

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

 Index No. **34403**  
 (For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having POOP, BRIDGE & FORECASTLE

Port of Survey Cady

Date of Survey November 1933

Name of Surveyor R. Langlands

Particulars of Classification +100 A1  
"Carrying Petroleum in Bulk" (Contemplated)

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>"CAMPERO"</u>	<u>Spain</u> <u>Malaga</u>	<u>1</u>	<u>6246</u>	<u>1933-4</u>

Moulded Dimensions: Length 123.44 Breadth 17.525 Depth 9.192

Moulded displacement at moulded draught = 85 per cent. of moulded depth 12666 tons

Coefficient of fineness for use with Tables .449

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... .. <u>9.192</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>8.33 (9.208 - 8.228) 30 = + 2.45</u>	Moulded Breadth (B) <u>17.525</u>
Stringer plate ... .. <u>.016</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>351</u>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>365</u>
Depth for Freeboard (D) = <u>9.208</u>		Difference <u>14</u>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ <u><math>\frac{14^2}{4} \times .582 = - 2</math></u>

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ... ..	<u>31.15</u>	<u>31.15</u>	<u>2290</u>		<u>31.15</u>	Standard Height of Superstructure <u>2290</u>
„ overhang ... ..	<u>1.22</u>	<u>.61</u>			<u>.61</u>	„ „ R.Q.D. <u>✓</u>
R.Q.D. enclosed ... ..						Deduction for complete superstructure <u>1064</u>
„ overhang ... ..						Percentage covered $\frac{S}{L} =$ <u>42.60</u>
Bridge enclosed ... ..	<u>4.93</u>	<u>4.93</u>	<u>2290</u>		<u>4.93</u>	„ „ $\frac{S_1}{L} =$ <u>41.80.79</u>
„ overhang aft ... ..	<u>1.52</u>	<u>1.14</u>			<u>1.14</u>	„ „ $\frac{E}{L} =$ <u>41.80.79</u>
„ overhang forward ... ..						Percentage from Table, Line A. <u>32.8%</u>
Fore enclosed ... ..	<u>10.46</u>	<u>10.46</u>	<u>2290</u>		<u>10.46</u>	(corrected for absence of forecastle (if required))
„ overhang ... ..						Percentage from Table, Line B.
Trunk aft ... ..						(corrected for absence of forecastle (if required))
„ forward ... ..						Interpolation for bridge less than 2L (if required)
Tonnage opening aft ... ..						Deduction = <u>1064 × .3279 = - 350</u>
„ „ forward ... ..						
Total ... ..	<u>52.58</u>	<u>51.59</u>			<u>51.59</u>	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ... ..	<u>1282</u>	1		<u>1282</u>	<u>1110</u>	<u>1110</u>	1		<u>1110</u>	Mean actual sheer aft =
$\frac{1}{4}$ L from A.P. ... ..	<u>540</u>	4		<u>2280</u>	<u>529</u>	<u>529</u>	4		<u>2116</u>	Mean actual sheer forward =
$\frac{2}{4}$ L „ ... ..	<u>142</u>	2		<u>284</u>	<u>144</u>	<u>144</u>	2		<u>294</u>	Mean standard sheer forward =
Amidships ... ..		4					4			Length of enclosed superstructure forward of amidships =
$\frac{3}{4}$ L from F.P. ... ..	<u>285</u>	2		<u>570</u>	<u>335</u>	<u>335</u>	2		<u>670</u>	„ „ aft of „ =
$\frac{1}{4}$ L „ ... ..	<u>1139</u>	4		<u>4556</u>	<u>1170</u>	<u>1170</u>	4		<u>4680</u>	
F.P. ... ..	<u>2564</u>	1		<u>2564</u>	<u>2608</u>	<u>2608</u>	1		<u>2608</u>	
Total ... ..				<u>11536</u>					<u>11448</u>	

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{11536}{18} \left( .75 - \frac{58}{213} \right) = \frac{58}{18} (.45 - .213) = + 2$

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 <u>.449 + .68 = 1.129</u>
Depth to Freeboard Deck = <u>9.208</u>	Tons per inch immersion at summer load water line	Depth Correction ... .. <u>245</u>
Summer freeboard = <u>1594</u>	T = <u>18.03</u>	Deduction for superstructures ... .. <u>350</u>
Moulded draught (d) = <u>4614</u>	Deduction = $\frac{\Delta}{40T}$ inches	Sheer correction ... .. <u>2</u>
Deduction for Tropical freeboard and addition for Winter freeboard = <u>1594</u>		Round of Beam correction ... .. <u>2</u>
Addition for Winter North Atlantic Freeboard (if required) = <u>101</u>		Correction for Thickness of Deck amidships ... .. <u>1</u>
		Other corrections, scantlings, etc. ... .. <u>1</u>
		Summer Freeboard = <u>1595</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>13.03</u>	Tropical Fresh Water Freeboard	<u>1595</u>
Fresh Water Line	<u>6.77</u>	Fresh Water	<u>1264</u>
Tropical Line	<u>6.26</u>	Tropical	<u>1423</u>
Winter Line below	<u>6.26</u>	Winter	<u>1754</u>
Winter North Atlantic Line	<u>10.24</u>	Winter North Atlantic	<u>1855</u>

# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	N <sup>o</sup> 1		OIL HATCHES		FORE PERM.	CHAIN LOCKER	O. F. BUNK 25 FT	COFFER.	
Dimensions of Hatchway	6' 7" x 7' 6"		6' x 4'		4' x 4'	2' 3" x 2' 11"	4' x 4'	24' CIRC.	
COAMINGS	Height above Deck	30"	30"		30"	15"	30"	24"	
	Thickness	4 1/2"	40		42	40	40	40	
	Stiffeners	...	...		...	...	...	...	
	Brackets, Stays	NONE	...		...	...	...	...	
HATCH BEAMS	Number	...	...		...	...	...	...	
	Spacing	...	...		...	...	...	...	
	Scantling and Sketch	NONE	...		...	...	...	...	
	Bearing Surface	...	...		...	...	...	...	
FORE AND AFTERS	Number	...	...		...	...	...	...	
	Spacing	...	...		...	...	...	...	
	Unsupported Lengths	...	...		...	...	...	...	
	Scantling* and Sketch	NONE	...		...	...	...	...	
	Bearing Surface	...	...		...	...	...	...	
HATCH COVERS	Material	Steel	Steel		Steel	Steel	Steel	Steel	
	Thickness	50	50		50	50	50	50	
	How fitted	one plate	one plate		one plate	one plate	one plate	one plate	
	Bearing Surface	hinged	hinged		hinged	hinged	hinged	hinged	
Spacing of Cleats	5' 0" x 4' 0"	20"	18.5" 15"		15"	14"	15"	3' 0" 15"	
Number of Tarpaulins	...	...	...		...	...	...	...	

Particulars of fiddle, funnel and ventilator coamings:— Steel framed openings on Fiddle top with weather tight covers and 2 pullays. 6" angle frames.

Particulars of Flush Bunker Scuttles:— None.

Particulars of Companionways:— To Forepeak Pump Room 3' 9" x 3' 0". Height 6' 3". Plating 3/8" WT. 4' 3" x 2' 0" Steel. Sill 18" above deck. Midship Pump Room, 15' 0" x 8' 6". Ht 7' 6". Plating 3/8". Stiffeners 4' 3" x 3/8" spaced 2' 3". 2 steel WT. doors 5' 0" x 2' 6". Sill 18" above deck.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— 2 ventilators to hold, at end of fore, formed by sideboard plating, 24" dia. with cowls & covers, coaming 3/8" above fore. 2 vents to fore pump room 12" dia. coaming 3/8" x 3/8" with cowls & covers. 2 vents to fore cofferdam 12" dia. coaming 3/8" x 3/8" with cowls & covers. 2 vents to main pump room (Samson abets) with cowls & covers. 2 vents to after cofferdam 12" dia. 3/8" x 3/8" with cowls & covers. 2 vents (Samson abets) aft 24" dia. x 40" covers. 8 vents to fore coaming top 30" dia. x 40" with cowls and covers. 2 vents on fore 15" dia. Coams 30" x 32" with efficient means of closing.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— 13 Swan-necked ventilators, each side, on poop; 2 on bridge & 2 on fore 8' x 4" section; 15 1/2" for deck to forward; with hinged flaps, WT.

Particulars of Gangway Cargo and Coaling Ports:— None.

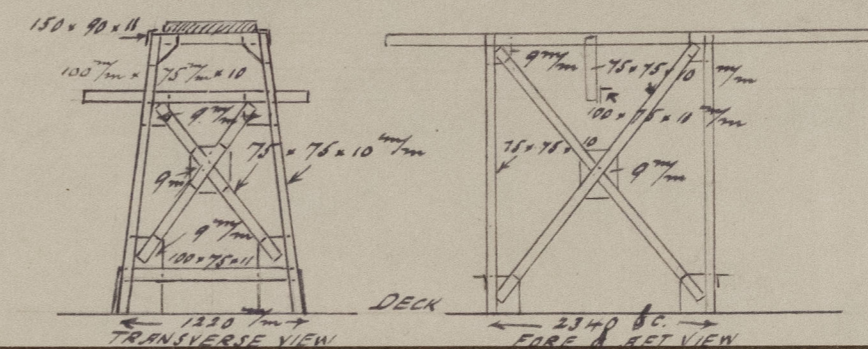
Particulars of Scuppers and Sanitary Discharge Pipes — None below freeboard deck.

Particulars of Side Scuttles:—

None below freeboard deck.

Particulars of Guard Rails:— Upper dx, 3' 8 1/2" high, 3 rails 1 1/8" - 7/8" - 7/8". Fore dx & Poop deck 3 rails.

Particulars of Gangways, Lifelines, etc.:— Wood gangway on steel latched supports; 2 guardrails. Substantial structure, as per sketch.

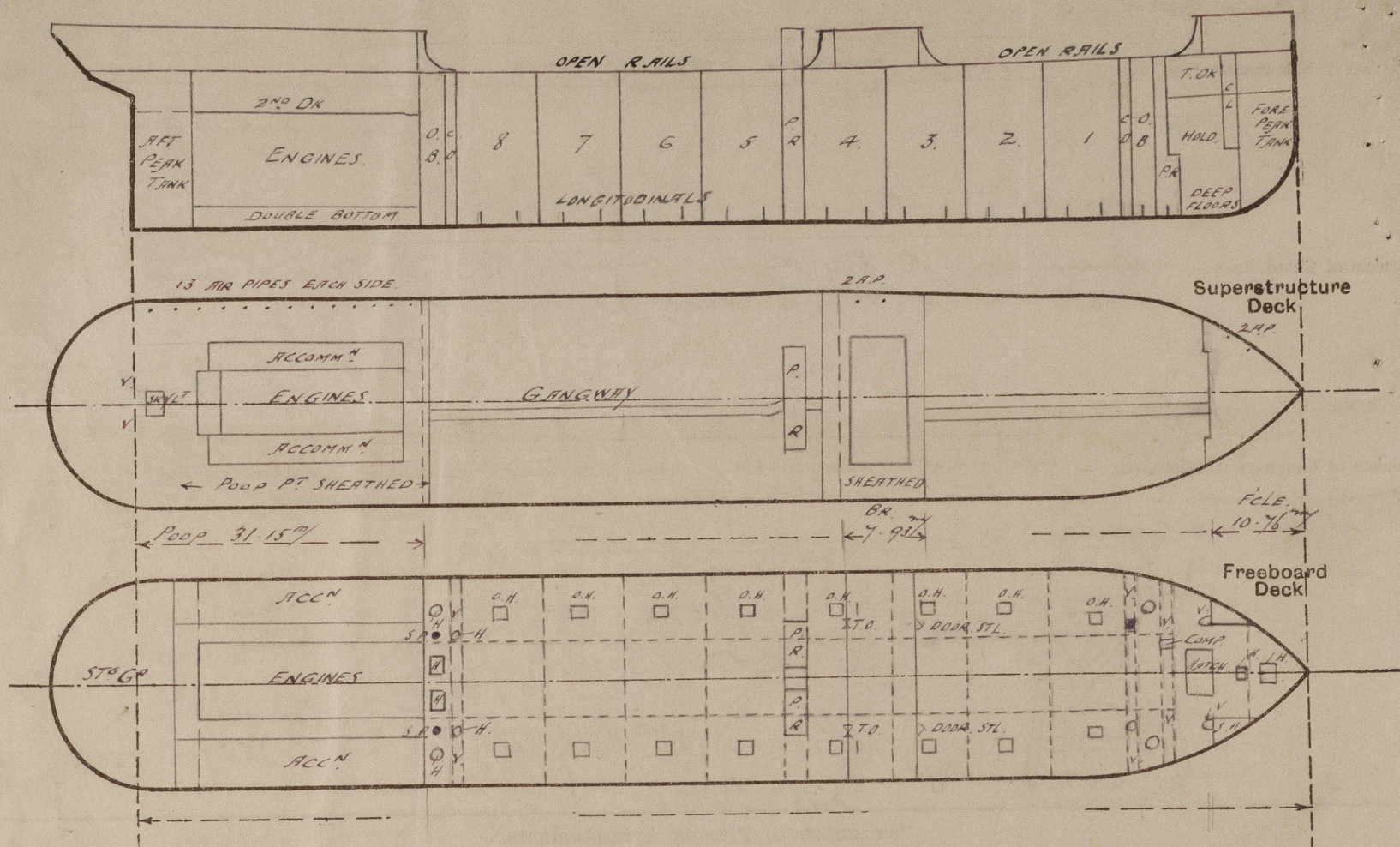


Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	Open rails	1				
Forward Well	Open rails	1				
State position of each freeing port ... After Well:— (F. and A. position and height above deck edge) Forward Well:— State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Additional area where sheer is less than standard.						

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	24" x 50"	46"	10 1/2" x 3 1/2" x 48"	27" - 31"	Rein. Top Lugs etc.	None	✓	7' 6"
Raised Quarter Deck Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead	24" x 50"	46"	4" x 3" x 38"	38 1/2"	Rein. Top Lugs etc.	4' 9" x 3' 1 1/2"	18"	7' 6"
Bridge, Forward Bulkhead	24" x 50"	46"	9 1/2" x 3 1/2" x 50"	✓	✓	5' 0" x 2' 6"	18"	7' 6"
Forecastle Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Superstructure Decks	24" x 34"	30"	3" x 3" x 30"	33"	Rein. Top	5' 0" x 2' 0"	18"	7' 6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	✓	✓	✓	✓	✓	✓	✓
Deckhouses on Flush Deck Ships	✓	✓	✓	✓	✓	✓	✓	✓

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	No openings ✓
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	Span boards full height in riveted Ls & bolted plates with top bolts 1/4" apart.
Bridge, Forward Bulkhead	2 hinged steel doors, weather tight; 6 lugs.
Forecastle Bulkhead	Open side doors only.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Pump Room openings, 2 weather tight steel doors.
Exposed Machinery Casings on Superstructure Decks	Steel weather tight doors.
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:— *Oil Tanker. Longitudinal framing. (Revised.)*

Builder's name and yard number *Messrs Scherattieta & Larinaga N. 24*

Names of sister ships *"Campas" + "Campomanes" + "Campuzano"*

Owners *Compania Administrativa del Monopolio de Petroleos S.A.*

Fee £ *18* : *0* : *0*

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