

LLOYD'S REGISTER OF SHIPPING

SURVEYS FOR FREEBOARD

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

Received

Index No.

Govt. Copy

Owners C11

Ship's Name CUTRAL CO	Official Number	Nationality and Port of Registry Argentinian Buenos Aires	Gross Tonnage 12,712.49	Date of Build 1960	Port of Survey Rotterdam
Moulded Dimensions: Length 21.89 m Breadth 12.00 m Depth 12.00 m					Date of Survey Whilst building
Freeboard Length 103.98 m to C.F.S.					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing)					Particulars of Classification +100A1 Oil Tanker
Coefficient of fineness for use with Tables .794					(contemplated)

DEPTH FOR FREEBOARD (D). m	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 12.000	(a) Where D is greater than Table depth (D - Table depth) R = 8.33(12.022 - 10.932)30 = +272 mm	Moulded Breadth (B) 21.890 m
Stringer plate022	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B}{50} = \frac{21.890}{50} = 438 \text{ mm}$
Wood Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 400
Depth for Freeboard (D) = 12.022		Difference 38
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{38}{4} \times 0.6390 = 6 \text{ mm}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>equivalent</i> ...	38.578	38.578	2.500	—	38.578
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	20.100	20.100	2.500	—	20.100
" overhang ...	1.000	0.500			.500
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	59.678	59.678			59.678

Standard Height of Superstructure 2290	
" " R.Q.D.	
Deduction for complete superstructure 1067	
Percentage covered $\frac{S}{L} =$ 36.41	
" " $\frac{S_1}{L} =$ 36.10	
" " $\frac{E}{L} =$ 36.10	
Percentage from Table, Line A. Tanker = 27.10	
(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 x .2710 = -289 mm	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	1620	1	1620	1051	1261	1	1261		
$\frac{1}{2}$ L from A.P. ...	720	4	2880	244	258	4	1032		
$\frac{2}{3}$ L " ...	180	2	360	0	0	2	0		
Amidships ...	0	4	0	0	0	4	0		
$\frac{2}{3}$ L from F.P. ...	360	2	720	0	0	2	0		
$\frac{1}{2}$ L " ...	1439	4	5756	57	57	4	228		
F.P. ...	3240	1	3240	1375	1375	1	1375		
Total ...			14576				3896		

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{10680}{18} (.75 - .1821) = 337 \text{ mm}$

If limited on account of midship superstructure. 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 = **12.022**

Summer freeboard = **2.970**

Moulded draught (d) = **9.052**

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for =

Winter freeboard = $\frac{d}{48}$ inches **189 mm = 7 1/2"**Addition for Winter North Atlantic Freeboard (if required) = **189 + 137 = 326 mm = 12 3/4"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 25486 \text{ m}^3$

Tons per inch immersion at summer load water line

$T = 30.966$

Deduction = $\frac{\Delta}{40 T}$ inches

= **206 mm = 8 1/4"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... **272**

Deduction for superstructures ... **289**

Sheer correction ... **337**

Round of Beam correction ... **6**

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

+	-
272	
289	
337	
6	
615	289

Summer Freeboard = **2971 mm = 116.9"**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Steel~~, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc **15 3/4"**

Fresh Water Line " **8 1/4"**

Tropical Line " **7 1/2"**

Winter Line below " **7 1/2"**

Winter North Atlantic Line " **12 3/4"**

Tropical Fresh Water Freeboard **8' 5 1/4"**

Fresh Water " **9' 0 3/4"**

Tropical " **9' 1 1/2"**

Winter " **10' 1 1/2"**

Winter North Atlantic " **10' 9 3/4"**

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

$$\begin{aligned} \text{Length at side} &= 36.995 \text{ m} \\ + \frac{2}{3} \times 2.405 &= \underline{1.603} \\ \text{Equiv. length} &= \underline{38.598 \text{ m}} \end{aligned}$$

$$\begin{aligned} \text{Actual Height of Poop T.W.Dt} &= 2.500 \\ \text{Standard} &= \underline{2.290} \\ \text{Excess} &= \underline{210 \text{ mm}} \end{aligned}$$

$$\begin{aligned} \text{Sheer at A.P.} &= 1051 + 210 = 1261 \\ \text{Sheer at } \frac{1}{6} &= 244 + 210 \left(\frac{9.665^2}{36.995^2} \right) \\ &= 258 \text{ mm.} \end{aligned}$$

Trade of ship international

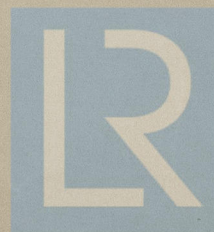
Names of sister ships TAHAMA etc.

Builder's name and yard number Verolme Shipyard Alblawerdam Ya N: 633

Owners Yacimientos Petroliferos Fiscales of Buenos Aires (Argentina)

Fee £ : :

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



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