

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD

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

Received
 Index No.
 Govt. Copy
 Owners C11

Ship's Name "ALDAN"	Official Number -	Nationality and Port of Registry Russian Leningrad	Gross Tonnage 1500	Date of Build 4.59	Port of Survey Gävle
Moulded Dimensions: Length 71.800 m Breadth 12.50 m Depth 5.20 to main deck					Date of Survey Whilst building
Freeboard Length 72.000 m TO E OF RUDDERSTOCK					Surveyor's Signature <i>H. O. Cullen</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth 2207 m ³					Particulars of Classification +100A1 FOR TOWING SERVICE
Coefficient of fineness for use with Tables .555 408 .680					class contemplated

DEPTH FOR FREEBOARD (D). mm Moulded depth ... 5200 Stringer plate ... 14 Wood Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 5214	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = 8.33(5214-4.800) 72 = +63 (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures	ROUND OF BEAM CORRECTION. mm Moulded Breadth (B) 12500 Standard Round of Beam = $\frac{B \times 12}{50} = 250$ Ship's Round of Beam = 244 Difference 6 Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S}{L} \right) = \frac{6}{4} \times (.4676) = .7014$
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DEDUCTION FOR SUPERSTRUCTURES.

See sketch overleaf

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed ...			2700		
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...	38,202	38,202	8,900		38,202
" overhang ...	173	130			130
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	38,375	38,332			38,332

Standard Height of Superstructure **1830**

" " R.Q.D. **-**

Deduction for complete superstructure **753**

Percentage covered $\frac{S}{L} = 53.29$

" " $\frac{S_i}{L} = 53.24$

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

Percentage from Table, Line A. **36.54**
 (corrected for absence of forecastle (if required))

Percentage from Table, Line B. **39.24**
 (corrected for absence of forecastle (if required))

Interpolation for bridge less than .2L (if required) **37.41**

Deduction = **753 x .3741 = -282**

SHEER CORRECTION. mm

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	854	1	854	763	763	1	763
1/4 L from A.P. ...	379	4	1516	224	224	4	896
2/4 L " ...	95	2	190	13	13	2	26
Amidships ...	0	4	0	0	0	4	0
3/4 L from F.P. ...	190	2	380	362	240	2	480
1/4 L " ...	759	4	3036	1005	1959	4	3836
F.P. ...	1708	1	1708	2003	2158	1	2158
Total ...			7684				8169

Mean actual sheer aft = **DEFICIENT .6476**

Mean standard sheer aft =

Mean actual sheer forward = **EXCESS**

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{475}{18} (.75 - .2665) = -13$

If limited on account of midship superstructure. **13 x 13.24 = -9**

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 = **5214**

Summer freeboard = **1139**

Moulded draught (d) = **4.075**

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for =

Winter freeboard = $\frac{d \text{ mm}}{48} = \frac{4075}{48} = 84.9$

Addition for Winter North Atlantic Freeboard (if required) = **85 + 51 = 136**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 2032 \text{ MET. TONS}$

Tons per inch immersion at summer load water line

$T = 6.77 \text{ MET. TONS CM.}$

Deduction = $\frac{\Delta}{40 T} \text{ inches} = \frac{2032}{40 \times 6.77} = 7.5 \text{ mm}$

3"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... **63**

Deduction for superstructures ... **282**

Sheer correction ... **9**

Round of Beam correction ... **1**

Correction for Thickness of Deck amidships ... **1**

Other corrections, scantlings, etc. **7.0**

611

675

291 + 384

Summer Freeboard = **1139**

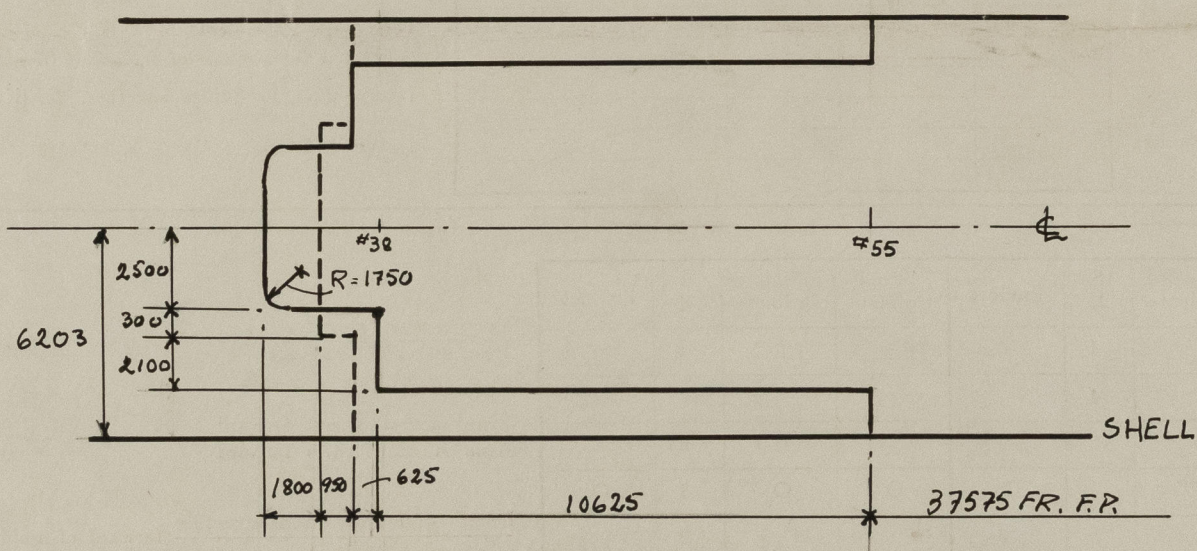
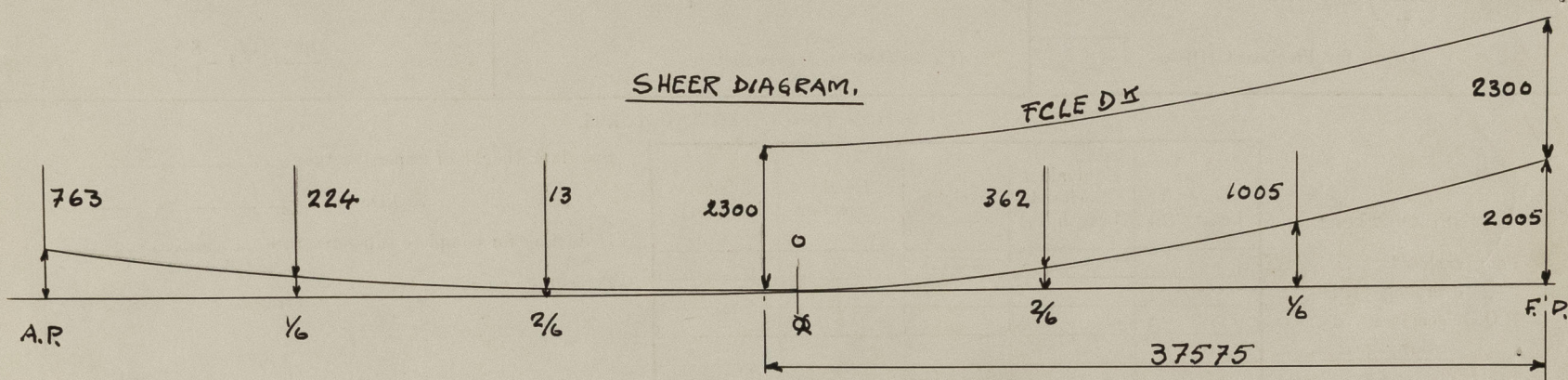
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck

Tropical Fresh Water Line above Centre of Disc	1.60	6 1/4"	Tropical Fresh Water Freeboard	1139 mm	3' - 8 3/4"
Fresh Water Line	75	3"	Fresh Water	1064 mm	3' - 2 1/4"
Tropical Line	85	3 1/4"	Tropical	1054 mm	3' - 5 1/2"
Winter Line below	85	3 1/4"	Winter	1234 mm	4' - 0"
Winter North Atlantic Line	136	5 1/4"	Winter North Atlantic	1275 mm	4' - 2"

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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.

DISPLACEMENT	DISPLACEMENT ON SHELL, TON (METRIC) IN SALT WATER	TON/CM ON SHELL METRIC TON
100 % of mould. depth	2830	7.00
95 % " " "	2660	7.00
85 % " " "	2276	6.90
75 % " " "	1914	6.70



FORECASTLE OVERHANG

Trade of ship..... International

Names of sister ships..... "PAMIR" Yard No. 99, Skm Rpt. No. 11731.

Builder's name and yard number..... A/B Gävle Varv, Yard No. 100.

Owners..... U.S.S.R.

Fee..... Kr. 455:--

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

1. Longitudinal section and plans.
2. Midship section.



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