

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

 Index. No. **15508**  
 (For London Office only.)

Rpt 9922

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~  
 having Pop. Bridge & F'le.  
"Radfield" (Type of Superstructures.)  
 Ship's Name **KOSTRENA** Nationality and Port of Registry Yugoslav. Lusak Official Number ✓ Gross Tonnage 2531 Date of Build 1902-1  
 Moulded Dimensions: Length 312.5' Breadth 43.82' Depth 23'-3"  
 Moulded displacement at moulded draught = 85 per cent. of moulded depth 6255 tons  
 Coefficient of fineness for use with Tables 809 ✓  
 Port of Survey Trieste  
 Date of Survey 13<sup>th</sup> 14<sup>th</sup> October 1932  
3<sup>rd</sup> March 1933.  
 Name of Surveyor Althunter  
 Particulars of Classification +100 A.1.  
SS Fin 2nd No.3 - 8,28

Depth for Freeboard (D)				Depth correction		Round of Beam correction	
Moulded depth	...	...	...	23.25	(a) Where D is greater than Table depth (D-Table depth) R =	Moulded Breadth (B)	43.82
Stringer plate	...	...	...	.04	(23.29 - 20.83) 2.46 = + 5.91	Standard Round of Beam = $\frac{B \times 12}{50}$ =	10.52
Sheathing on exposed deck	$T \left( \frac{L-S}{L} \right) =$			✓	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Ship's Round of Beam	= 10.5"
Depth for Freeboard (D) =				23.29	If restricted by superstructures	Difference	.02
						Restricted to	
						Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right)$	= $\frac{.02}{4} \times .4972 = \text{NIL}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>31'-0"</u>	<u>31.00</u>	<u>7'-0"</u>		<u>31.00</u> ✓
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	<u>94'-0"</u>	<u>94.00</u>	<u>7'-0"</u>		<u>94.00</u> ✓
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	<u>33'-0"</u>	<u>32.12</u>	<u>7'-3"</u>		<u>32.12</u> ✓
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<u>158.00</u>	<u>157.12</u>			<u>157.12</u> ✓

Standard Height of Superstructure	<u>6.625</u> ✓
" " R.Q.D.	
Deduction for complete superstructure	<u>36.16</u> ✓
Percentage covered $\frac{S}{L} =$	<u>50.56</u>
" " $\frac{S_1}{L} =$	<u>50.28</u>
" " $\frac{E}{L} =$	<u>50.28</u> ✓
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	<u>36.28</u> ✓
Interpolation for bridge less than 2L (if required)	
Deduction =	<u>- 13.12</u> ✓

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate INCHES	Effective Ordinate	S	M	Product
A.P. ...	<u>41.25</u>	<u>1</u>		<u>41.25</u>	<u>44.0</u>	<u>44.0</u>	<u>1</u>		<u>44.00</u>
$\frac{1}{2}$ L from A.P. ...	<u>18.35</u>	<u>4</u>		<u>73.40</u>	<u>19.0</u>	<u>18.96</u>	<u>4</u>		<u>75.84</u> ✓
$\frac{3}{8}$ L " ...	<u>4.54</u>	<u>2</u>		<u>9.08</u>	<u>4.7</u>	<u>4.74</u>	<u>2</u>		<u>9.48</u> ✓
Amidships ...		<u>4</u>					<u>4</u>		
$\frac{3}{8}$ L from F.P. ...	<u>9.08</u>	<u>2</u>		<u>18.16</u>	<u>10.1</u>	<u>10.17</u>	<u>2</u>		<u>20.34</u> ✓
$\frac{1}{2}$ L " ...	<u>36.71</u>	<u>4</u>		<u>146.84</u>	<u>40.7</u>	<u>40.68</u>	<u>4</u>		<u>162.72</u> ✓
F.P. ...	<u>82.50</u>	<u>1</u>		<u>82.50</u>	<u>94.0</u>	<u>94.0</u>	<u>1</u>		<u>94.00</u>
Total ...				<u>371.23</u>					<u>406.38</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{371.23 - 406.38}{18} \left( .75 - \frac{.2528}{.4972} \right) = -.97$  ✓  
 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 = 23.29 ✓  
 Summer freeboard = 3.56 ✓  
 Moulded draught (d) = 19.73 ✓

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 4.93 = 5" ✓  
 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 =  $\frac{\Delta}{40T}$  inches

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{809 + .68}{1.36} = \frac{1.489}{1.36}$

Depth Correction ... 5.91 ✓  
 Deduction for superstructures ... 13.12 ✓  
 Sheer correction ... .97 ✓  
 Round of Beam correction ...  
 Correction for Thickness of Deck amidships  
 Other corrections, scantlings, etc. ...

	+	-
Depth Correction	<u>5.91</u>	
Deduction for superstructures		<u>13.12</u>
Sheer correction		<u>.97</u>
Round of Beam correction		
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	<u>5.91</u>	<u>14.09</u>
Summer Freeboard =	<u>42.75</u> ✓	

SUMMER 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	...
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										
ON SUPER. DECKS										
Description of Hatchway	TO POOP SPACE	POOP OK. TRAMP TO POOP	ON CASING TOP TO COAL CHUTE	ON BRIDGE DECK SIDE BURNERS 15	N°1 (PB) CARGO	N°2 CARGO	N°3 CARGO	N°4 CARGO	IN POOP TO AFTER TANK	
Dimensions of Hatchway	LENGTH 8'-0"	3'-0"	12'-0"	5'-10 1/2"	20'-3"	23'-10"	24'-0"	19'-0"	9'-0"	
	WIDTH 10'-0"	3'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	8'-0"	
COAMINGS	Height above Deck 12 1/2"	12 1/2"	12"	12 1/2"	12 1/2"	12 1/2"	12 1/2"	12 1/2"	12"	
	Thickness Sides 3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	
	Thickness Ends 3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	
	Stiffeners 3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	
	Brackets, Stays 3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	
HATCH BEAMS	Number 1-2091	1228								
	Spacing 12'-11"									
	Scantling and Sketch									
Bearing Surface	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	
FORE AND AFTERS	Number 1 CENTRE 5'-0"									
	Spacing 7'-6"									
	Unsupported Lengths 6"									
	Scantling and Sketch									
Bearing Surface	WOOD 2 1/4"	NIL	NIL	WOOD 2 1/4"	WOOD 2 1/4"	WOOD 2 1/4"	WOOD 2 1/4"	WOOD 2 1/4"	NIL	
HATCH COVERS	Material WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	STEEL	
	Thickness 3"	3"	3"	3"	3"	3"	3"	3"	3"	
	How fitted TRANS	GRATING	LONGIT.	TRANS.	TRANS.	TRANS.	TRANS.	TRANS.	TRANS.	
	Bearing Surface 2"	2"	3"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	
Spacing of Cleats	26"/14"	18"	24"	22"/10"	24"	25"	25"/24"	25"/24"	25"	
Number of Tarpaulins	3	3	3	3	3	3	3	3	NIL	
<p>*Are wood fore and afters steel shod at all bearing surfaces? YES</p> <p>Are battens and wedges efficient and in good condition? YES</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? YES</p> <p>Are lashings provided in accordance with rule requirements? YES</p>										

Particulars of fidley, funnel and ventilator coamings:— 2 VENTS TO STOKES. COAMINGS 22" DIA

2 " " ENGINE ROOM " 15"

FUNNEL COAMING 27" HIGH

ENG. ROOM SKYLIGHT OF STEEL WITH WOOD HINGED COVERS

FOLEY GRATINGS FITTED WITH HINGED STEEL COVERS. NO MEANS OF KEEPING SAME CLOSED.

Particulars of Flush Bunker Scuttles:— NIL

Particulars of Companionways:— NIL

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

FORE DECK. 2 @ 7" dia x 15" high x 24" th. to cover space (N°1 on sketch p 4). 2 rings for stove pipes 5" dia x 2" high (N°2 on sketch). 1 C.I. mushroom to F.P. (N°3 on sketch)

FORE WELL. 4 @ 14" dia x 39" high x 30" th. to holds (N°4 on sketch)

BRIDGE DECK. 2 demich post vents. 18" dia to bridge space & bunkers (N°5)

AFTER WELL. 4 @ 14" dia x 36" high x 30" th. to holds (N°6)

POOP DECK. 1 demich post vent 14" high dia x 38" th. to tunnel (N°7) 2 @ 7 1/2" dia x 19" high x 25" th. to poop space (N°8)

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

BRIDGE DECK. 2 @ 3" dia opening 24" above deck, to Stokes bulkhead lining

AFTER WELL. 1 @ 2 1/2" dia opening 21" above deck to N°6 d.b. tank (fitted with wood plug). 1 at 2" dia opening 16" above deck to N°5 d.b. tank (no closing appliance)

In the Fore Well & on the Poop Deck, the sounding pipes to the N°6 d.b. tank & the sounding pipe to the after peak tank respectively comprise the air pipes to these tanks. The sounding pipes are flush with the deck & are fitted with screwed brass plugs.

Particulars of Gangway Cargo and Coaling Ports:— NIL

Particulars of Scuppers and Sanitary Discharge Pipes — Below Main Deck

3 @ N°2 hold 4 C.I. deck scuppers (2 P. 23)

3 @ N°3 " 4 C.I. main deck scuppers (2 P. 25)

3 @ N°4 " 2 C.I. " " (1 P. 15)

Particulars of Side Scuttles:

IN FOLEY 7 @ 8 1/2" dia (3 P. 45) fitted with deadlights

IN POOP 6 @ 8 1/2" dia (3 P. 35) " " "

Particulars of Guard Rails:—

On forecastle & poop rails 36" high with 1 intermediate rail. Stanchions spaced about 5'-0"

On bridge " 36" " 2 " " " 5'-0"

Particulars of Gangways, Lifelines, etc.:— NIL. CREW BERTHED FORWARD

Lifelines provided in fore and after wells P. 15

## 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	80'-0"	3'-8 1/2"	3'-6" x 1'-5"	4	18.2 Sq. Ft.	16.0
Forward Well	76'-0"	3'-8 1/2"	3'-6" x 1'-5"	4	18.2 Sq. Ft.	14.9
<p>State position of each freeing port ... After Well:— FROM FORWARD 8'-6" 23'-6" 43'-0" 63'-0" LOWER EDGE 10" ABOVE DECK</p> <p>(E. and A. position and height above deck edge) Forward Well:— " " 9'-10" 31'-0" 46'-6" 67'-6" " " " "</p> <p>State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 1" BARS SPACED 4". BARS HORIZONTAL.</p> <p>Additional area where sheer is less than standard.</p>						

## 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	30" x 44"	42"	5" x 3 1/2" x 40" OA	31"	BRACKETS AT BOTTOM ONLY	2 @ 5'-0" x 3'-0" WIDE	19"	
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	42" x 34"	28"	5" x 3" x 40" OA	31"	NIL	2 @ 6'-7 1/2" x 4'-0" W		
Bridge, Forward Bulkhead	25" x 46"	38"	8" x 3 1/2" x 50" BA	27"	BRACKETS TOP & BOTTOM	2 @ 4'-4 1/2" x 3'-0" W.	19"	
Forecastle Bulkhead	19" x 32"	26"	3" x 3" x 26" OA	34"	NIL	4'-9" x 2'-0" W. SEE SKETCH	19"	
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	39" x 32"	28"	3" x 3" x 300" A.	28"	BRACKETS AT TOP ONLY	SEE SKETCH	18"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	36"	28"	3" x 3" x 300" A.	27"	BRACKETS AT TOP	10 4'-6" x 4'-0" TO DB. SPACE 2 @ 4'-6" x 2'-0" W. fidley	18"	
Deckhouses on Flush Deck Ships								

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

Poop Bulkhead	Hinged steel doors, kept shut by clamps spaced 20" operated from outside only.
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	3" horizontal wood shifting boards. Fitted full height (deck to deck) in channels 1 1/2" deep.
Bridge, Forward Bulkhead	Hinged steel doors kept shut by clamps spaced 18" operated from outside only.
Forecastle Bulkhead	Hinged wood doors 2 1/2" thick. Handles both sides, ordinary locks.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	
Exposed Machinery Casings on Superstructure Decks	Hinged steel doors. Operated both sides, ordinary locks
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	To Donkey Boiler. Double hinged steel door, operated both sides, ordinary bolts. To Fidley. Hinged steel doors operated both sides, ordinary bolts.
Deckhouses on Flush Deck Ships	

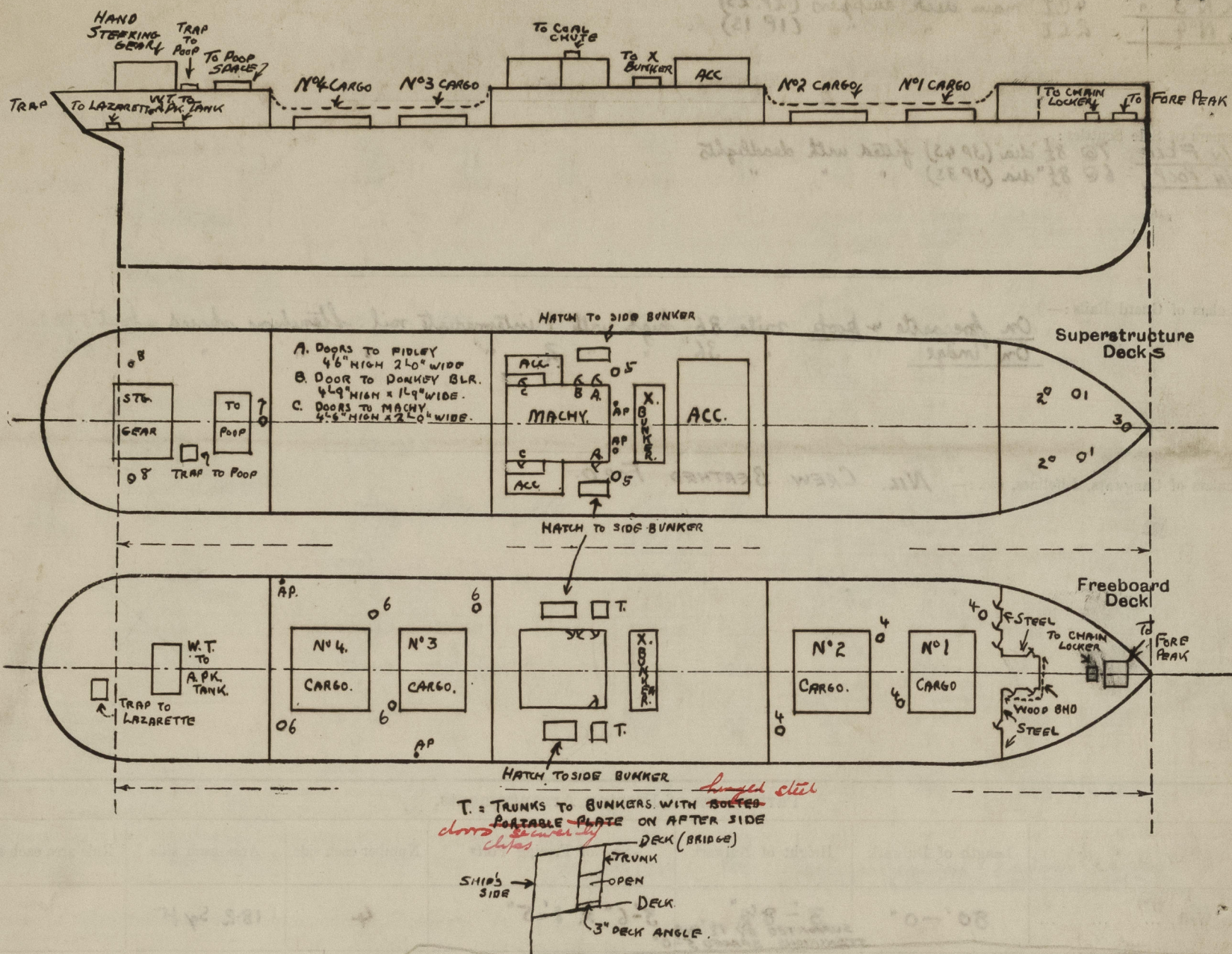
KOSTRENA.  
RASFIELD.

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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:—

The special survey 3<sup>rd</sup> N°1 has been held on this vessel at this time.

See Trieste report N° 9761 etc.

The main steering engine is situated amidships with rods & chains lead aft. An efficient hand steering gear is arranged on the poop deck, protected by a steel deck house.

*The double bottom tanks within the half length; the centre girder holes closed by bolted washer*

*Strong angle sockets efficiently secured to the stringer fitted for securing the uprights*

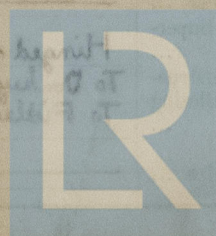
*Eye plates for securing lashings provided and riveted to the sheers/wake*

Builder's name and yard number Napier & Miller Ltd. Glasgow. Yard N° -120.

Names of sister ships

Owners Brodanko Akhionarsko Društvo "Oceania"

Fee £1200. 2 applied for  
Exp 30.- 8/3/33 Received by me



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