

29 DEC 1934

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(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having poop, trunk, forecastle

(Type of Superstructures.)

Ship's Name URDANETA Nationality and Port of Registry Maracaibo Venezuela Official Number 2647 Date of Build 1927-8

Moulded Dimensions: Length 305.4 Breadth 50.8 Depth 16.3

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

Coefficient of fineness for use with Tables .836

Port of Survey Aruba N.W.I

Date of Survey Nov 27 1934

Name of Surveyor George P. Richardson

Particulars of Classification 100 A 1 12 32
S.S. N.Y. No 1 31. Carrying persons
F.P. at 150° F. Date for at Jul 5 27

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	16.50	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	50.00
Stringer plate	.04	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	(20.33 - 16.54) 2.346	Standard Round of Beam = $\frac{B \times 12}{50}$	12.00
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$			= - 8.89	Ship's Round of Beam	12.50
Depth for Freeboard (D) =	16.54	If restricted by superstructures		Difference	.50
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L})$	$\frac{.50}{4} \times .3182 = -.04$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	68.5	70.70	7.25	✓	70.70	Standard Height of Superstructure 6.55'
" overhang	70.40					" " R.Q.D. 4.733'
R.Q.D. enclosed						Deduction for complete superstructure 35.67"
" overhang						Percentage covered $\frac{S}{L} = 34.10\%$
Bridge enclosed	78.5		17			" " $\frac{S_1}{L} = 68.18\%$
" overhang aft						" " $\frac{E}{L} = 68.18\%$
" overhang forward						Percentage from Table, Line A. Tanker
F'cle enclosed	33.9	16.65	7.25	✓	16.65	(corrected for absence of forecastle (if required)) 61.00
" overhang						Percentage from Table, Line B.
Trunk aft	107.5	120.58	7.25	✓	120.58	(corrected for absence of forecastle (if required))
" forward	97.4		7.25			Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = 35.67 x .61 = - 21.75"
" forward						
Total	104.00	207.93			207.93	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	40.50	1		40.50	30.00	30.00	1		30.00	Mean actual sheer aft =
$\frac{1}{2}$ L from A.P.	18.02	4		72.08	4.00	4.00	4		16.00	Mean standard sheer aft =
$\frac{3}{8}$ L	4.455	2		8.91	0	0	2		0	Mean actual sheer forward =
Amidships	✓	4		✓	✓	✓	4		✓	Mean standard sheer forward =
$\frac{3}{8}$ L from F.P.	8.91	2		17.82	0	0	2		0	Length of enclosed superstructure forward of amidships =
$\frac{1}{2}$ L	36.04	4		144.16	4.00	4.00	4		16.00	" " aft of " =
F.P.	81.00	1		81.00	54.00	54.00	1		54.00	
Total				364.47	✓	✓			116.00	

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 1½ ins. per 100 ft.

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 16.54
Summer freeboard = 2.02
Moulded draught (d) = 14.52

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.63 = 3 $\frac{3}{4}$ "
Addition for Winter North Atlantic Freeboard (if required) = 3 + 3 $\frac{3}{4}$ = 6 $\frac{3}{4}$ "

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 5330$

Tons per inch immersion at summer load water line

T = 32.41

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

= 4.11

= 4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{.836 + .68}{1.36} = \frac{1.516}{1.36}$

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

Summer Freeboard = 24.26

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

Tropical Fresh Water Line above Centre of Disc	7 $\frac{3}{4}$ "	Tropical Fresh Water Freeboard	1 $\frac{1}{2}$ "
Fresh Water Line	4"	Fresh Water	1 $\frac{1}{2}$ "
Tropical Line	3 $\frac{3}{4}$ "	Tropical	1 $\frac{1}{2}$ "
Winter Line below	3 $\frac{3}{4}$ "	Winter	2 $\frac{1}{4}$ "
Winter North Atlantic Line	6 $\frac{3}{4}$ "	Winter North Atlantic	2 $\frac{1}{4}$ "

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	1. W.T.H. Fore Deck	2. W.T.H. Fore Deck	3. W.T.H. Fore Deck	4. W.T.H. Fore Deck	5. W.T.H. Fore Deck	6. W.T.H. Fore Deck	7. W.T.H. Fore Deck	8. W.T.H. Fore Deck	9. W.T.H. Fore Deck
Dimensions of Hatchway	4'-0" x 2'-6"	5'-0" x 1'-6"	4'-0" x 2'-6"	3'-0" x 2'-6"	5'-0" x 5'-6"	3'-0" x 3'-5"	5'-0" x 2'-6"	2'-0" x 2'-6"	1'-5" x 1'-2"
COAMINGS	Height above Deck	6'-3"	9'-3"	6'-3"	2'-6"	1'-5"	2'-6"	2'-6"	6'-3"
	Thickness	40	40	40	40	40	40	40	40
	Stiffeners	✓	✓	✓	✓	✓	✓	✓	✓
	Brackets, Stays	✓	✓	✓	✓	✓	✓	✓	✓
HATCH BEAMS	Number	2-1/2" angle	2-1/2" angle	2-1/2" angle	2-1/2" angle	2-1/2" angle	2-1/2" angle	2-1/2" angle	2-1/2" angle
	Spacing	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"
FORE AND AFTERS	Number	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"
	Spacing	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"
HATCH COVERS	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Thickness	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Spacing of Cleats	Number	10	10	10	10	10	10	10	10
	Number of Tarpaulins	1	1	1	1	1	1	1	1

Particulars of fiddle, funnel and ventilator coamings:— Fore & Aft coamings to fiddle from poop deck. Steel lugged. Half doors capable of being manipulated from both sides with 18" oil. Fiddle open on top and fitted with steel lugged. Storm doors in efficient condition. Fiddle and funnel coamings plating and ventilators in efficient condition.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:— Fore and Aft Companionways with steel lugged doors. Oil leading from poop deck down to crew quarters. The doors are steel fitted with four toggles capable of being manipulated from both sides doors being fitted on inside of superstructure. 3 steel ladders with efficient hand rails leading from forecastle deck, poop deck and trunk top to the upper deck.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

Forecastle deck 1-5' 36" x 5/8" coaming to forecastle
 Upper deck 1-18' 9" x 5/8" tracked to forecastle Bulkhead
 Poop deck 2-18' 30" x 5/8" coaming to fore bulk
 Poop deck 2-9' 30" x 5/8" Coaming to F.W. bulk
 Poop deck 1-12' 30" x 5/8" Crew quarters
 Poop deck 1-6' 30" x 5/8" Do any close
 Poop deck 2-15' 30" x 5/8" cleaning engine
 Poop deck 2-2' 15" air and sound to after peak tank

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

Forecastle deck 1-4" to fore peak tank 16" air deck
 Poop deck 2-2' 15" air and sound to F.W. bulk
 Poop deck 4-2' 15" air and sound to B.R.
 Poop deck 2-2' 15" air and sound to B.R.
 Poop deck 4-6' 14" fore peak tank to N.Co. etc
 Poop deck 2-2' 15" air and sound to after peak tank

Particulars of Gangway Cargo and Coaling Ports:—

None

Particulars of Scuppers and Sanitary Discharge Pipes:— 1 1/2" to 4" dia discharge valves fitted in scuppers sides on discharge from W.Co. bathrooms etc and efficient traps fitted to the inward ends storm valves of trunks with cross valves and pins scupper pipes leading through No 6. P+S sides pipes approximately 13 1/2' long

Particulars of Side Scuttles:—

All side scuttles fitted with efficient steel doors, lugged with lugged covers permanently attached

Particulars of Guard Rails:—

Forecastle deck 3'-0" high 2 rails standard spaced 4'-0" to 5'-0"
 Poop deck 3'-0" high 2 rails
 Upper Deck 3'-0" high 2 rails
 Poop deck 3'-0" high 2 rails

Particulars of Gangways, Lifelines, etc:—

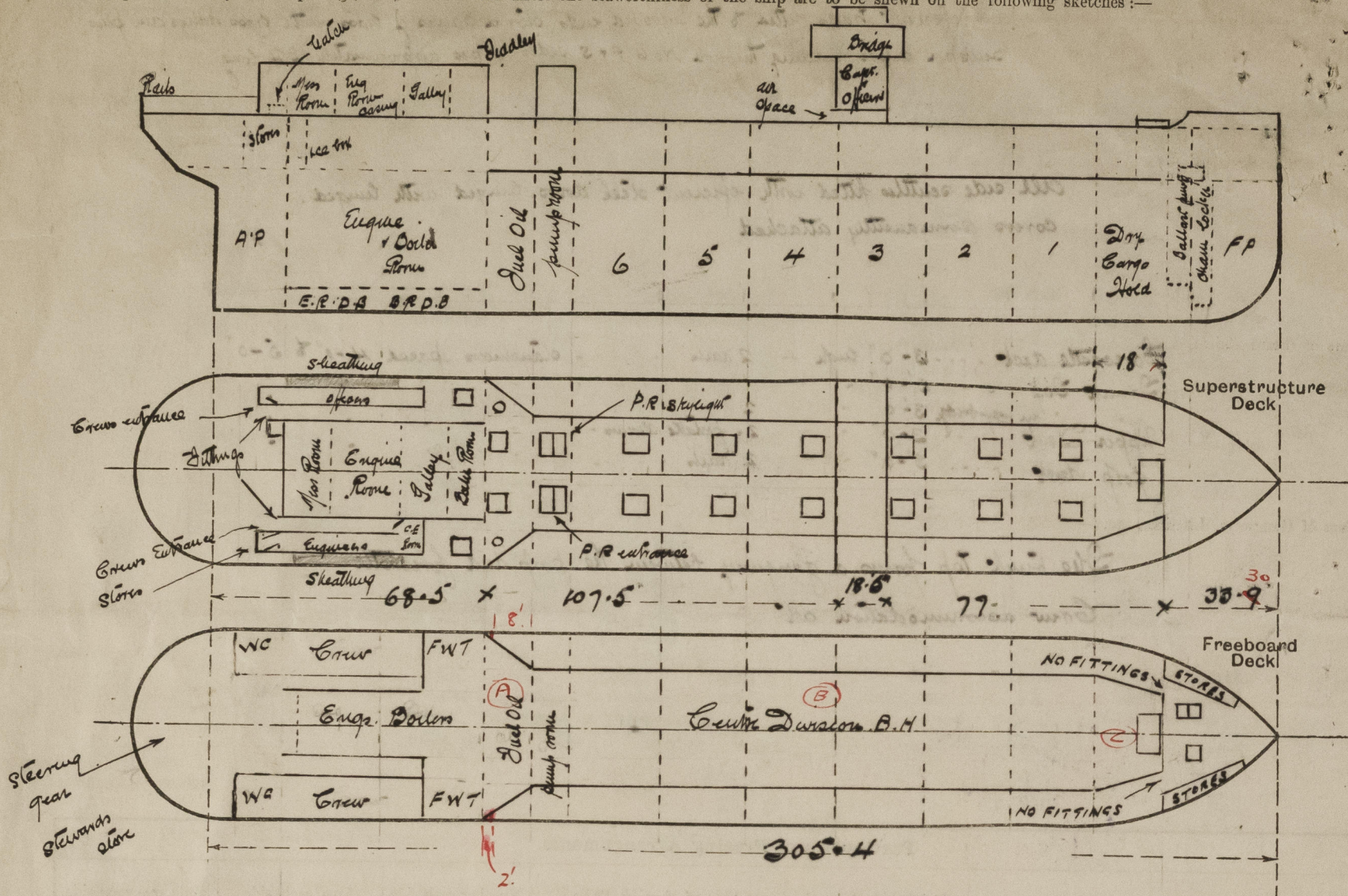
The trunk top forms a gangway between the poop and forecastle
 Crew accommodation aft

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well			Open rails on all weather decks			
Forward Well						

Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓	40	6 1/2" x 10 BA	28' to 34'	8" to 10" all round deck beams	no openings	✓	7'-3"
Raised Quarter Deck Bulkhead	✓	40	6 1/2" x 10 BA	28' to 34'	8" to 10" all round deck beams	no openings	✓	7'-3"
Bridge, After Bulkhead	✓	30	plating lugged	45"	✓	5'-3" x 2'	6"	7'-3"
Bridge, Forward Bulkhead	✓	30	plating lugged	45"	✓	5'-3" x 2'	6"	7'-3"
Forecastle Bulkhead	✓	30	6 1/2" x 10 BA	27'	8" to 10" all round deck beams	no openings	✓	7'-3"
Trunk, Aft	✓	44	6 1/2" x 10 BA	29"	8" to 10" all round deck beams	no openings	✓	7'-3"
Trunk, Forward	✓	44	6 1/2" x 10 BA	29"	8" to 10" all round deck beams	no openings	✓	7'-3"
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	✓	✓	✓	✓	no openings	✓	7'-3"
Exposed Machinery Casings on Superstructure Decks	✓	✓	✓	✓	✓	no openings	✓	7'-3"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	✓	✓	✓	✓	no openings	✓	7'-3"

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	No openings
Raised Quarter Deck Bulkhead	No openings
Bridge, After Bulkhead	No openings one wood door to Cap and Officers quarters capable of being manipulated on both sides
Bridge, Forward Bulkhead	No openings one wood door for side
Forecastle Bulkhead	Openings 3'-9" x 6'-6" between store rooms P+S sides and forward end of trunk and no fittings attached for closing these openings
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Fore & Aft of fiddle. openings fitted with steel lugged half doors capable of being manipulated on both sides. Storm door with 18" oil forward end of fore alleyway of superstructure and at after end riveted channel bars with storm boards full length
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships	

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



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

Trunk

(A)	$8.00 \times \frac{40}{50}$	= 6.40
(B)	$175 \times \frac{30}{50}$	= 105.00
(C)	$18.00 \times \frac{25.5}{50}$	= 9.18
		<u>120.58</u>

Builder's name and yard number

Palmer's Co. Ltd. Newcastle

No. 972

Names of sister ships

SUCRE - MONAGAS - PERIJA - BOLIVAR - ARAGUA - PAEZ

Owners

Venezuelan Gulf Oil Co

Fee

150.00

Received by me



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