

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tugster					Port of Survey <u>Rotterdam</u>	
having <u>Poop, Bridge, Forecastle</u>					Date of Survey <u>20 July - 1932</u>	
<u>BIOKOVO</u> (Type of Superstructures.)					Name of Surveyor <u>L. Vuyk</u>	
Ship's Name		Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	
<u>5/5 "ALEKSANDAR I"</u>		<u>JUGO SLAV.</u>	<u>SPLIT.</u>	<u>5948.</u>	<u>1927-5</u>	
Moulded Dimensions: Length <u>423.5</u>		Breadth <u>55.68</u>	Depth <u>31.31</u>			
Moulded displacement at moulded draught = 85 per cent. of moulded depth		<u>13900</u>		tons		
Coefficient of fineness for use with Tables		<u>780</u>		Particulars of Classification <u>+ 100 A1</u>		

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	31.31	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	55.68
Stringer plate	0.04	(31.34 - 28.07) 3 =	9.81	Standard Round of Beam = $\frac{B \times 12}{50}$	13.36
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam =	1.16
$T \left( \frac{L-S}{L} \right) =$		If restricted by superstructures		Difference	14.64
Depth for Freeboard (D) =	31.35			Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right)$	$\frac{64}{4} \times \frac{52.02}{-08}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed	37.9	37.75	7.9		37.75
„ overhang					
R.Q.D. enclosed					
„ overhang					
Bridge enclosed	123.0	123.00	7.9		123.00
„ overhang aft					
„ overhang forward					
Fore enclosed	41.3	41.25	7.9		41.25
„ overhang					
Trunk aft					
„ forward					
Tonnage opening aft					
„ forward					
Total	202.00	202.00			202.00

Standard Height of Superstructure	7.5
„ „ R.Q.D.	
Deduction for complete superstructure	42.00
Percentage covered $\frac{S}{L} =$	47.98
„ „ $\frac{S_1}{L} =$	47.98
„ „ $\frac{E}{L} =$	47.98
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	34.28
Interpolation for bridge less than 2L (if required)	
Deduction =	$42.00 \times 34.28 = -14.40$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
P. ...	52.10	1		52.10	69.00	69.00	1		69.00
1/2 L from A.P. ...	23.18	4		92.72	29.75	29.92	4		119.68
1/4 L „ ...	5.73	2		11.46	6.63	7.48	2		14.96
amidships ...		4					4		
1/4 L from F.P. ...	11.46	2		22.92	15.00	14.98	2		29.96
1/2 L „ ...	46.37	4		185.48	59.38	59.94	4		239.76
F.P. ...	104.20	1		104.20	138.00	138.00	1		138.00
Total				468.88					611.36

Mean actual sheer aft = Even  
Mean standard sheer aft = EvenMean actual sheer forward = Even  
Mean standard sheer forward = EvenLength of enclosed superstructure forward of amidships = 7.1L  
„ „ aft of „ = 7.1LCorrection =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{142.48}{18} (.75 - \frac{2399}{2399}) = -4.04$ 

If limited on account of midship superstructure.

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Ft.  
Depth to Freeboard Deck = 31.34  
Summer freeboard = 6.27  
Moulded draught (d) = 25.07Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 6.27 - 6.14  
Addition for Winter North Atlantic Freeboard (if required) = ✓

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 

Tons per inch immersion at summer load water line

T =

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

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

68 + .78  
136Depth Correction ... 9.81  
Deduction for superstructures ... 4.40  
Sheer correction ... 4.04  
Round of Beam correction ... .08  
Correction for Thickness of Deck amidships ...  
Other corrections, scantlings, etc. ...

+	-
9.81	—
—	4.40
—	4.04
—	.08
—	—
—	—
9.81	18.52

Summer Freeboard = 75.13SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:—Tropical Fresh Water Line above Centre of Disc ...  
Fresh Water Line „ „ ...  
Tropical Line „ „ ...  
Winter Line below „ ... 6.14  
Winter North Atlantic Line „ „ ...Tropical Fresh Water Freeboard ...  
Fresh Water „ „ ...  
Tropical „ „ ...  
Winter „ „ ...  
Winter North Atlantic „ „ ...



## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS						
Description of Hatchway	FOREWELL No 1	FOREWELL No 2	BRIDGE DECK No 3	FREEBOARD No 3	AFTERWELL No 4	AFTERWELL No 5
Dimensions of Hatchway	36'0" x 18'0"	36'0" x 18'0"	18'0" x 18'0"	18'0" x 18'0"	37'5" x 18'0"	32'8" x 18'0"
COAMINGS	Height above Deck	30	30	30	30	30
	Thickness	.44	.44	.44	.44	.44
	Sides	.44	.44	.44	.44	.44
	Ends	.44	.44	.44	.44	.44
HATCH BEAMS	Stiffeners	7 x 3 x .40	7 x 3 x .40	7 x 3 x .40	7 x 3 x .40	7 x 3 x .40
	Brackets, Stays	3 stays 2 1/2" φ	3 stays 2 1/2" φ	3 stays 2 1/2" φ	3 stays 2 1/2" φ	3 stays 2 1/2" φ
	Number	7	5	3	3	6
	Spacing	4.6'	5'	4.5'	4.5'	4.7'
FORE AND AFTERS	Scantling and Sketch	16 x .36	16 x .36	15 x .35	16 x .36	16 x .36
	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"
	Number	None	None	None	None	None
	Spacing	None	None	None	None	None
HATCH COVERS	Material	pine	pine	pine	pine	pine
	Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
	How fitted	longitudinal	longitudinal	longitudinal	longitudinal	longitudinal
	Bearing Surface	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
Spacing of Cleats	24	24	24	24	24	24
Number of Tarpaulins	two	two	two	two	two	two
*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.						

Particulars of fiddle, funnel and ventilator coamings:— Fiddle casing, funnel and ventilators in efficient condition. Stokhold gratings covered by strong steel hinged covers. Engine skylight of steel with steel flaps strongly constructed.

Particulars of Flush Bunker Scuttles:— none fitted.

Particulars of Companionways:—

none fitted.  
entrance fore room in forward end bridge space through hatch inside saloon deckhouse, door to entrance sill 48"

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

On fore-castle deck - 1 vent 8" dia. craming 36 x .30 led to forepeak  
 On fore-castle deck - 3 vents 27" " " 36 x .34 led to holdspace  
 On bridge deck - 2 vents 10" " " 36 x .30 led to bunkerspace  
 On fore-castle deck - 2 vents 10" " " 36 x .30 led to deck space  
 On fore-castle deck - 4 vents 27" " " 36 x .34 led to holdspace  
 On pump deck - 1 vent 10" " " 36 x .30 led to tunnel  
 On pump deck - 3 vents 8" " " 30 x .28 led to enclosed poop  
 On pump deck - 9 vents 6" " " 30 x .26 " " " "

All ventilators in accordance with the Rules and Coamings closed with wood plugs and canvas covers.

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

On fore-castle deck - 1 steel air pipe 14" high x 3" dia. from forepeak  
 On fore-castle deck - 2 " " 31" " x 4 1/2" " from double bottom tanks  
 On bridge deck - 1 " " 22" " x 3" " " " " "  
 On fore-castle deck - 2 " " 20" " x 3" " " " " "  
 On fore-castle deck - 2 " " 26" " x 3" " " " " "  
 On fore-castle deck - 2 " " 36" " x 1 1/2" " " " " "  
 On pump deck - 1 " " 13" " x 3" " " after peak

All air pipes are closed with wood plugs and canvas covers.

Particulars of Gangway Cargo and Coaling Ports:— none fitted.

Particulars of Scuppers and Sanitary Discharge Pipes:— Forewell - 1 scupper pipe and 1 scupper through shing angle.  
 Afterwell - 1 scupper pipe and 2 scuppers through shing angle.  
 Bridge space - 3 scupper pipes fitted with storm valves.  
 Sanitary discharge pipes - 1 on starboard from Captains accommodation in saloon deckhouse.  
 1 on starboard and 1 on port from officers accommodation in sidehouses.  
 1 on starboard and 1 on port from crew accommodation in poop.  
 all fitted with metal storm valves at shipside

Particulars of Side Scuttles:— Side scuttles to crew space in poop and to fore-castle space all fitted with permanently attached deadlights.  
 No side scuttles fitted below freeboard deck.  
 All scuttles are of substantial construction.

Particulars of Guard Rails:— Steel bulwarks on freeboard deck in wells 4'2" high efficiently constructed and supported.  
 Guard rails on fore-castle and on poop 3'3" high with 2 rods and stanchions spaced 4'9" apart.  
 Steel bulwarks on bridge 3'6" high efficiently constructed and supported.

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

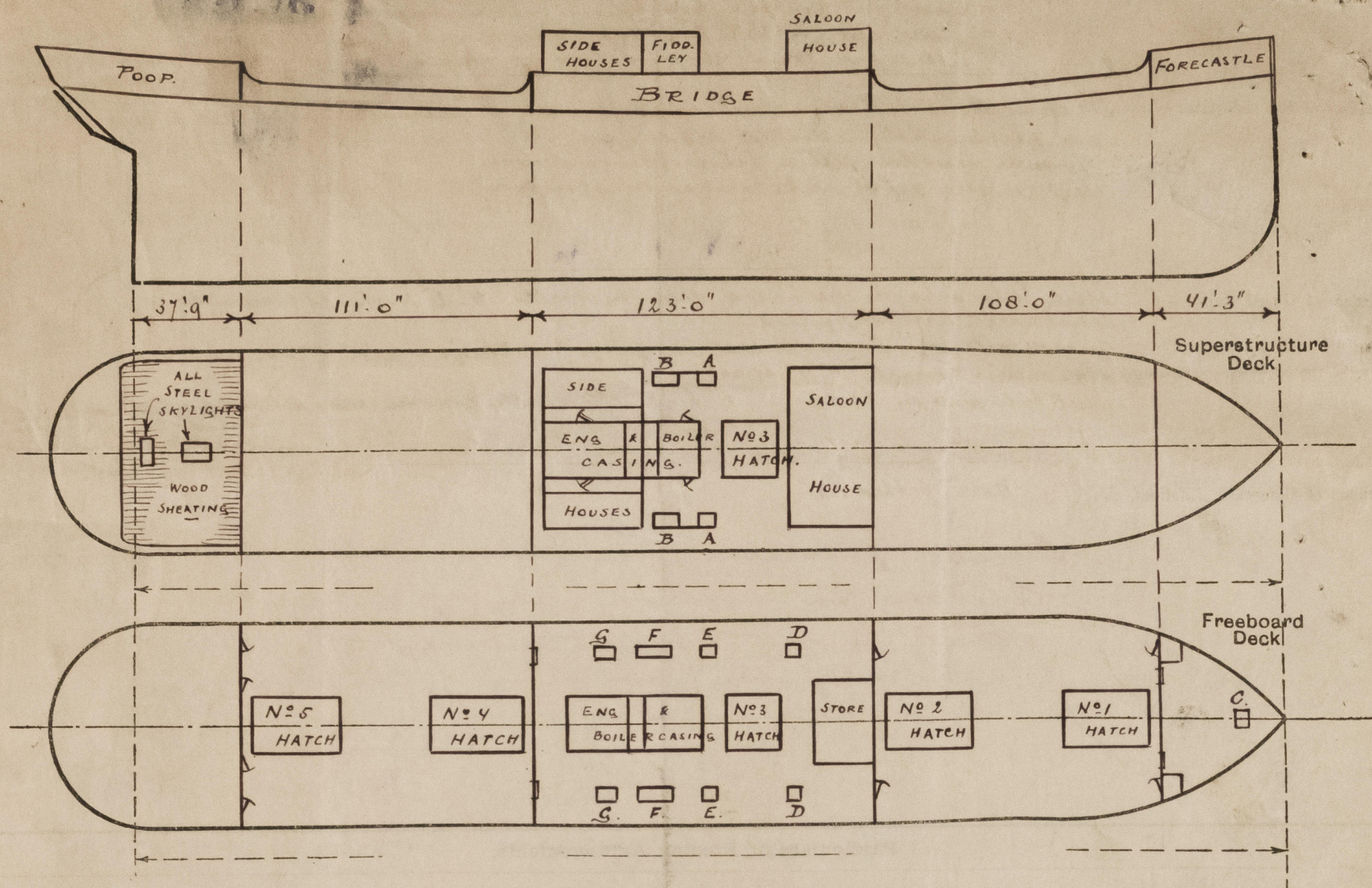
Suitable provision has been made for rigging lifelines for use in any part of the ship which might have to be used by the crew in the regular working of the ship.

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	111'0"	4'2"	4.0 x 1.5	4	24	22.2
Forward Well	108'0"	4'2"	4.0 x 1.5	4	24	21.6
State position of each freeing port ... After Well:— height above deck edge 14" (F. and A. position and height above deck edge) Forward Well:— State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— fitted with 5 vertical rails 7/8" φ 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	.34	.30	6 x 3 1/2 x .50 A	30"	lugs top & bottom	4'10" x 2'0"	19"	7'9"
Raised Quarter Deck Bulkhead	.34	.30	3 x 3 x .30 A	30"	none	5'11" x 4'6"	20"	7'9"
Bridge, After Bulkhead	.36	.30	4 x 3 x .48 BA	30"	lugs top & bottom	5'0" x 3'0"	18"	7'9"
Bridge, Forward Bulkhead	.34	.30	3 x 3 x .28 A	25"	none	5'10" x 3'1"	20"	7'9"
Fore-castle Bulkhead	.34	.30	3 x 3 x .28 A	25"	none	5'10" x 3'1"	20"	7'9"
Trunk, Aft	.34	.30	3 x 3 x .28 A	25"	none	5'10" x 3'1"	20"	7'9"
Trunk, Forward	.34	.30	3 x 3 x .28 A	25"	none	5'10" x 3'1"	20"	7'9"
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	.34	.28	3 x 3 x .32 A	36"	hacks at top only	5'0" x 2'3"	18"	7'6"
Exposed Machinery Casings on Superstructure Decks	.34	.28	3 x 3 x .32 A	36"	hacks at top only	5'0" x 2'3"	18"	7'6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	.32	.28	3 x 3 x .32 A	36"	hacks at top only	5'0" x 2'3"	18"	7'6"
Deckhouses on Flush Deck Ships	.34	.30	3 x 3 x .28 A	25"	none	5'10" x 3'1"	20"	7'9"
Particulars of Closing Appliances (state if capable of being manipulated from both sides).								
Poop Bulkhead	hinged teak doors 1 1/2" in thickness operated from both sides.							
Raised Quarter Deck Bulkhead	1 1/2" wood boards in channels riveted to bulkhead for full height of opening.							
Bridge, After Bulkhead	steel hinged watertight doors operated from outside only.							
Bridge, Forward Bulkhead	put 2 1/2" wood boards in channels riveted to bulkhead for full height of opening.							
Fore-castle Bulkhead	steel hinged doors operated from both sides.							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	in wings steel hinged doors operated from both sides.							
Exposed Machinery Casings on Superstructure Decks	to boiler space - steel hinged doors operated from both sides.							
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	to engine room - teak hinged doors in alleyway sidehouses operated from both sides.							
Deckhouses on Flush Deck Ships	2 hinged steel doors operated from both sides.							



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:—



Particulars have been taken whilst the vessel was lying afloat and passing her S.S. No 1.

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

Small hatches on Bridge deck - A. 2'8" x 3'0"; coaming 30"; hatches 2 1/2"; cleats spaced 21"; 2 tarpaulins.  
 B. 14'6" x 3'0"; " 30"; " 2 1/2"; " 21"; 2 "  
 on freeboard deck under forecastle C. 4'0" x 3'0"; " 9" BA; " 2 1/2"; " 18"; 2 "  
 on freeboard deck under bridge D. 2'0" x 3'0"; " 9" BA; " 2 1/2"; " 18"; 2 "  
 E. 5'6" x 3'0"; " 9" BA; " 2 1/2"; " 18"; 2 "  
 F. 11'6" x 3'0"; " 9" BA; " 2 1/2"; " 18"; 2 "  
 G. 3'0" x 3'0"; " 9" BA; " 2 1/2"; " 18"; 2 "

Builder's name and yard number *Lithgows, Ltd. Kingston Yard, Port Glasgow.*

Names of sister ships *S.S. "SVETI VLAHO"*

Owners *Jugo Slavenki Lloyd a.d.*

Fee *f 163.20* will be Received by me *L. Vuys*



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