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(For London Office only.)

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

F-3315

Ship's Name <b>"ALEXANDRA I"</b>	Official Number <b>718</b>	Nationality and Port of Registry <b>Liberian Monrovia</b>	Gross Tonnage <b>20926.</b>	Date of Build <b>FEB. 1956.</b>	Port of Survey <b>Innoshima</b>
Moulded Dimensions: Length <b>197.0 M</b> Breadth <b>26.40 M</b> Depth <b>14.0 M</b> to Centre of Stock					Date of Survey <b>Whilst building</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>49,300</b> tons (excluding bossing)					Surveyor's Signature <b>Long. W. Culloch.</b>
Coefficient of fineness for use with Tables <b>795.790</b>					Particulars of Classification <b>"Carrying Petroleum in Bulk"</b>

DEPTH FOR FREEBOARD (D). M	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION. M
Moulded depth ... .. 14.0	(a) Where D is greater than Table depth (D-Table depth) R = <b>8.33 (14.031 - 13.133) 30 = +224</b>	Moulded Breadth (B) <b>26.40</b>
Stringer plate ... .. .031	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>8.98</b>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{26.40 \times 12}{50} = 6.336$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures <input checked="" type="checkbox"/>	Ship's Round of Beam = <b>5.55</b>
Depth for Freeboard (D) = <b>14.031</b>		Difference <b>22</b>
		Restricted to
		Correction = $\frac{\text{Diff.}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{22}{4} \times \frac{58}{81} = 3.8$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height M	Height Correction	Effective Length (E)
Poop enclosed ... ..	<b>41.890</b>	<b>41.890</b>	<b>2.60</b>	<input checked="" type="checkbox"/>	<b>41.890</b>
" overhang ... ..	-	-	-	-	-
R.Q.D. enclosed ... ..	-	-	-	-	-
" overhang ... ..	<b>12.582</b>	<b>12.582</b>	<b>2.60</b>	<input checked="" type="checkbox"/>	<b>12.582</b>
Bridge enclosed ... ..	<b>Sketch</b>	<b>12.582</b>	<b>2.60</b>	<input checked="" type="checkbox"/>	<b>12.582</b>
" overhang aft ... ..	-	-	-	-	-
" overhang forward ... ..	-	-	-	-	-
F'cle enclosed ... ..	<b>26.32M</b>	<b>26.320</b>	<b>2.60</b>	<input checked="" type="checkbox"/>	<b>26.320</b>
" overhang ... ..	<b>0.68M</b>	<b>340</b>	<b>2.60</b>	<input checked="" type="checkbox"/>	<b>340</b>
Trunk aft ... ..	-	-	-	-	-
" forward ... ..	-	-	-	-	-
Tonnage opening aft ... ..	-	-	-	-	-
" " forward ... ..	-	-	-	-	-
Total ... ..	<b>81472</b>	<b>81132</b>	-	-	<b>81132</b>

Standard Height of Superstructure	<b>2.290 M</b>
" " R.Q.D.	<b>1067</b>
Deduction for complete superstructure	<b>1067</b>
Percentage covered $\frac{S}{L} =$	<b>41.36</b>
" " $\frac{S_1}{L} =$	<b>44.9</b>
" " $\frac{E}{L} =$	<b>32.19</b>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<input checked="" type="checkbox"/>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	<input checked="" type="checkbox"/>
Interpolation for bridge less than .2L (if required)	<input checked="" type="checkbox"/>
Deduction = $1067 \times 32.19 =$	<b>343</b>

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ... ..	<b>1895</b>	<b>1</b>	<b>1895</b>	<b>965</b>	<b>1275</b>	<b>1</b>	<b>1275</b>
$\frac{1}{4}$ L from A.P. ... ..	<b>842</b>	<b>4</b>	<b>3368</b>	<b>145</b>	<b>156</b>	<b>4</b>	<b>624</b>
$\frac{2}{4}$ L " ... ..	<b>211</b>	<b>2</b>	<b>422</b>	<b>0</b>	<b>-</b>	<b>2</b>	<b>-</b>
Amidships ... ..	<b>-</b>	<b>4</b>	<b>-</b>	<b>0</b>	<b>-</b>	<b>4</b>	<b>-</b>
$\frac{3}{4}$ L from F.P. ... ..	<b>421</b>	<b>2</b>	<b>842</b>	<b>0</b>	<b>-</b>	<b>2</b>	<b>-</b>
$\frac{1}{4}$ L " ... ..	<b>1684</b>	<b>4</b>	<b>6736</b>	<b>60</b>	<b>60</b>	<b>4</b>	<b>240</b>
F.P. ... ..	<b>3790</b>	<b>1</b>	<b>3790</b>	<b>1930</b>	<b>1930</b>	<b>1</b>	<b>1930</b>
Total ... ..	<b>17063</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4069</b>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{12984 (75 - 20.68)}{18} = +892 \frac{1}{2}$   
If limited on account of midship superstructure. **5432** 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.

Depth to Freeboard Deck = **14081**  
Summer freeboard = **3480**  
Moulded draught (d) = **10551**  
Keel allowance = **-**

Extreme draught = **-**  
Addition for Tropical freeboard and addition for **-**

Winter freeboard =  $\frac{d}{4}$  inches = **220.84**

Addition for Winter North Atlantic Freeboard (if required) = **220 + 161 = 381.15**

## Deduction for Fresh Water.

Displacement in salt water at summer load water line **471037**  
 $\Delta =$  See Over  
Tons per inch immersion at summer load water line **113.75**  
T = See Over  
Deduction =  $\frac{\Delta}{40 T}$  inches = **9.46**  
= **9.2**

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	<b>224</b>	<b>-</b>
Deduction for superstructures	<b>-</b>	<b>343</b>
Sheer correction	<b>392</b>	<b>-</b>
Round of Beam correction	<b>-</b>	<b>3</b>
Correction for Thickness of Deck amidships	<b>-</b>	<b>-</b>
Other corrections, scantlings, etc.	<b>-</b>	<b>-</b>
	<b>616</b>	<b>346</b>

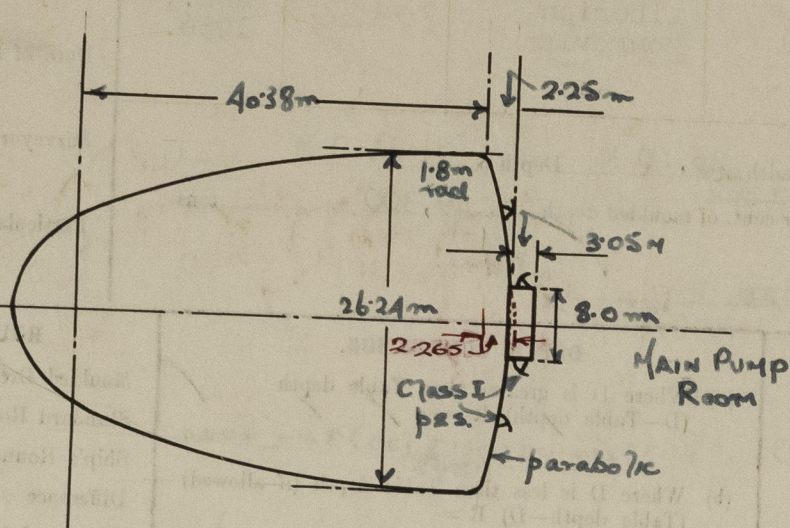
Summer Freeboard = **3480**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~W~~ Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	<b>18.4</b>	Tropical Fresh Water Freeboard	<b>9.104</b>
Fresh Water Line	<b>9.2</b>	Fresh Water	<b>10.72</b>
Tropical Line	<b>8.4</b>	Tropical	<b>10.84</b>
Winter Line below	<b>8.4</b>	Winter	<b>12.13</b>
Winter North Atlantic Line	<b>15</b>	Winter North Atlantic	<b>12.84</b>



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.

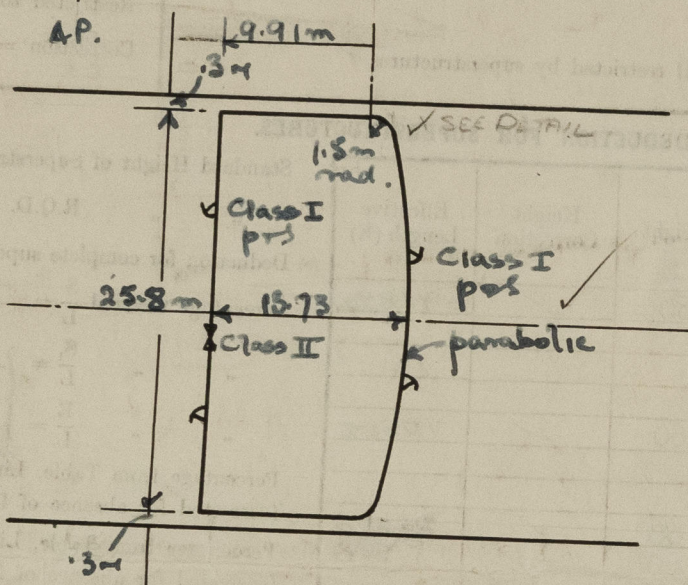
Poop.



Poof.

$$\begin{aligned} \text{Equiv. Length} &= 40.38 + \frac{2}{3} \times 2.25 \\ &= 40.38 + 1.510 \\ &= 41.890 \end{aligned}$$

A.P.

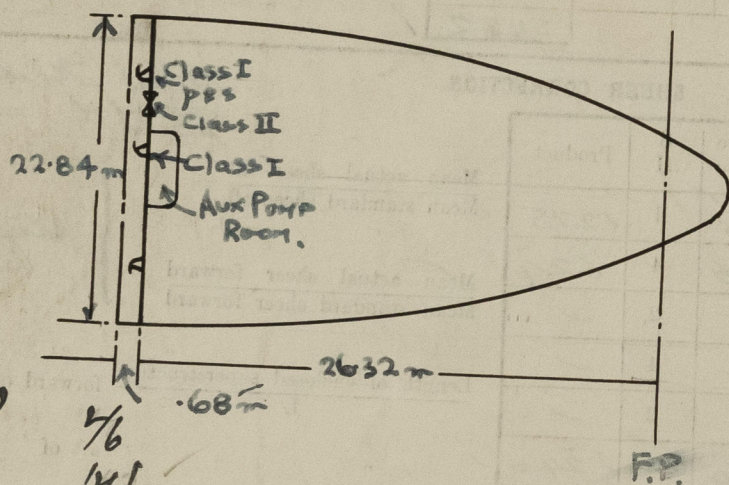


Bridge

$$\begin{aligned} \text{Equiv. Length} &= 11.210 + \frac{2}{3} \times 2.52 - \frac{7}{2} \times \frac{1.8}{2} \\ &= 11.210 + 1.680 - 0.616 \\ &= 12.890 - 0.616 \\ &= 12.874 \end{aligned}$$

$$12.874 \times \frac{25.8}{26.4} = 12.582$$

Forecastle.



Draft	Mld. Displt.	Mld. T.P.L Mld.
33'	40.830	112.75
34'	42.200	113.35
35'	43.550	114.00
36'	44.890	114.60

Shunapt AP  
Actual 965  
Gross 310  
1275

$$\begin{aligned} &\frac{11}{156} = 310 \times \frac{7.5472}{40.382} \end{aligned}$$

Trade of ship International

Names of sister ships

Builder's name and yard number Hitachi S.B. & E., Co., Ltd., Innoshima Shipyard, No. 3752

Owners Liberian Transocean Navigation Corporation.

Fee £



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