

DISCLOSED SECTION No. 424

Rpt. C.11.

Lloyd's Register of Shipping.

Index. No. 33162.

(For London Office only.)

13 APR 1932

261.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having *Shade Deck, ie a superstructure which extends over the whole length of the freeboard deck with opening in the side plating*
(Type of Superstructures.)

Port of Survey *Lusak*

Date of Survey *during completion*

Name of Surveyor *Wm Balfour, Z.A. Ozezone*

Particulars of Classification *100A1 Shade Deck with freeboard, for Service in the Adriatic (class contemplated)*

Ship's Name
Jugoslavija

Nationality and Port of Registry
*Jugoslav
Lusak*

Official Number

Gross Tonnage

Date of Build
1920

Moulded Dimensions: Length *253* Breadth *34.16* Depth *15.5*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *1690* metric tons

Coefficient of fineness for use with Tables *.68 lowest in tables.*

Depth for Freeboard (D)
Moulded depth ... *15.50*
Stringer plate ... *1/2"* ... *.04*
Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) = \frac{2.8}{12} \times \frac{253-242.7}{253} = .09$
Depth for Freeboard (D) = *15.59*

Depth correction
(a) Where D is greater than Table depth
(D-Table depth) R =
(b) Where D is less than Table depth (if allowed)
(Table depth-D) R =
 $(16.84-15.55) \times 1.946 = -2.54$
If restricted by superstructures

Round of Beam correction
Moulded Breadth (B) *34.16*
Standard Round of Beam = $\frac{B \times 12}{50} = 8.20$
Ship's Round of Beam = *8.50*
Difference *.30*
Restricted to
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \text{nil.}$

Mean Covered Length for file
 $581 + \frac{16 \times 3.7}{96} = 604.38$
mean overhang
 $4.3 + 1.42 = 5.72$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed					
Poop overhang					
Bridge enclosed...	<i>174.3</i>	<i>174.30</i>	<i>7.5</i>		<i>174.30</i>
" overhang aft ...					
" overhang forward	<i>2.3</i>	<i>1.15</i>	<i>7.5</i>		<i>1.15</i>
F'cle enclosed ...	<i>60.438</i>	<i>60.38</i>	<i>7.5</i>		<i>60.38</i>
" overhang ...	<i>5.72</i>	<i>2.86</i>	<i>7.5</i>		<i>2.86</i>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	<i>242.7</i>	<i>238.69</i>			<i>238.69</i>

Standard Height of Superstructure *6.03*

" " R.Q.D. *-*

Deduction for complete superstructure *31.30*

Percentage covered $\frac{S}{L} = 95.92$

" " $\frac{S_1}{L} = 94.30$

" " $\frac{E}{L} = 94.30$

Percentage from Table, Line A. *92.99*

(corrected for absence of forecastle (if required))

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

Interpolation for bridge less than .2L (if required)

Deduction = *31.30* \times *92.99* = *-29.11*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>35.30</i>	1		<i>35.30</i>	<i>18.6</i>	<i>18.50</i>	1		<i>18.50</i>
1/2 L from A.P. ...	<i>15.41</i>	4		<i>62.84</i>	<i>5.2</i>	<i>5.20</i>	4		<i>20.80</i>
2/3 L " ...	<i>3.88</i>	2		<i>7.76</i>	<i>0.5</i>	<i>0.50</i>	2		<i>1.00</i>
Amidships ...		4		<i>0</i>			4		
2/3 L from F.P. ...	<i>4.44</i>	2		<i>8.88</i>	<i>3.2</i>	<i>3.20</i>	2		<i>6.40</i>
1/2 L " ...	<i>31.42</i>	4		<i>125.68</i>	<i>8.0</i>	<i>8.00</i>	4		<i>32.00</i>
F.P. ...	<i>40.60</i>	1		<i>40.60</i>	<i>31.5</i>	<i>31.50</i>	1		<i>31.50</i>
Total ...				<i>314.42</i>					<i>110.20</i>

Mean actual sheer aft = *Deficient*

Mean standard sheer aft

Mean actual sheer forward = *Deficient*

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = *.19L*

" " aft of " = *.50L*

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{204.52}{18} \times (.45 - .4496) = +3.12$

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 = *15.55*

Summer freeboard = *2.48*

Moulded draught (d) = *13.07*

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = *3.24*

Addition for Winter North Atlantic Freeboard (if required) = *2.00*

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

full displacement salt water at 3.9 met. draught 1680 tons (m)

tons (m) per centim = 5.9

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	<i>2.54</i>	
Deduction for superstructures ...	<i>29.11</i>	
Sheer correction ...	<i>3.12</i>	
Round of Beam correction ...		
Correction for Thickness of Deck amidships ...	<i>.12</i>	
Other corrections, scantlings, etc. to correspond to approved winter freeboard of <i>2'-9"</i>	<i>25.48</i>	
	<i>28.60</i>	<i>31.80</i>
Summer Freeboard = <i>29.43</i>		

29.43 = 0.455 Metres

23.19 = 0.589

26.46 = 0.642

26.46 = 0.642

33.00 = 0.838

35.00 = 0.889

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

Tropical Fresh Water Line above Centre of Disc	<i>6.54</i>	<i>= 166</i>	Tropical Fresh Water Freeboard	
Fresh Water Line	<i>3.24</i>	<i>= 83</i>	Fresh Water	
Tropical Line	<i>3.24</i>	<i>= 83</i>	Tropical	
Winter Line below	<i>3.24</i>	<i>= 83</i>	Winter	
Winter North Atlantic Line	<i>5.24</i>	<i>= 134</i>	Winter North Atlantic	

1906 freeboards assigned.

10m,231

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway ...			No 1 on FREEBOARD	No 1 on SHADE DECK							
Dimensions of Hatchway ...			11'2" x 9'8"	11'2" x 9'8"							
COAMINGS	Height above Deck	...	24" x	18" x							
	Thickness	Sides	4 1/4 x	4 1/4 x							
		Ends	4 1/4	4 1/4							
	Stiffeners	...	—	—							
	Brackets, Stays	...	—	—							
HATCH BEAMS	Number	...	ONE	one							
	Spacing	...	5'6"	as for							
	Scantling and Sketch	...	11'8" x 7'5" x 30 ALL ANGLES 3 x 3 x 40	not on freeboard deck							
	Bearing Surface	...	2'6" x								
FORE AND AFTERS	Number	...									
	Spacing	...									
	Unsupported Lengths	...	none	none							
	Scantling and Sketch	...									
HATCH COVERS	Bearing Surface	...									
	Material	...	pitch pine	pitch pine							
	Thickness	...	2'6" (65%)	2'6"							
	How fitted	...	fore & aft	fore & aft							
Spacing of Cleats	Bearing Surface	...	2 1/2"	2 1/2"							
	Number of Tarpaulins	...	two	two							
<p>*Are wood fore and afters steel shod at all bearing surfaces? — Yes x</p> <p>Are battens and wedges efficient and in good condition? — Yes x</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? — Yes x</p> <p>Are lashings provided in accordance with rule requirements? — Yes x</p>											

Particulars of fiddle, funnel and ventilator coamings:— The fiddleys are fitted and the funnel stepped on the casing 76 inch above the boat deck which is two decks tier above the freeboard decks. The fiddleys are fitted with hinged steel flaps. On the same level steel skylight to E.R. is fitted with hinged steel flaps. Stokehold ventilators are fitted at the same level of strong construction with mechanical means of turning the cowl head.

Particulars of Flush Bunker Scuttles:— One port Starboard on Shade deck dia 21" cast iron with bayonet joint

Particulars of Companionways:— Two on Shade deck forward, one to crew's quarters, steel 26 door sill 11" 18 hinged teak door 1 3/4", and one to III class saloon. Steel 26 door sill 10" hinged teak door 1 3/4" 18

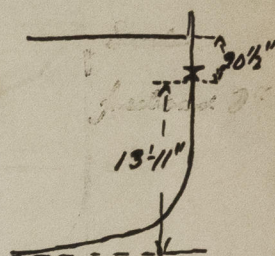
Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— On freeboard dk none. On Shade Dk Ventilators to upper & lower tween decks, coamings 30" x 34" at 11" dia. to 38" x 45" dia, with ordinary cowl heads and temporary means of closing. Swan neck vents fitted in gutterway to W.C. bath & stores in upper tween decks. Tube 3 1/2" x 20. opening 9" above gutterway, with temporary means of closing.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— On freeboard dk none. On Shade Dk Air pipes carried up in gutterway with swan necks. Opening 10" above gutterway, with temporary means of closing.

Particulars of Gangway Cargo and Coaling Ports:— One coaling port port Starboard opening about 12" above freeboard deck, size about 2ft x 2ft. closing arrangements:— hinged framed plate with two efficient hinged strong backs. Ash ejector: fitted about 12" above freeboard dk. Flap at ship's side controlled from the stokehold. Hopper in stokehold fitted with strong hinged screw down W.T. cover.

Particulars of Scuppers and Sanitary Discharge Pipes — Discharge pipes 1½" to 2" lead overboard above the W.L. fitted with bronze non-return valves. (about 5 in all) Discharge pipes 3" to 4" lead overboard at or under the water-line fitted with bronze non-return valves controlled from the freeboard deck (about 19 in all). Pipes galvanized steel of substantial thickness.

Particulars of Side Scuttles: Side Scuttles are fitted at the forward and after ends under the freeboard deck, dia 10" hinged with hinged deadlights. Under the shade deck forward (over quarters) 10" hinged side scuttles fitted with hinged deadlights. Elsewhere 12" hinged side scuttles. The sill of the lowest side scuttle is 13'-11" above the rounded keel line.



Particulars of Guard Rails:— Rails 8½" clear spacing height 43" slanchum about 51" apart.

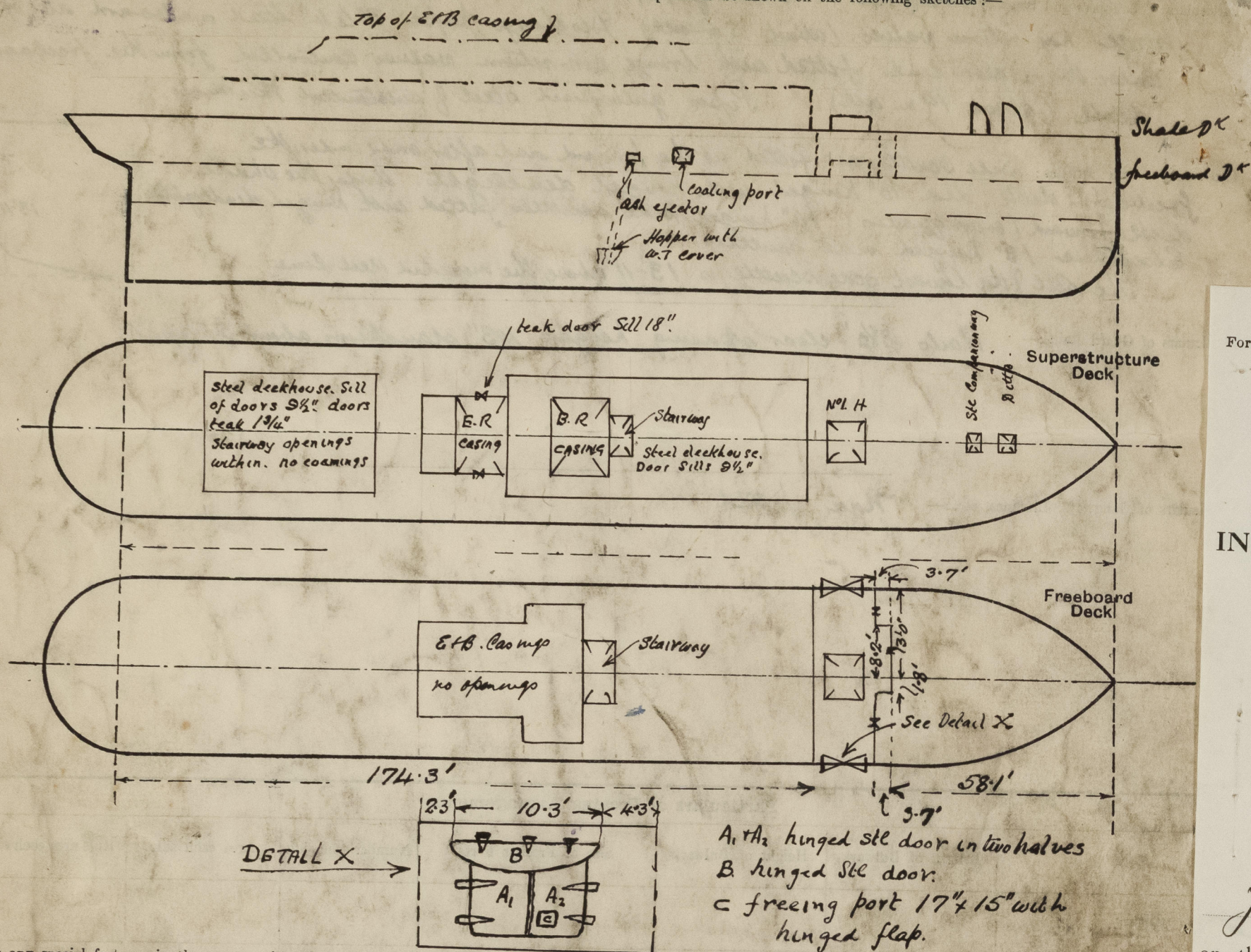
Particulars of Gangways, Lifelines, etc.:— None fitted.

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	17	completely closed see sketch	17" x 15"	one	✓	
State position of each freeing port { After Well:— (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:— 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	—							
Raised Quarter Deck Bulkhead ...	—							
Bridge, After Bulkhead	—							
Bridge, Forward Bulkhead	26 ✓	26 ✓	plating 1/4" 3" x alt 5/16" 2 1/2" x 2 1/2" x 28	31 1/2 ✓	none ✓	none ✓		
Forecastle Bulkhead	26 ✓	26 ✓	2 1/2" x 2 1/4" x 28	30 ✓	none ✓	66" x 27 ✓	9 1/2" ✓	
Trunk, Aft	—							
Trunk, Forward	—							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	—							
Exposed Machinery Casings on Superstructure Decks on Shade Deck ...	5 1/4" x 34 ✓	28 ✓	2 3/4" x 2 1/4" x 26	39" ✓	none ✓	61" x 25" ✓	18" ✓	
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	
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead	hinged teak door capable of being manipulated from both sides ✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks on Shade Deck ...	hinged teak door capable of being manipulated from both sides. ✓
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:—



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

This vessel was commenced in May 1914, launched July 1920 and is now being completed. The class contemplated is +100 A-1 Shade deck with freeboard for Service in the Adriatic, date of build 1920. With reference to the Secretary's letter 7 Aug 1931 to Trieste, it should be noted the scantlings have been approved in 1914 for a freeboard of 2'-9" from the upper deck. It is concluded that it was intended to measure the freeboard from the steel upper deck and that it would be an all Season freeboard. The Owners desire the maximum draught possible at all Seasons and the freeboard assigned under the old Rules. This vessel is at Trieste fitting out Engines, boiler and part hull. She goes to Trieste about the end of May when the public room will be completed and the ship measured for tonnage. The approved midship section is enclosed for reference, kindly return.

Form C11 (b).

Lloyd's

INTERNATIONAL

PERIODIC

I have

JUGOSLAVIA

on this date, in accordance with the Rules, have endorsed the Freeboard Certificate.

I have seen the vessel and find her to be in force, and my satisfaction is hereby certified.

(Signature of Surveyor.)

Builder's name and yard number GANZ & CO DANUBIUS N° 68 and CANTIERE NAVALE DEL QUARNARO N° 13

Names of sister ships none

Owners JADRANSKA PLOVIDBA D.D.

Fee £ Received by me

Fee 688-

Surveyors should note that the certificate has been produced to the satisfaction of the Surveyor.

5m. 4.38.



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