

15 OCT 1933

Rpt. C.11.

Index. No. 28506
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

| | | | | | | |
|--|--|---|---------------------------------|-------------------------------|---|--|
| Computation of Freeboard for Steamer, Sailing Ship, Tanker | | | | | Port of Survey <i>Bilbao</i> | |
| having <i>Poop, Long Bridge and Forecastle</i> | | | | | Date of Survey <i>August 1933</i> | |
| (Type of Superstructures.) | | | | | Name of Surveyor <i>J. de Beraza</i> | |
| Ship's Name <i>"Aldecoa"</i> | | Nationality and Port of Registry <i>Spanish Bilbao</i> | Gross Tonnage <i>5153.50</i> | Date of Build <i>1922-</i> | Particulars of Classification <i>100.A.1</i> <i>S.S. Bel. No 3 - 3.34.</i> | |
| Moulded Dimensions: Length <i>557.62</i> Breadth <i>49.74</i> Depth <i>33.96</i> | | | | | | |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>11515.</i> tons | | | | | | |
| Coefficient of fineness for use with Tables <i>.785</i> | | | | | | |

| | | | | | |
|---|--------------|--|--|--|--|
| Depth for Freeboard (D) | | Depth correction | | Round of Beam correction | |
| Moulded depth ... | <i>33.96</i> | (a) Where D is greater than Table depth (D - Table depth) R = | | Moulded Breadth (B) | <i>49.74</i> |
| Stringer plate ... | <i>.04</i> | (<i>34.00 - 23.84</i>) <i>2.75 = + 27.94</i> | | Standard Round of Beam = $\frac{B \times 12}{50}$ | <i>11.94</i> |
| Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ | | (b) Where D is less than Table depth (if allowed) (Table depth - D) R = | | Ship's Round of Beam | <i>12.40</i> |
| Depth for Freeboard (D) = | <i>34.00</i> | If restricted by superstructures | | Difference <i>Excuse</i> | <i>.46</i> |
| | | | | Restricted to | |
| | | | | Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$ | <i>= \frac{.46}{4} \times 3238 = .04</i> |

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) | |
|---------------------------------|-------------------------|--|--------------|-------------------|----------------------|---|
| Poop enclosed ... | <i>29.27</i> | <i>29.27</i> | <i>8' 0"</i> | | <i>29.27</i> | Standard Height of Superstructure <i>7.076</i> |
| " overhang ... | <i>2.0</i> | <i>1.00</i> | | | <i>1.00</i> | " " R.Q.D. |
| R.Q.D. enclosed ... | <i>✓</i> | | | | | Deduction for complete superstructure <i>39.17</i> |
| " overhang ... | <i>✓</i> | | | | | Percentage covered $\frac{S}{L} = 67.62$ |
| Bridge enclosed ... | <i>177.0</i> | <i>177.00</i> | <i>8' 0"</i> | | <i>177.00</i> | " $\frac{S_1}{L} = 67.34$ |
| " overhang aft ... | <i>✓</i> | | | | | " $\frac{E}{L} = 67.34$ |
| " overhang forward ... | <i>✓</i> | | | | | Percentage from Table, Line A. |
| Fore enclosed <i>and hoists</i> | <i>33.40</i> | <i>33.60</i> | <i>8' 0"</i> | | <i>33.60</i> | (corrected for absence of forecastle (if required)) |
| " overhang ... | <i>✓</i> | | | | | Percentage from Table, Line B. <i>58.48</i> |
| Trunk aft ... | <i>✓</i> | | | | | (corrected for absence of forecastle (if required)) |
| " forward ... | <i>✓</i> | | | | | Interpolation for bridge less than 2L (if required) |
| Tonnage opening aft ... | <i>✓</i> | | | | | Deduction = <i>39.17 × .5848 = - 22.91</i> |
| " " forward | <i>✓</i> | | | | | |
| Total ... | <i>241.87</i> | <i>240.87</i> | | | <i>240.87</i> | |

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product | |
|---------------------|-------------------|----------|---|---------------|-----------------|--------------------|----------|---|---------------|--|
| A.P. ... | <i>45.76</i> | <i>1</i> | | <i>45.76</i> | <i>36.81</i> | <i>36.81</i> | <i>1</i> | | <i>36.81</i> | Mean actual sheer aft = <i>Deficient</i> |
| 1/4 L from A.P. ... | <i>20.36</i> | <i>4</i> | | <i>81.44</i> | <i>14.62</i> | <i>14.62</i> | <i>4</i> | | <i>58.48</i> | Mean actual sheer forward = <i>Deficient</i> |
| 1/4 L " ... | <i>5.03</i> | <i>2</i> | | <i>10.06</i> | <i>3.65</i> | <i>3.65</i> | <i>2</i> | | <i>7.30</i> | Mean standard sheer forward |
| Amidships ... | <i>-</i> | <i>4</i> | | <i>-</i> | <i>-</i> | <i>-</i> | <i>4</i> | | <i>-</i> | Length of enclosed superstructure forward of amidships = |
| 3/4 L from F.P. ... | <i>10.07</i> | <i>2</i> | | <i>20.14</i> | <i>7.00</i> | <i>7.00</i> | <i>2</i> | | <i>14.00</i> | " " aft of " = |
| 1/4 L " ... | <i>40.73</i> | <i>4</i> | | <i>162.92</i> | <i>27.99</i> | <i>27.99</i> | <i>4</i> | | <i>111.96</i> | |
| F.P. ... | <i>91.52</i> | <i>1</i> | | <i>91.52</i> | <i>67.52</i> | <i>67.52</i> | <i>1</i> | | <i>67.52</i> | |
| Total ... | | | | <i>411.84</i> | | | | | <i>296.07</i> | |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{115.77}{18} \left(75 - \frac{33.60}{2 \times 557.62} \right) = + 2.65$
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) | <i>58.21</i> |
| Addition for Winter and Winter North Atlantic Freeboard. | Displacement in salt water at summer load water line | Correction for coefficient $\frac{785 + .68}{1.36} = \frac{1.463}{1.36}$ | <i>63.24</i> |
| Depth to Freeboard Deck = | $\Delta =$ | Depth Correction ... | <i>27.94</i> |
| Summer freeboard = | Tons per inch immersion at summer load water line | Deduction for superstructures ... | <i>22.91</i> |
| Moulded draught (d) = | T = | Sheer correction ... | <i>2.65</i> |
| Deduction for Tropical freeboard and addition for | Deduction = $\frac{\Delta}{40 T}$ inches | Round of Beam correction ... | <i>-</i> |
| Winter freeboard = $\frac{d}{4}$ inches = | | Correction for Thickness of Deck amidships ... | <i>-</i> |
| Addition for Winter North Atlantic Freeboard (if required) = | | Other corrections, scantlings, etc. ... | <i>-</i> |
| | | Summer Freeboard = | <i>70.88</i> |

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

| | |
|--|------------------------------------|
| Tropical Fresh Water Line above Centre of Disc ... | Tropical Fresh Water Freeboard ... |
| Fresh Water Line " " ... | Fresh Water " " ... |
| Tropical Line " " ... | Tropical " " ... |
| Winter Line below " " ... | Winter " " ... |
| Winter North Atlantic Line " " ... | Winter North Atlantic " " ... |

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | | |
|---|-----------------------|----------------------|-------------------|--|---------------------|---------------------|---------------------|---------------------|--|--|
| ← Bridge Deck → | | | | | | | | | | |
| Description of Hatchway | | | | Nº 1. | Nº 2. | Nº 3 | Nº 4 | Nº 5 | | |
| Dimensions of Hatchway | | | | 25.0 x 19.11/2 | 36.0 x 17.4 1/2 | 18.9 x 19.11/2 | 31.3 x 19.11/2 | 25.0 x 19.11/2 | | |
| COAMINGS | Height above Deck | Sides | ... | 3.3" | 3.3" | 3.3" | 3.3" | 3.5" | | |
| | | Ends | ... | .62 | .62 | .32 | .16 | .36 | | |
| | Thickness | | ... | .43 | .43 | .43 | .43 | .43 | | |
| | | Stiffeners | ... | 9 x 3 1/2 x 50 B.L. | 9 x 3 1/2 x 50 B.L. | 9 x 3 1/2 x 50 B.L. | 9 x 3 1/2 x 50 B.L. | 9 x 3 1/2 x 50 B.L. | | |
| Brackets, Stays | | ... | 9" x 3 1/2 B.P.L. | 9" x 3 1/2 B.P. | 9" x 3 1/2 B.P. | 9" x 3 1/2 B.P. | 9" x 3 1/2 B.P. | | | |
| HATCH BEAMS | Number | ... | ... | 4 | 7 | 3 | 5 | 4 | | |
| | | Spacing | ... | 5.0" | 4.6 | 4.8 1/4 | 5.2 1/2 | 5.0" | | |
| | | Scantling and Sketch | ... | 4.8 116 18" ends 18 ends 116 4x3=45 | | 25 Nº 1 | 25 Nº 1 | | | |
| | Bearing Surface | ... | 3" | 3" | 3" | 3" | | | | |
| FORE AND AFTERS | Number | ... | ... | | | | | | | |
| | | Spacing | ... | | | | | | | |
| | | Unsupported Lengths | ... | | | | | | | |
| | Scantling* and Sketch | ... | | | | | | | | |
| Bearing Surface | | ... | | | | | | | | |
| HATCH COVERS | Material | ... | ... | W. Pine | | | | | | |
| | | Thickness | ... | 2 3/4 | | chtho | chtho | | | |
| | | How fitted | ... | Fore and aft | | | | | | |
| | | Bearing Surface | ... | 3" | | | | | | |
| Spacing of Cleats | | ... | 24" | | | | | | | |
| Number of Tarpaulins | | ... | 2 | | | | | | | |

*Are wood fore and afters steel shod at all bearing surfaces? ☒

Are battens and wedges efficient and in good condition? ☒

Are tarpaulins in good condition and in accordance with rule requirements? ☒

Are lashings provided in accordance with rule requirements? ☒

Particulars of fiddle, funnel and ventilator coamings:— All openings in fiddle, top are provided of strong steel covers hinged and permanently fixed in their proper positions.

Particulars of Flush Bunker Scuttles :—

Name Filled ✓

Particulars of Companionways :—

— Name fitted ✓

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

All identifiable Coamings of more than 3.6 in height are efficiently supported.

Efficient means of closing
provided
see attached sketch.

Means of closing X

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

All air pipes are of galvanized iron and of strong and substantial construction

Those in the large well are of $4\frac{1}{2}$ " diam x 26" height to the mouth

Long Bridge in $4\frac{1}{2}$ " \times 26" and 2 B.E. $3\frac{1}{2}$ " diam \times 12" length. Efficient means are provided for closing all apertures of the air pipes.

Particulars of Gangway Cargo and Coaling Ports :—

One now fitted as shown in the approved plan.

Particulars of Scuppers and Sanitary Discharge Pipes :—

There is no discharge filled in those spaces below the foreward deck

Particulars of Side Scuttles :

No side scuttles are fitted below the fore board Deck
(See sketch attached.)

Particulars of Guard Rails :—

Boards are fitted in the fore castle & and aft end of Food deck
3.2 Ingh and three rods of $1\frac{1}{2}$ - 1" and 1" diam.

Particulars of Gangways, Lifelines, etc. :—

Life line has been fitted in the fore well also from the control house
to poop deck

| 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 | 30'-0" 26'-7" | 4'-0" | (2) 3'-7" x 1'-6" | 2 | 10.80 sq. ft. | 9.15 sq. ft. |
| Forward Well | 85'- 8" ^{6"} | 3'-10" | 3'-0 1/2" x 2'-3" | 3 | 17.5 sq. ft. | 17'-0" sq. ft. |
| State position of each freeing port } After Well:— 6'-6" from each Bulwark, with 3 rads. (F. and A. position and height above deck edge) } Forward Well:— No. 1. 13.10 & No. 2 4x7 both from fwd. No. 3-7 ft. from aft. } All 10" above deck 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. | | | | | | |

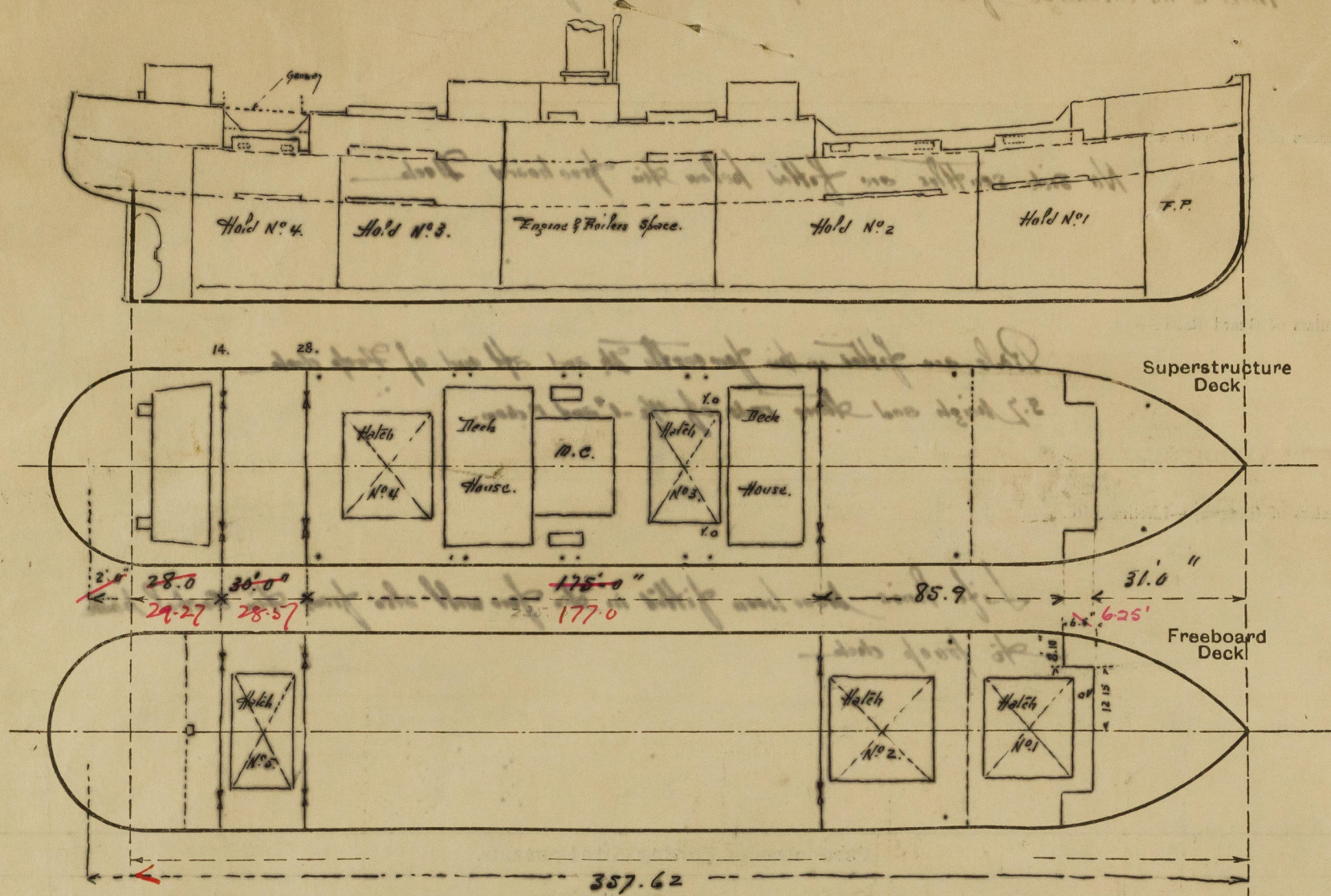
| | Coaming | Plating | Stiffeners | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
|--|------------|----------|--------------------------------|---------|----------------------------------|------------------|--------------------|----------------------|
| Poop Bulkhead | 3'3" x 36" | 36 | 150 x 75 x 10 B.A. | 760 mm | Bridgels top fl/bottom | 1.20 x 908 | 600 mm | 8' 0" ✓ |
| Raised Quarter Deck Bulkhead ... | | | | | | | | |
| Bridge, After Bulkhead | 3'3" x 36" | 32 | 150 x 75 x 10 B.A. | 760 -- | Bridgels top fl/bottom | 1.20 x 908 mm | 600 mm | 8' 0" ✓ |
| Bridge, Forward Bulkhead | " | 11-12 mm | 8 x 5½ x 54 B.A. | 30" | 4" Bridgels top fl/bottom | 5.8 x 2.10 | 53" | 8' 0" ✓ |
| Forecastle Bulkhead | | 7 mm | 3 x 3 x 58 | 27" | -- | 5.6 x 2.2 | 20" | 8' 0" ✓ |
| Trunk, Aft | | | | | | | | |
| Trunk, Forward | | | | | | | | |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks ... | | | | | | | | |
| Exposed Machinery Casings on Superstructure Decks | ✓ | 9 mm | Honges plates 43/4 x 3 x 36 | 26" | Bridgels at top | 5.4 x 2.2 | 12" | 8' 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 | Steel plates with bolted studs through plating and ribs spaced about 6" apart. |
| Raised Quarter Deck Bulkhead ... | Can be manipulated from one side only ✓ |
| Bridge, After Bulkhead | Steel plates with bolted studs through plating and ribs spaced about 6" apart ✓ |
| Bridge, Forward Bulkhead | Steel bolted plates studs about 5" apart - Manipulation from one side only ✓ |
| Forecastle Bulkhead | Wood doors 1½" thick of teak ✓ |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks ... | ✓ |
| Exposed Machinery Casings on Superstructure Decks | Steel hinged doors ✓ |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | ✓ |
| Deckhouses on Flush Deck Ships ... | ✓ |

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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 shown on the following sketches:—



Cool hatches in fore and aft have 21" diameters and are provided of Wood Covers. Lashing and efficient means of closing.

Forecastle 31.00
8.10
+ 6.25 x 8.15 = 2.5
20.25 = 33.65 5.0

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

Builder's name and yard number

Sociedad Española de Construcción Naval Bilbao

Names of sister ships

Owner

Francisco Alarcos Esq Bilbao

Fee £

Pls 1200.

Received by me

30th September 1939.



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