

LLOYD'S REGISTER OF SHIPPING

SURVEYS FOR FREEBOARD

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

Received
 Index No.
 Govt. Copy
 Owners Clt
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Ship's Name **"LENKORAN"** Official Number **903** Nationality and Port of Registry **Russian Odessa** Gross Tonnage **23158.70** Date of Build **1962**

Port of Survey **Aioi, Japan**
 Date of Survey **Whilst Building**
 Surveyor's Signature **A. Scott**
 Particulars of Classification ***100A, Oil Tanker [Contemplated]**

Moulded Dimensions: Length **639.78** Breadth **27mm** Depth **47.26**
 Freeboard Length **639.78 to centre of stock**
 Moulded displacement at moulded draught = 85 per cent. of moulded depth **52.380** tons
 (excluding bossing)
 Coefficient of fineness for use with Tables **0.805**

DEPTH FOR FREEBOARD (D).
 Moulded depth ... **47.26**
 Stringer plate ... **27mm** ... **09**
 Wood Sheathing on exposed deck **None**
 $T \left(\frac{L-S}{L} \right) =$
 Depth for Freeboard (D) = **47.35**

DEPTH CORRECTION.
 (a) Where D is greater than Table depth (D-Table depth) R = **[47.35 - 42.65] 3 + 14.10**
 (b) Where D is less than Table depth (if allowed) (Table depth-D) R = **4.70**
 If restricted by superstructures

ROUND OF BEAM CORRECTION.
 Moulded Breadth (B) **28.58**
 Standard Round of Beam = $\frac{B \times 12}{50} =$ **21.26**
 Ship's Round of Beam = **See sketch over**
 Difference **20.39**
 Restricted to **0.87**
 Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.87^2}{4} \times .6621 = +.14$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Least Height Ft.	Height Correction	Effective Length (E)	
Poop enclosed Even	140.59	140.59	8.33 at CL	-	140.59	Standard Height of Superstructure 7.50
" overhang						" " R.Q.D. -
R.Q.D. enclosed						Deduction for complete superstructure 42"
" overhang						Percentage covered $\frac{S}{L} =$ 33.79
Bridge enclosed						" " $\frac{S_1}{L} =$ 33.69
" overhang aft						" " $\frac{E}{L} =$ 33.69
" overhang forward						Percentage from Table, Line A. TANKER 24.69
F'cle enclosed	75.58	75.58	7.44 at side	7.44/7.50	74.98	(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = 42 x 24.69 = 10.37
" forward						
Total	216.17	216.17			215.57	

SHEER CORRECTION.

EXCESS POOP HT = 122.76 - 90" = 32.76

$$\frac{32.76}{3} \times \frac{137.30}{639.78} = 2.34$$

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	73.98	1	73.98	14.69	14.69	1	14.69
$\frac{1}{2}L$ from A.P.	32.92	4	131.68	0	0	4	0
$\frac{2}{3}L$ "	8.14	2	16.28	0	0	2	0
Amidships	0	4	0	0	0	4	0
$\frac{2}{3}L$ from F.P.	16.27	2	32.54	0	0	2	0
$\frac{1}{2}L$ "	65.84	4	263.36	0.87	0.87	4	3.48
F.P.	147.95	1	147.95	24.06	24.06	1	24.06
Total			665.79				42.23

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{623.56 - 2.34}{18} \left[.75 - \frac{.1690}{.5810} \right] = +18.77$

If limited on account of midship superstructure. **32.30**

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck	=	47.35
Summer freeboard	=	12.42
Moulded draught (d)	=	34.93
Keel allowance	=	
Extreme draught	=	
Deduction for Tropical freeboard and addition for	=	

Winter freeboard = $\frac{d}{4}$ inches = **8.73 = 8 3/4**

Addition for Winter North Atlantic Freeboard (if required) = **8.73 + 6.40 = 15.13 = 15 1/4**

Deduction for Fresh Water.

Displacement in salt water at summer load water line	$\Delta =$ 44940
Tons per inch immersion at summer load water line	T = 116.90
Deduction = $\frac{\Delta}{40 T}$ inches	= 9.61 = 9 1/2

See Over also

"Hydrostatic Curves"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.805 + .68}{1.36} = \frac{1.485}{1.36}$

	+	-	
Depth Correction	14.10	-	
Deduction for superstructures	-	10.37	
Sheer correction	18.77	-	
Round of Beam correction	14	-	
Correction for Thickness of Deck amidships	-	-	
Other corrections, scantlings, etc.	-	-	
	33.01	10.37	+ 22.64
Summer Freeboard =			149.04

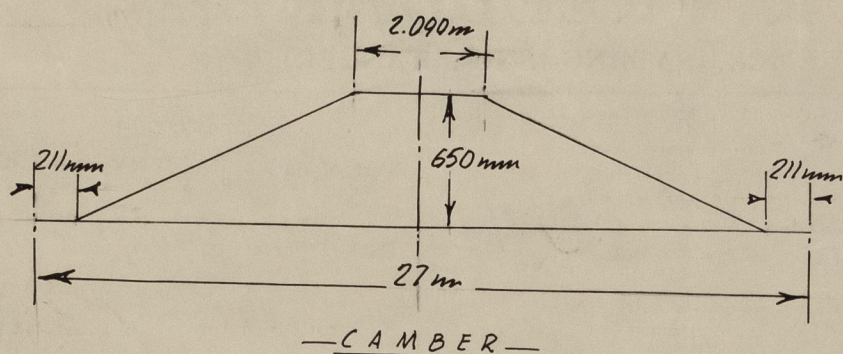
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, ~~Steel~~, Deck :-

Tropical Fresh Water Line above Centre of Disc	... 12 1/4 ...
Fresh Water Line	... 9 1/2 ...
Tropical Line	... 8 3/4 ...
Winter Line	... 8 1/4 ...
Winter North Atlantic Line	... 15 1/4 ...

Tropical Fresh Water Freeboard	12 1/4
Fresh Water	10 1/2
Tropical	11 1/2
Winter	13 1/4
Winter North Atlantic	15 1/4

15 MAY 1962

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.



EQU CAMBER

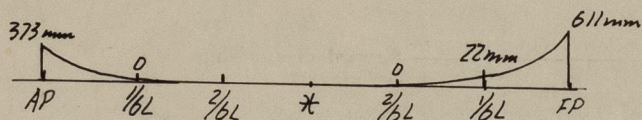
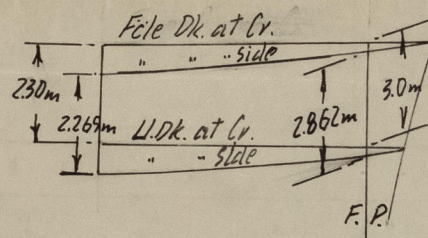
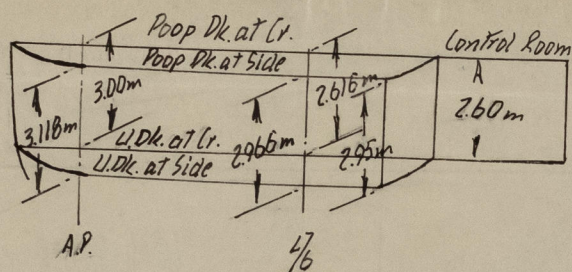
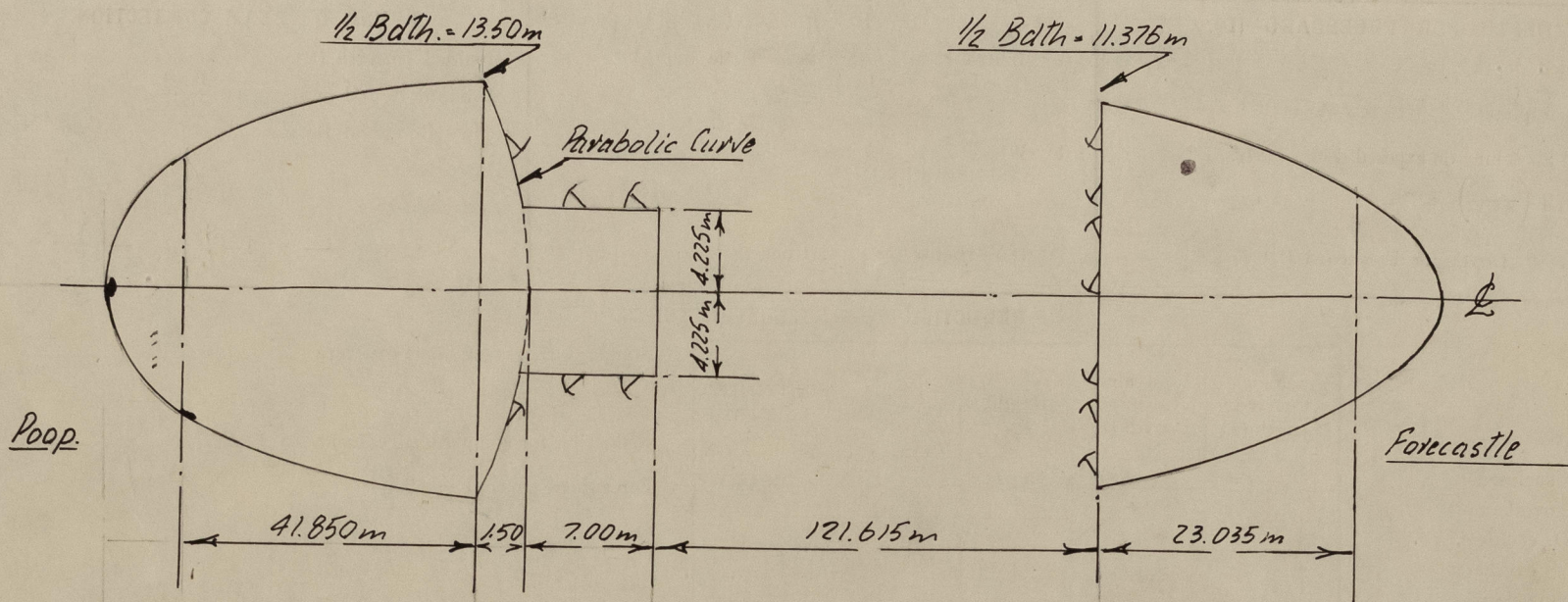
$$\text{AREA} = \frac{14.334}{2} \times 13.289 + 1.045 \times 650$$

$$\therefore \text{EQU. L} = \frac{3}{2} \times \frac{14.334}{2} \times \frac{650}{13.500} \text{ m.}$$

$$= 518.7 = 20.39'$$

EQU. LENGTH OF POOP

$$\text{LENGTH @ SIDE} = 41.85 + \frac{2}{3} \times 1.5 = 42.850 \text{ m} = 140.59'$$



Sheer Heights

Mld. Draft Feet	Full Displ't. L. Tons.	T.P.L. L. Tons
37'-0"	47,840	118.2
36'-0"	46,420	117.6
35'-0"	45,010	117.0
34'-0"	43,610	116.4
33'-0"	42,220	115.8

Trade of ship "INTERNATIONAL" TANKER.

Names of sister ships "LISICHANSK", YARD Nos. 593, 4. Building or preparing.

Builder's name and yard number Ishikawajima - Harima Heavy Industries Co. Ltd., Aioi Works, Japan. Yard No. 592.

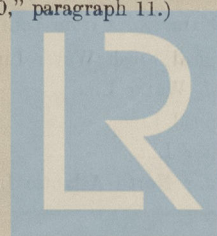
Owners Vsesojuznoje Exportno-Importnoje Objedinenije "SUDOIMPORT", Moscow, U.S.S.R.

Fee £ :

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

MIDSHIP SECTION
PROFILE & DECKS
HYDROSTATIC CURVES
GENERAL ARRANGT.

[See Ship, Yard No. 591, "LISICHANSK"]



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