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Index. No. (For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Coop. Trunk, Forecastle

Port of Survey Aruba N.W.I

Date of Survey February 12, 1935

Name of Surveyor George P. Richardson

Particulars of Classification 100 A.1. 12-33
S.S. 600. No 1-33
Carrying petrol in bulk

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>T. S. S. PERIJA</u>	<u>Venezuelan</u> <u>Maracaibo</u>	<u>✓</u>	<u>2647</u>	<u>1927.10</u>

Moulded Dimensions: Length 305 Breadth 50.8 Depth 16.8

Moulded displacement at moulded draught = 85 per cent. of moulded depth 5108 tons

Coefficient of fineness for use with Tables 836 ✓

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>16.5</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>✓</u>	Moulded Breadth (B) <u>50.00'</u>
Stringer plate <u>10.45</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>(20.33 - 16.54) 2.346</u>	Standard Round of Beam = $\frac{B \times 12}{50} = 12.00''$
Sheathing on exposed deck T $\left(\frac{L-S}{L}\right) =$ <u>✓</u>	<u>= - 8.89''</u> ✓	Ship's Round of Beam = <u>12.50''</u>
Depth for Freeboard (D) = <u>16.545</u>	If restricted by superstructures <u>✓</u>	Difference <u>5000 .50''</u>
		Restricted to
		Correction = $\frac{\text{Diff}^o}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{50}{4} \times .3182 = - .04''$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	<u>70.70</u>	<u>70.70</u>	<u>4.25</u>	<u>✓</u>	<u>70.70</u>	Standard Height of Superstructure <u>6.55'</u>
" overhang	<u>68.7</u>					" " R.Q.D. <u>4.733'</u>
R.Q.D. enclosed						Deduction for complete superstructure <u>35.67''</u>
" overhang						Percentage covered $\frac{S}{L} = 34.10\%$
Bridge enclosed	<u>18.0</u>		<u>14.00</u>			" " $\frac{S_1}{L} = 68.18\%$
" overhang aft						" " $\frac{E}{L} = 68.18\%$
" overhang forward	<u>3.5</u>					Percentage from Table, Line A. Tanker <u>61.00</u>
Fore enclosed	<u>33.3</u>	<u>16.65</u>	<u>4.25</u>	<u>✓</u>	<u>16.65</u>	(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward	<u>185.0</u>	<u>120.58</u>	<u>7.25</u>	<u>✓</u>	<u>120.58</u>	Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = <u>35.67 × .61 = - 21.75''</u>
" " forward						
Total	<u>104.00</u>	<u>207.93</u>			<u>207.93</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	<u>40.50</u>	1		<u>40.50</u>	<u>30.00</u>	<u>30.00</u>	1		<u>30.00</u>	Mean actual sheer aft = <u>Deficient</u>
$\frac{1}{8}$ L from A.P.	<u>18.02</u>	4		<u>72.08</u>	<u>4.00</u>	<u>4.00</u>	4		<u>16.00</u>	Mean actual sheer forward = <u>Deficient below 50% standard.</u>
$\frac{3}{8}$ L "	<u>4.455</u>	2		<u>8.91</u>	<u>0</u>	<u>0</u>	2		<u>0</u>	
Amidships	<u>✓</u>	4		<u>✓</u>	<u>✓</u>	<u>✓</u>	4		<u>✓</u>	Length of enclosed superstructure forward of amidships =
$\frac{3}{8}$ L from F.P.	<u>8.91</u>	2		<u>17.82</u>	<u>0</u>	<u>0</u>	2		<u>0</u>	" " aft of " = } <u>Tanker.</u>
$\frac{1}{8}$ L "	<u>36.04</u>	4		<u>144.16</u>	<u>4.00</u>	<u>4.00</u>	4		<u>16.00</u>	
F.P.	<u>81.00</u>	1		<u>81.00</u>	<u>54.00</u>	<u>54.00</u>	1		<u>54.00</u>	
Total				<u>264.47</u>					<u>116.00</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{248.47}{18} (.75 - .1705) = + 8.00''$

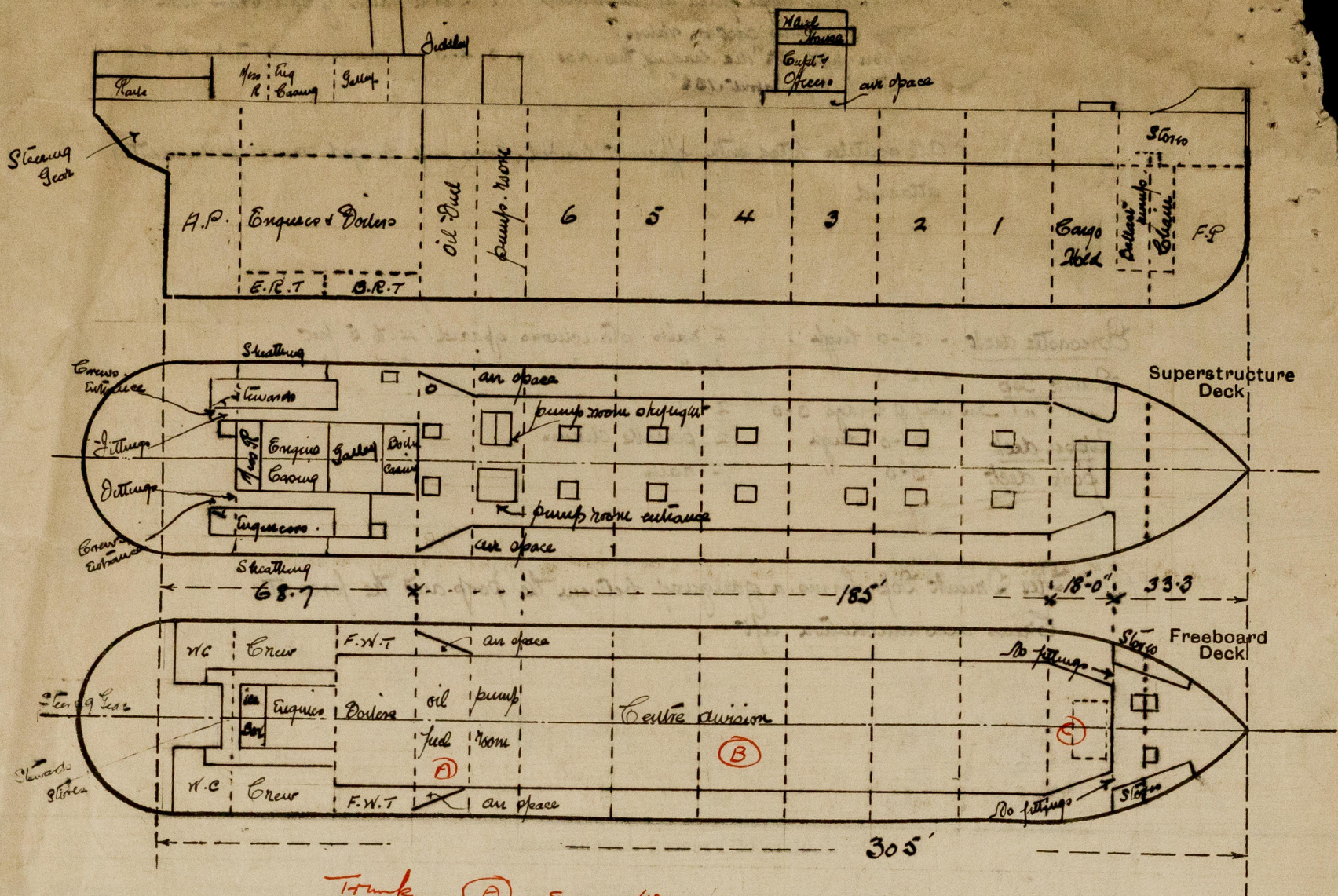
If limited on account of midship superstructure. ✓ If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{836 + .68}{1.36} = \frac{1516}{1360}$
Depth to Freeboard Deck = <u>16.54</u>	$\Delta = 5330$	Depth Correction <u>8.89</u>
Summer freeboard = <u>2.02</u>	Tons per inch immersion at summer load water line	Deduction for superstructures <u>21.75</u>
Moulded draught (d) = <u>14.52</u>	T = <u>32.41</u>	Sheer correction <u>8.00</u>
Deduction for Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40T}$ inches	Round of Beam correction <u>.04</u>
Winter freeboard = $\frac{d}{4}$ inches = <u>3.63 = 3$\frac{3}{4}$</u>	= <u>4.11</u>	Correction for Thickness of Deck amidships
Addition for Winter North Atlantic Freeboard (if required) = <u>3 + 3$\frac{3}{4}$ = 6$\frac{3}{4}$</u>	= <u>4''</u>	Other corrections, scantlings, etc.
		8.00 30.68 - 22.68
		Summer Freeboard = <u>24.26</u>

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

Tropical Fresh Water Line above Centre of Disc <u>7$\frac{3}{4}$</u>	Tropical Fresh Water Freeboard <u>2' 0$\frac{1}{4}$</u>
Fresh Water Line " " <u>4''</u>	Fresh Water " " <u>1' 4$\frac{1}{2}$</u>
Tropical Line " " <u>3$\frac{3}{4}$</u>	Tropical " " <u>1' 8$\frac{1}{2}$</u>
Winter Line below " " <u>3$\frac{3}{4}$</u>	Winter " " <u>2' 4''</u>
Winter North Atlantic Line " " <u>6$\frac{3}{4}$</u>	Winter North Atlantic " " <u>2' 7''</u>

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—



Trunk (A) $8.00 \times \frac{40}{50} = 6.40$

(B) $175 \times \frac{30}{50} = 105.00$

(C) $18 \times \frac{25.5}{50} = \frac{9.18}{120.58}$

State any special features in the construction of the ship:—

Builder's name and yard number Palmer's Co. Ltd. Newcastle

HULL No 976

Names of sister ships SUCRE, MONAGAS, ARAGUA, URDANETA, PAEZ, BOLIVAR

Owners Venezuelan Gulf Oil Co.

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