

# LLOYD'S REGISTER OF SHIPPING

## SURVEYS FOR FREEBOARD

(COMPUTATION FOR ~~STEAMER~~, ~~SAILING SHIP~~, TANKER)

For LONDON OFFICE ONLY

Received .....

Index No. ....

Govt. Copy .....

Owners C11 .....

L.L.111

Ship's Name <b>BALACLAVA</b>	Official Number	Nationality and Port of Registry Russian RIGA	Gross Tonnage <b>13,365</b>	Date of Build
Moulded Dimensions: Length 165.012 Breadth 21.800 Depth 11.78 Freeboard Length 165.012 <i>to cr. of rudder stock.</i> Moulded displacement at moulded draught = 85 per cent. of moulded depth 27025 tons Coefficient of fineness for use with Tables <b>.750</b>				
Port of Survey <b>Gdańsk</b> Date of Survey <b>whilst building</b> Surveyor's Signature <i>A.M. Tyc</i> Particulars of Classification <b>+100 A1 Oil Tanker (Contemplated)</b>				

<b>DEPTH FOR FREEBOARD (D).</b> Moulded depth ... 11.780 ... Stringer plate ... 25 ... Wood Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <b>11.805</b>	<b>DEPTH CORRECTION.</b> (a) Where D is greater than Table depth (D-Table depth) R = $8.33(11.805 - 11.001)30 = +201 \text{ mm}$ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures	<b>ROUND OF BEAM CORRECTION.</b> Moulded Breadth (B) <b>21.800 m</b> Standard Round of Beam = $\frac{B \times 100}{50} = 436$ Ship's Round of Beam = <b>435</b> Difference <b>1</b> Restricted to Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S}{L} \right) = \text{Nil}$
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## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <i>equivalent</i>	39.963	39.963	2500		39.963
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed <i>equivalent</i>	13.626	13.626			13.626
" overhang aft	1.849	1.387			1.387
" overhang forward					
Fore enclosed ...	21.370	21.370	2500		21.370
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft					
" " forward...					
Total ...	76.808	76.346			76.346

Standard Height of Superstructure **2290 mm**" " R.Q.D. **-**Deduction for complete superstructure **1067 mm**Percentage covered  $\frac{S}{L} = 46.58$ 
 $\frac{S_1}{L} = 46.27$   
 $\frac{E}{L} =$ 
Percentage from Table, Line A. Tanker **37.27**  
(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 =  $1067 \times .3727 = -398 \text{ mm}$ 

## SHEER CORRECTION.

Actual Height of Superstructure = 2500  
Standard " " = 2290

Excess = 210

 $\text{Allowance for shear} = \left( \frac{210}{3} \times \frac{21.370}{165.012} \right) + \left( \frac{210}{3} \times \frac{38.890}{165.012} \right) = 25$ 
Mean actual sheer aft =  
Mean standard sheer aft =Mean actual sheer forward =  
Mean standard sheer forward =Length of enclosed superstructure forward of amidships =  
L

" " aft of " =

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	1629	1		1629	927	927	1		927
1/4 L from A.P. ...	724	4		2896	240	240	4		960
1/2 L " ...	181	2		362	0	0	2		0
Amidships ...	0	4		0	0	0	4		0
3/4 L from F.P. ...	362	2		724	0	0	2		0
3/4 L " ...	1447	4		5788	772	772	4		3088
F.P. ...	3257	1		3257	2472	2472	1		2472
Total ...				14656					7447

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{7209 - 25}{18} \left( .75 - \frac{2329}{2500} \right) = +194 \text{ mm}$ 

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100ft.

## Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **11.805**  
Summer freeboard = **2.584**Moulded draught (d) = **9.221**

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for =

Winter freeboard =  $\frac{d}{48} \text{ inches} = 192 \text{ mm} = 7 \frac{1}{2} \text{ inches}$ Addition for Winter North Atlantic Freeboard (if required) =  $192 + 137 = 329 \text{ mm} = 13 \text{ inches}$ 

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 25383$ 

Tons per inch immersion at summer load water line

T = **30.85**Deduction =  $\frac{\Delta}{40 T} \text{ inches} = 206 \text{ mm}$ = **8 inches**

## TABULAR FREEBOARD - corrected for Fresh Deck (if required)

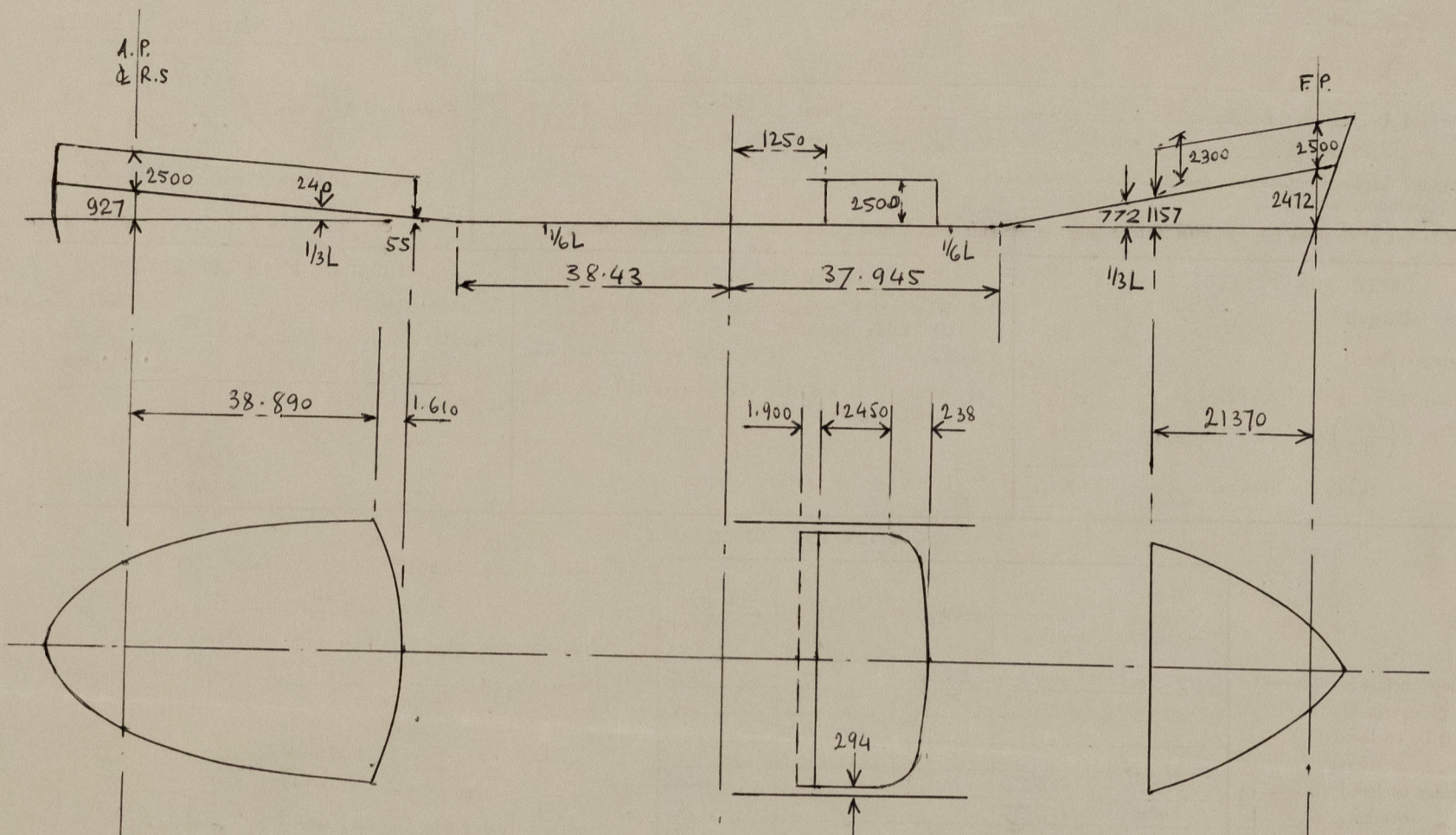
Correction for coefficient  $\frac{.68 + .75}{1.36} = 1.430$ Depth Correction ...
| Deduction for superstructures ... |
| Sheer correction ... |
| Round of Beam correction ... |
| Correction for Thickness of Deck amidships ... |
| Other corrections, scantlings, etc. ... |
| **395** | **398** | **- 3 mm** |
Summer Freeboard = **2584 mm**  
= **8' 5 3/4"**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Winter~~ Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	...	15 1/2
Fresh Water Line	"	8
Tropical Line	"	7 1/2
Winter Line below	"	7 1/2
Winter North Atlantic Line	"	13

Tropical Fresh Water Freeboard	7' 2 1/4"
Fresh Water	7' 2 3/4"
Tropical	7' 10 1/4"
Winter	9' 1 1/4"
Winter North Atlantic	9' 6 3/4"

12 DEC 1961

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.



Equivalent length of Prop

$$\begin{aligned} \text{Length at side} &= 38.890 \text{ m} \\ + \left( \frac{2}{3} \times 1.610 \right) &= \frac{1.073}{39.963 \text{ m}} \end{aligned}$$

Bridge

$$\begin{aligned} \text{Length at side} &= 12.450 \\ + \frac{2}{3} \times 2.380 &= \frac{1.587}{14.037} \\ - \frac{.705}{21.212} &= \frac{.033}{14.004} \end{aligned}$$

$$\text{Equivalent length} = 14.004 \times \frac{21.212}{21.800} = 13.626 \text{ m}$$

$$\text{Overhang} = 1.900 \times \frac{21.212}{21.800} = 1.849$$

MOULDED DRAUGHT  
IN METRES

9.00  
9.25  
9.50

EXTREME DISPLACEMENT  
IN METRIC TONS

24700  
25480  
26250

DISPLACEMENT IN  
METRIC TONS PER  
CENTIMETRE IMMERSION

30.65  
30.87  
31.02

Dr. Linc.

Trade of ship INTERNATIONAL OIL CARRIER

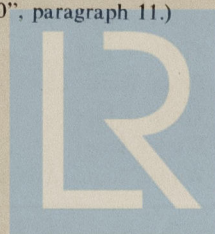
Names of sister ships "BAUSKA" B 70/001

Builder's name and yard number Stocznia Gdańska B70/002

Owners Russian Government

Fee £ with FIRST ENTRY REPORT

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950", paragraph 11.)



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Foundation