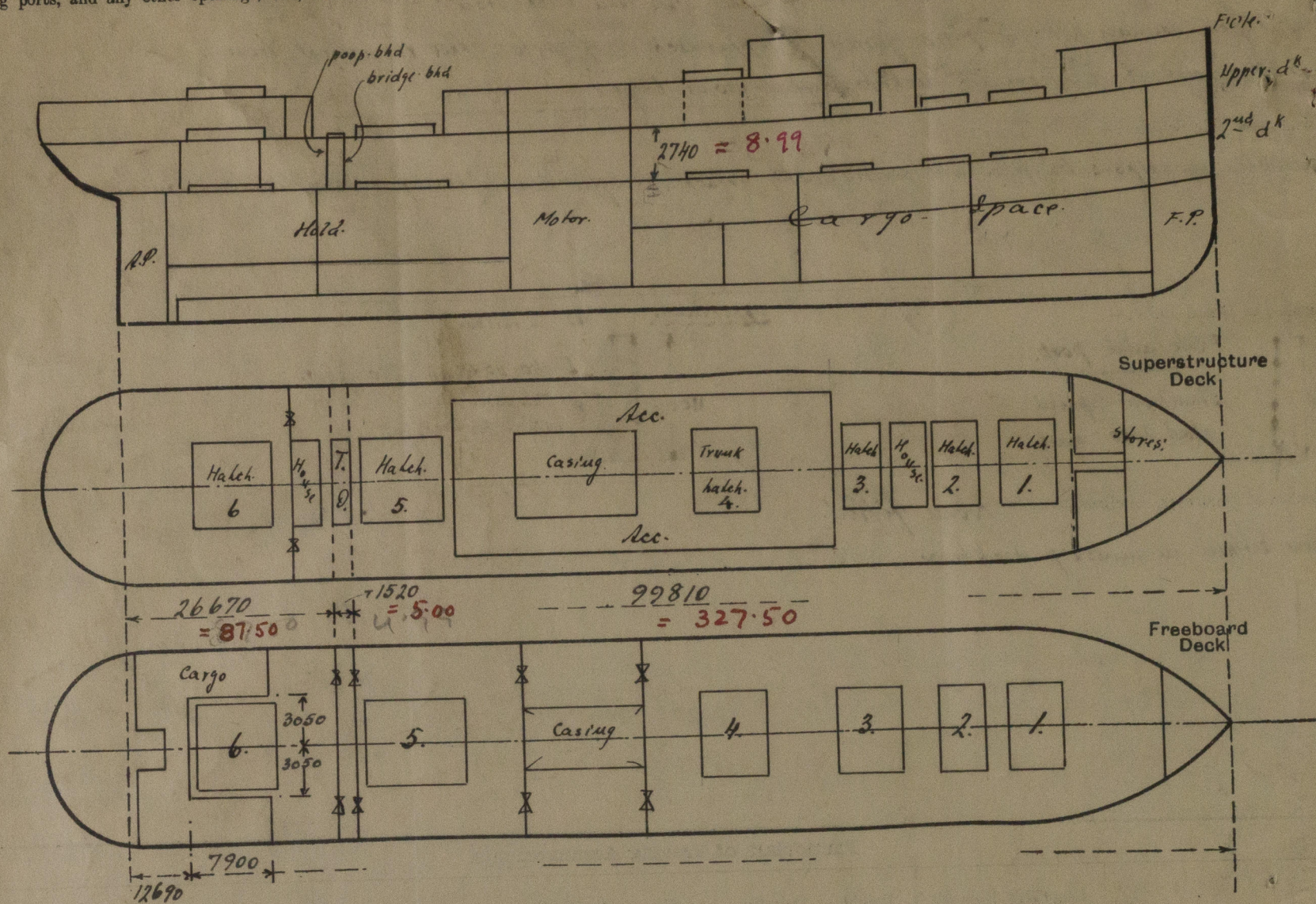
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	7	7	150x75x10	710	Takes bound bars	1900x990	None	2740
Raised Quarter Deck Bulkhead	✓							
Bridge, After Bulkhead	7	7	150x75x10	710	Takes bound bars	1900x990	None	2740
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	✓							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓							
Exposed Machinery Casings on Superstructure Decks	✓							
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 boards for full height of opening in riveted channels.
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	Wood boards for full height of opening in riveted channels.
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	✓
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:—

Vessel has cruiser stern.

Tween-deck height: 2740 mm.

Vessel classed "with freeboard."

No deck sheathing on upper or 2nd deck.

Builder's name and yard number *N.V. Nalskov Skibsværft. Yard N° 80.*

Names of sister ships *None.*

Owners *Compagnie Maritime Belge (Lloyd Royal) S.A. - Antwerp Belgium.*

Fee £ *To be charged with First Entry.* Received by me ☒