

113 APR 1950

Index No. 41282
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name DIRECTOR MADARIAGA Official Number 26 Nationality and Port of Registry Argentine Gross Tonnage 11633.21 Date of Build 1950

Port of Survey Rotterdam
Date of Survey March '50
Surveyor's Signature J. Wiskoot
Particulars of Classification 100A1
carrying petroleum in bulk (contemp)

Moulded Dimensions: Length 160.322m Breadth 20.726m Depth 11.277m
to after part stern post 160.017m
Moulded displacement at moulded draught = 85 per cent. of moulded depth 9585 24693 tons
Coefficient of fineness for use with Tables .775

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth <u>11.277m</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>8.33 (11.277 - 10.683) 30 = + 152</u>	Moulded Breadth (B) <u>20.726m</u>
Stringer plate <u>0.022m</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>.616</u>	Standard Round of Beam = $\frac{B \times 12}{50} = \underline{0.415}$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures <u>✓</u>	Ship's Round of Beam = <u>0.415m</u>
Depth for Freeboard (D) = <u>11.299m</u>		Difference <u>NIL</u>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \underline{NIL}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <u>Equiv.</u>	<u>47.512</u>	<u>47.512</u>	<u>2.438</u>	<u>✓</u>	<u>47.512</u>
" overhang	<u>0.067</u>	<u>0.067</u>			<u>0.067</u>
R.Q.D. enclosed	<u>13.3</u>				
" overhang					
Bridge enclosed <u>open equiv.</u>	<u>13.588</u>	<u>13.588</u>	<u>2.438</u>	<u>✓</u>	<u>13.588</u>
" overhang aft					
" overhang forward	<u>0.067</u>	<u>0.067</u>			<u>0.067</u>
F'cle enclosed <u>Equiv.</u>	<u>14.192</u>	<u>14.192</u>	<u>2.286</u>	<u>✓</u>	<u>14.192</u>
" overhang <u>Equiv.</u>	<u>0.685</u>	<u>0.685</u>			<u>0.685</u>
Trunk aft	<u>14.563</u>	<u>14.563</u>	<u>2.286</u>	<u>✓</u>	<u>14.563</u>
" forward	<u>0.314</u>	<u>0.314</u>			<u>0.314</u>
Tonnage opening aft					
" forward					
Total	<u>80.772</u>	<u>75.954</u>			<u>75.954</u>

Standard Height of Superstructure 2290
" " R.Q.D. ✓
Deduction for complete superstructure 1067
Percentage covered $\frac{S}{L} = 50.38$
" " $\frac{S_1}{L} = 47.37$
" " $\frac{E}{L} = 38.37$
Percentage from Table, Line A. TANKER
(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 38.37 = -409

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>1590</u>	<u>✓</u>	<u>1</u>	<u>1590</u>	<u>0.808</u>	<u>808</u>	<u>✓</u>	<u>1</u>	<u>808</u>
$\frac{1}{8}L$ from A.P. ...	<u>706</u>	<u>✓</u>	<u>4</u>	<u>2824</u>	<u>0.195</u>	<u>195</u>	<u>✓</u>	<u>4</u>	<u>780</u>
$\frac{2}{8}L$ " ...	<u>176.5</u>	<u>✓</u>	<u>2</u>	<u>353</u>	<u>0.000</u>	<u>0</u>	<u>✓</u>	<u>2</u>	<u>0</u>
Amidships ...	<u>✓</u>	<u>4</u>	<u>✓</u>	<u>0.000</u>	<u>✓</u>	<u>4</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
$\frac{2}{8}L$ from F.P. ...	<u>353</u>	<u>✓</u>	<u>2</u>	<u>706</u>	<u>0.000</u>	<u>0</u>	<u>✓</u>	<u>2</u>	<u>0</u>
$\frac{1}{8}L$ " ...	<u>1412</u>	<u>✓</u>	<u>4</u>	<u>5648</u>	<u>0.248</u>	<u>248</u>	<u>✓</u>	<u>4</u>	<u>992</u>
F.P. ...	<u>3180</u>	<u>✓</u>	<u>1</u>	<u>3180</u>	<u>0.2100</u>	<u>2100</u>	<u>✓</u>	<u>1</u>	<u>2100</u>
Total ...				<u>14301</u>					<u>4680</u>

Mean actual sheer aft = Deficient
Mean standard sheer aft = Deficient
Mean actual sheer forward = Deficient
Mean standard sheer forward = Deficient
Length of enclosed superstructure forward of amidships = Deficient
" " aft of " = Deficient
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{9621(75 - .2519)}{18} = +266$
If limited on account of midship superstructure. ✓
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 = 11.299
Summer freeboard = 2.550
Moulded draught (d) = 8.749
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 1.82 inches = 18mm
Addition for Winter North Atlantic Freeboard (if required) = 182 + 131 = 313 inches = 313mm

Deduction for Fresh Water.
Displacement in salt water at summer load water line 2240
Tons per inch immersion at summer load water line 80.9
Deduction = $\frac{\Delta}{40 \cdot T}$ inches = 194 inches = 19mm

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient 775 + .69 = 1.36
Depth Correction 152
Deduction for superstructures 409
Sheer correction 266
Round of Beam correction ✓
Correction for Thickness of Deck amidships ✓
Other corrections, scantlings, etc. ✓
Summer Freeboard = 2549

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

Tropical Fresh Water Line above Centre of Disc	<u>3.1</u>	<u>✓</u>	Tropical Fresh Water Freeboard	<u>2.55</u>	<u>✓</u>
Fresh Water Line " "	<u>1.9</u>	<u>✓</u>	Fresh Water " "	<u>2.36</u>	<u>✓</u>
Tropical Line " "	<u>1.8</u>	<u>✓</u>	Tropical " "	<u>2.36</u>	<u>✓</u>
Winter Line below " "	<u>1.8</u>	<u>✓</u>	Winter " "	<u>2.36</u>	<u>✓</u>
Winter North Atlantic Line " "	<u>3.1</u>	<u>✓</u>	Winter North Atlantic " "	<u>2.86</u>	<u>✓</u>

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.

$$\begin{array}{rcl} \text{Peak at side} & = & 46.445 \checkmark \\ + \frac{2}{3} \times 1600 \checkmark & = & 1.067 \checkmark \\ \hline & = & 47.512 \checkmark \end{array} \quad \begin{array}{rcl} \text{o/h Forward} & = & 1.200 \checkmark \\ & = & 1.067 \checkmark \\ \hline & = & .133 \checkmark \end{array}$$

$$\begin{array}{rcl} \text{Bridge Open at aft end} & \text{Length at side} & = 12.800 \checkmark \\ & & 4.250 \checkmark \\ \hline & & 17.050 \checkmark \\ + \frac{2}{3} \times 1600 & = & 1.067 \checkmark \\ \hline & = & 18.117 \checkmark \end{array} \quad \begin{array}{rcl} \text{o/h Forward} & = & 1.200 \checkmark \\ & = & 1.067 \checkmark \\ \hline & = & .133 \checkmark \end{array}$$

$$\begin{array}{rcl} \text{Femurle :-} & \text{Length at side} & = 14.877 \checkmark \\ - 6.200 \times .685 & = & .314 \checkmark = \text{o/h} \\ \hline & = & 14.563 \checkmark = \text{eqin Encl.} \checkmark \end{array}$$

Trade of ship

Ocean Trade

Names of sister ships

Builder's name and yard number

Machinofabrik in Schuppenweg van P. Smid & NV 596

Owners

Yacimientos Petroliferos Fiscales

Fee

500



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Foundation