

V^o 8231

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

17 JAN 1933

Computation of Freeboard for Steamer, Sailing Ship, Tanker
 having Poop, Bridge and Forecastle

(Type of Superstructures.)

Ship's Name S.S. "Gastelu" Nationality and Port of Registry Spanish San Sebastian Official Number 62722 Gross Tonnage 3292 Date of Build 1921.8

Moulded Dimensions: Length 100.826 m Breadth 14.554 m Depth 7.823 m

Moulded displacement at moulded draught = 85 per cent. of moulded depth 7760 m³

Coefficient of fineness for use with Tables .795

Port of Survey Bilbao

Date of Survey 15th 22nd December 1932

Name of Surveyor Joe Perez

Particulars of Classification 100.A.I
S.S. B60. No 3-12.32

Depth for Freeboard (D) 7.823

Moulded depth ... 25.83

Stringer plate ... 50

Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ 11

Depth for Freeboard (D) = 7.834

Depth correction

(a) Where D is greater than Table depth
 (D - Table depth) R = 8.33 (7.834 - 6.722) 25.465

(b) Where D is less than Table depth (if allowed)
 (Table depth - D) R = 236

If restricted by superstructures ✓

Round of Beam correction

Moulded Breadth (B) 14.554 m

Standard Round of Beam = $\frac{B \times 12}{50} =$ 291

Ship's Round of Beam = 72' 305 m/m

Difference 14

Restricted to ✓

Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) =$ 14 $\times .516 =$ -2 m/m

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>9.510</u>	<u>9.510</u>	<u>2.362</u>	<u>✓</u>	<u>9.510</u>
" overhang ...	<u>32.0</u>		<u>8.2</u>	<u>✓</u>	
R.Q.D. enclosed ...					
" overhang ...	<u>27.736</u>		<u>2.362</u>	<u>✓</u>	
Bridge enclosed ...	<u>9.143</u>	<u>27.736</u>	<u>8.2</u>	<u>✓</u>	<u>27.736</u>
" overhang aft ...	<u>1.43</u>	<u>.857</u>			<u>.857</u>
" overhang forward ...	<u>7.60</u>	<u>.381</u>	<u>2.438</u>	<u>✓</u>	<u>.381</u>
Fore enclosed ...	<u>10.326</u>	<u>10.326</u>	<u>8.2</u>	<u>✓</u>	<u>10.326</u>
" overhang ...					
Trunk aft ...	<u>✓</u>				
" forward ...	<u>✓</u>				
Tonnage opening aft ...	<u>✓</u>				
" " forward ...	<u>49.477</u>				<u>✓</u>
Total ...	<u>4.25</u>	<u>48.810</u>			<u>48.810</u>

Standard Height of Superstructure 2077 m" " R.Q.D. ✓Deduction for complete superstructure 950Percentage covered $\frac{S}{L} =$ 49.07%" $\frac{S_1}{L} =$ 48.40%" $\frac{E}{L} =$ 48.40%Percentage from Table, Line A.
(corrected for absence of forecastle (if required)) ✓Percentage from Table, Line B. 34.64%
(corrected for absence of forecastle (if required)) ✓Interpolation for bridge less than 2L (if required) ✓Deduction = $950 \times .3464 =$ -329 m/m

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	<u>1094</u>	<u>1</u>	<u>1094</u>	<u>54</u>	<u>1372</u>	<u>1</u>	<u>1372</u>
$\frac{1}{8}L$ from A.P. ...	<u>486</u>	<u>4</u>	<u>1944</u>	<u>18</u>	<u>457</u>	<u>4</u>	<u>1828</u>
$\frac{3}{8}L$ " ...	<u>122</u>	<u>2</u>	<u>244</u>	<u>3</u>	<u>13</u>	<u>2</u>	<u>26</u>
Amidships ...	<u>✓</u>	<u>4</u>	<u>✓</u>	<u>0.00</u>	<u>✓</u>	<u>4</u>	<u>✓</u>
$\frac{5}{8}L$ from F.P. ...	<u>243</u>	<u>2</u>	<u>486</u>	<u>18</u>	<u>452</u>	<u>2</u>	<u>904</u>
$\frac{7}{8}L$ " ...	<u>972</u>	<u>4</u>	<u>3888</u>	<u>53</u>	<u>1346</u>	<u>4</u>	<u>5384</u>
F.P. ...	<u>2188</u>	<u>1</u>	<u>2188</u>	<u>113</u>	<u>2896</u>	<u>1</u>	<u>2896</u>
Total ...			<u>9844</u>				<u>12410</u>

Mean actual sheer aft = Deficient > 75%
Mean standard sheer aftMean actual sheer forward = Excess ✓
Mean standard sheer forwardLength of enclosed superstructure forward of amidships = 42.0 > .1L" " aft of " = 49.0 > .1LCorrection = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ 2566 $\times \left(.75 - .2453 \right) =$ -72 m/m

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 = 7834Summer freeboard = 1243Moulded draught (d) = 6591

Deduction for Tropical freeboard and addition for

Winter freeboard = d inches = 137 m/mAddition for Winter North Atlantic Freeboard (if required) = 48 = 5.39

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$

Tons per inch immersion at summer load water line

T =

Deduction = $\frac{\Delta}{40T}$ inches= 152 m/m= 6

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient 795 + .68 = 14751.36 1.36Depth Correction ... 236 ✓Deduction for superstructures ... 329 ✓Sheer correction ... 72 ✓Round of Beam correction ... 2 ✓Correction for Thickness of Deck amidships ... ✓Other corrections, scantlings, etc. ... ✓236 403 -167Summer Freeboard = 1243SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck: 48.94 = 1243 m/m

Tropical Fresh Water Line above Centre of Disc ...

Fresh Water Line " " ...

Tropical Line " " ...

Winter Line below " " .539 = 137 m/m

Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ...

Fresh Water " " ...

Tropical " " ...

Winter " " 54.33 = 1380 m/m

Winter North Atlantic " " ...

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS								
Description of Hatchway		Hatches Nos 1-5	Hatches Nos 2-4	Hatch No 3	Hatch No 6	Coaling Hatches	Coaling Hatches	Hatch No 7
Dimensions of Hatchway		24' 0" x 21' 2"	33' 0" x 21' 2"	18' 2" x 8' 2"	18' 2" x 7' 6"	12' 0" x 6' 0"	6' 7" x 2' 0"	6' 8" x 2' 3"
COAMINGS	Height above Deck	31"	31"	12"	33"	30"	9" 3/4"	19"
	Thickness Sides	40"	40"	40"	40"	40"	48"	40"
	Stiffeners	7 1/2 x 3 x 1/2 B.A.	7 1/2 x 3 x 1/2 B.A.	✓	✓	✓	✓	✓
	Brackets, Stays	2 1/2" round bars	2 1/2" round bars	✓	✓	✓	✓	✓
HATCH BEAMS	Number	4	4	4	3	11	none	none
	Spacing	4' 0"	4' 13/16"	4' 1"	3' 9"	11'	none	none
	Scantling and Sketch						none	none
Bearing Surface		3"	3"	3"	3"	3"	3"	3"
FORE AND AFTERS	Number	none	none	none	none	none	none	none
	Spacing	none	none	none	none	none	none	none
	Unsupported Lengths	none	none	none	none	none	none	none
	Scantling and Sketch	none	none	none	none	none	none	none
Bearing Surface		none	none	none	none	none	none	none
HATCH COVERS	Material	W. Pine	W. Pine	W. Pine	W. Pine	W. Pine	W. Pine	W. Pine
	Thickness	3"	3"	3"	3"	3"	3"	3"
	How fitted	Fore and aft	Fore and aft	Fore and aft	Fore and aft	Fore and aft	Fore and aft	Fore and aft
	Bearing Surface	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Spacing of Cleats		24"	24"	24"	24"	24"	24"	24"
Number of Tarpaulins		(2)	(2)	(2)	(2)	(2)	(2)	(2)

*Are wood fore and afters steel shod at all bearing surfaces? *none fitted*
 Are battens and wedges efficient and in good condition? *yes*
 Are tarpaulins in good condition and in accordance with rule requirements? *yes*
 Are lashings provided in accordance with rule requirements? *yes*

Particulars of fiddley, funnel and ventilator coamings: *Fiddley Coaming 8' 3" above Bridge Dk. All openings in fiddley top are fitted with strong steel covers permanently attached in their proper positions. The Engine Room skylight is of steel with steel covers and eye glass lights and 8" coaming above fiddley top permanently attached in their proper positions. Two vents to Boiler Room 15' 2" high x 30" diam and 26" thick. Two vents to Engine Room 24" diam x 30" high above fiddley top. Height of funnel coaming = 27".*

Particulars of Flush Bunker Scuttles:—

— None —

Particulars of Companionways:— *One on Poop Deck 6' 0" high by 4' 0" x 3' 0" with one wood door 53" x 24" and 16" sill capable of being manipulated from both sides.*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— *On Poop Dk. Two derrich post vents to hold No 4 - 19" diam x 18' 2" high above Poop Dk. To holds Nos 3 & 4 (aft well) three vents 18" diam x 26" x 40" high. On Bridge Dk. two vents to forward Dk. 13" diam x 26" x 40" high. To Engineers Accommodation in houses top Bridge Dk. 8" mushroom vents 6" diam x 10" high. To holds Nos 1 & 2 (fore well) four vents 18" diam x 40" high. To Forecastle between Dk. three vents 12" diam x 14" high and four mushroom vents 8" diam x 10" high. All funnel ventilator openings are provided with wood hatch covers and canvas covers. All mushroom vents have screw covers. One funnel vent on Poop Dk. 9" diam x 36" high.*

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— *On Poop Dk. On air pipe from after peak fitted with brass cleek socket and brass plug flush on Dk. On Freeboard Dk. after Well 2 air pipes each side from tanks Nos 2 & 3 33" high x 2 1/2" diam. On Bridge Dk. two air pipes 21" high x 2 1/2" diam and two 4 1/2" high x 4" diam from tanks Nos 3 and Boiler Room. On Freeboard Dk. (Fore well) 2 air pipes from tanks Nos 1 & 2 33" high x 2 1/2" diam. On Forecastle Deck one air pipe from fore peak 5' high x 4" diam. All pipes are goose-necked and have wood plugs for closing them.*

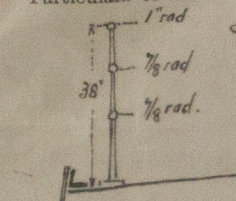
Particulars of Gangway Cargo and Coaling Ports:—

— None —

Particulars of Scuppers and Sanitary Discharge Pipes:— *After Well 3 scuppers, Fore well 3 scupper discharging over Dk. On Bridge Deck 2 scuppers discharging just below deck. On Bridge Deck Officers W.C. and Wash places discharging above freeboard Dk. one storm valve fitted to each discharging pipe. In Forecastle space W.C. of crew discharging below the freeboard deck one storm valve fitted to each discharging pipe.*

Particulars of Side Scuttles:— *No side scuttles are situated below the freeboard deck, side scuttles are situated about 18" below the forecastle deck and are fitted with efficient dead lights permanently attached in their proper positions.*

Particulars of Guard Rails:—



Fore Bridge and Forecastle.

Efficient guard rails are fitted in all exposed portions of all superstructure. Fore decks as detailed on sketch. The Bridge space is protected by bulwarks and rails.

Particulars of Gangways, Lifelines, etc.:—

None fitted. Both forward and after wells are fitted with strong bulwarks 45" high reinforced by bulwark stays 6 1/2 x 3 1/2 x 40 Bulwarks 6-3" apart.

Steel wire lifelines with noggins secured. Have been provided in the fore and after wells.

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	83' 25"	45"	2' 6" x 1' 6"	5	18.75 sq. ft.	16.65 sq. ft.
Forward Well	81' 30"	45"	2' 6" x 1' 6"	5	18.75 sq. ft.	16.36 sq. ft.

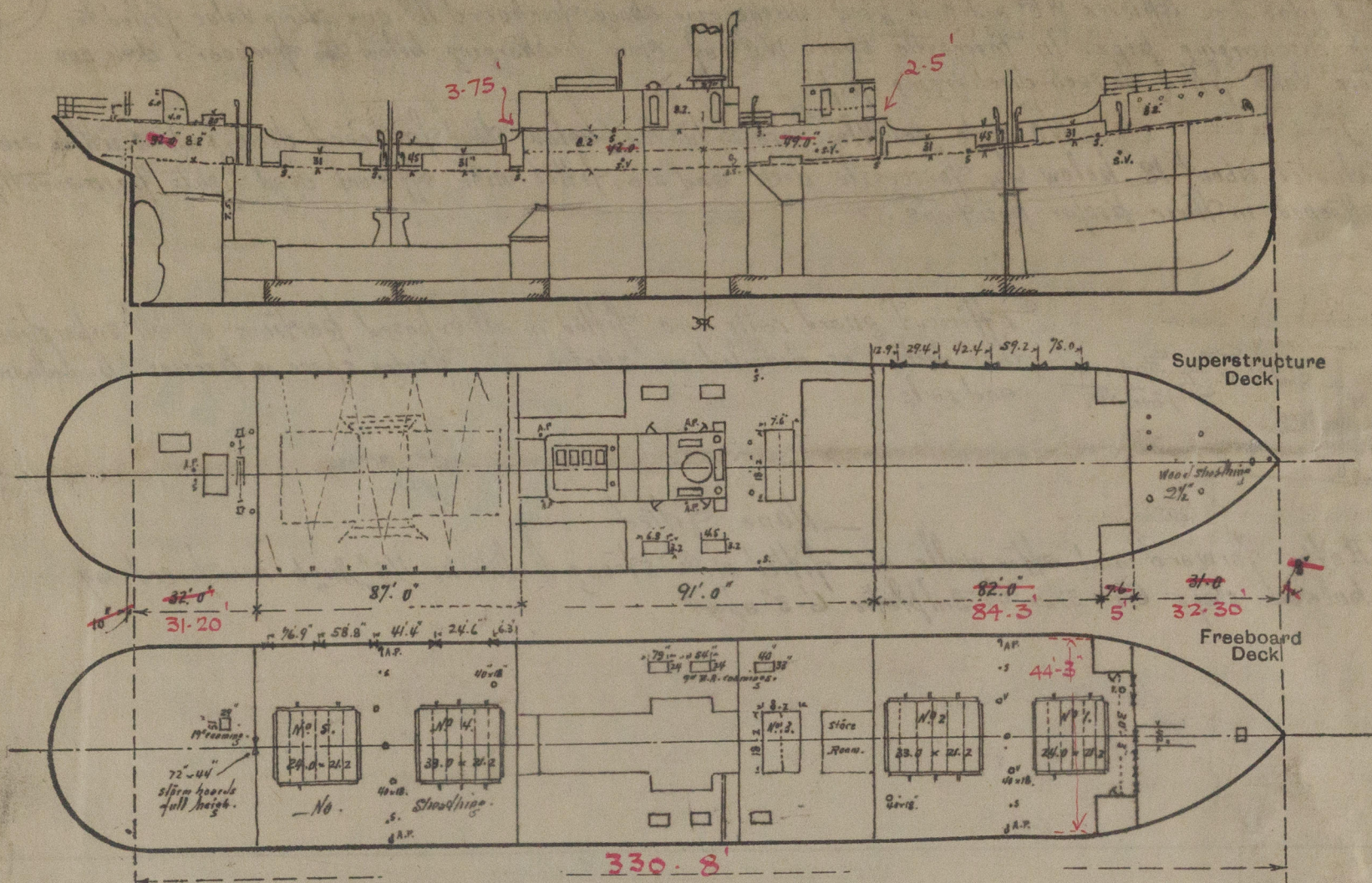
State position of each freeing port:— *After Well: 6' 3" - 24' 6" - 44' 4" - 58' 8" and 76' 9" from after end of Bridge (F. and A. position and height above deck edge). Forward Well: 12' 9" - 29' 4" - 42' 4" - 59' 2" - 75' 0" from fore end of Bridge.*
 State whether the freeing ports are fitted with 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	No and Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	21' x 40"	36"	6 1/2 x 3 1/2 x 1/2 S.A.	39"	Brackets top & bottom	(1) 72" x 44"	21"	✓
Raised Quarter Deck Bulkhead	18' x 40"	32"	4 x 4 x 1/2 S.A.	43"	Brackets top & bottom	(2) 78" x 40"	18"	✓
Bridge, After Bulkhead	18' x 48"	36"	10 x 3 1/2 x 1/2 S.A.	30' 4 1/2"	Brackets top & bottom	all closed	none	✓
Bridge, Forward Bulkhead	16' x 32"	32"	6 x 3 x 3/4 S.A.	42' 33"	free ends	(1) 66" x 48"	18"	✓
Forecastle Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	16' x 36"	32"	3 1/2 x 3 x 3/8 S.A.	29"	free ends	all closed	✓	8' 2"
Exposed Machinery Casings on Superstructure Decks	16' x 32"	28"	3 1/2 x 3 x 3/8 S.A.	29"	—	(2) 66" x 26"	16"	8' 2"
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	Storm boards fitted on rivetted channel bars (full height)
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	Storm boards fitted on rivetted channel bars (full height)
Bridge, Forward Bulkhead	All closed.
Forecastle Bulkhead	Strong hinged wood door capable of being manipulated from both sides
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	All closed
Exposed Machinery Casings on Superstructure Decks	Steel hinged doors capable of being manipulated from both sides
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:—



Note: Vessel surveyed in dry dock and survey embraces all the requirements of the Special Survey

State any special features in the construction of the ship:— Particulars for the Carriage of Timber Deck Cargoes.

- (1) Double bottom tanks have longitudinal subdivision
- (2) Bulwarks fitted to forward and after wells
Plating 3/8 thick 45" high
Stays 6 1/2 x 3 1/2 x 40 6.3 apart
Bulwerk Main Rail 6 1/2 x 3 1/2 x 1/2 B.A.
- (3) Protection to Hold Vents. Cargo stowed well clear of all vents forming ample space round same
- (4) Access to Crew's Quarters and Machinery Space: Deck cargo stowed well clear of Forecastle and Poop Trans and stowed so as to form a ladderway from Deck to top of deck cargo over which the crew pass to Bridge Deck. Access to Machinery Space through casing on Bridge Deck. No cargo carried on Superstructure Decks.
- (5) Protection to Main Steering Gear: Deck cargo stowed well clear of all gearing blocks and steering drum and chains. Hand steering gear in Poop Deck clear of cargo.
- (6) No sockets for uprights fitted. No eye plates fitted on sheerstrake.
- (7) Method for lashing cargo (As shewn above).

Builder's name and yard number *Mrs. Fehorniet's of Larrinaga Cadiz* Ship No.

Names of sister ships

Owners *Cia Naviera Guipuzcoana Bilbao*

Fee *715* Received by me *R. Crawford*