

Lillian Luckenbach 27463
Dorothy Luckenbach 27460

31 MAY 1933

Rpt. C.11.

Index. No. 40160
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

| | | | | | |
|---|----------------------------------|-----------------|--|-----------------------------|---|
| Computation of Freeboard for Steamer, Sailing Ship, Tanker | | | | | Port of Survey <i>New York</i> |
| having <i>Complete Shelter deck with tonnage opening.</i> | | | | | Date of Survey <i>May 2nd 1933</i> |
| (Type of Superstructures.) | | | | | Name of Surveyor <i>Geo. Tully</i> |
| Ship's Name | Nationality and Port of Registry | Official Number | Gross Tonnage | Date of Build | Particulars of Classification <i>+100A1</i> |
| <i>"J. L. Luckenbach"</i> | <i>New York U.S.A.</i> | <i>217562</i> | <i>8536</i> | <i>1919</i> <i>3 mo.</i> | <i>Shelter deck with freeboard.</i> |
| Moulded Dimensions: Length <i>449</i> Breadth <i>60</i> Depth <i>31.29 to upper deck</i> | | | | | |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>(26.6') = 14600</i> tons <i>14900</i> | | | | | |
| Coefficient of fineness for use with Tables <i>.728</i> | | | | | |
| Depth for Freeboard (D) | | | Depth correction | | Round of Beam correction |
| Moulded depth <i>31.29</i> | | | (a) Where D is greater than Table depth (D - Table depth) R = <i>(31.33 - 29.93) 3 = +4.20</i> | | Moulded Breadth (B) <i>60'</i> |
| Stringer plate ... <i>1/2</i> <i>.04</i> | | | (b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>✓</i> | | Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>14.40</i> |
| Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ | | | If restricted by superstructures <i>✓</i> | | Ship's Round of Beam = <i>13' at upper deck</i> |
| Depth for Freeboard (D) = <i>31.33</i> | | | | | Difference <i>15' at shelter deck</i> |
| | | | | | Restricted to <i>.60</i> |
| | | | | | Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.60}{4} \times .0212 = \text{Nil.}$ |

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|----------------------------|-------------------------|--|------------------|-------------------|----------------------|
| Poop enclosed | <i>4'-0"</i> | <i>4.00</i> | <i>9'-7 1/2"</i> | <i>-</i> | <i>4.00</i> |
| " overhang | <i>30'-0"</i> | <i>15.00</i> | <i>9'-7 1/2"</i> | <i>-</i> | <i>15.00</i> |
| R.Q.D. enclosed | | | | | |
| " overhang | | | | | |
| Bridge enclosed | <i>411'-0"</i> | <i>411.00</i> | <i>9'-7 1/2"</i> | <i>-</i> | <i>411.00</i> |
| " overhang aft | | | | | |
| " overhang forward | | | | | |
| Trunk aft | | | | | |
| " forward | | | | | |
| Tonnage opening aft | <i>4'-0"</i> | <i>9.50</i> | | | <i>9.50</i> |
| " " forward | | | | | |
| Total | <i>449.0'</i> | <i>439.50</i> | | | <i>439.50</i> |

| | |
|---|---|
| Standard Height of Superstructure <i>7.50</i> | R.Q.D. <i>42</i> |
| Deduction for complete superstructure <i>42</i> | Percentage covered $\frac{S}{L} = 100\%$ |
| | $\frac{S_1}{L} = 97.88\%$ |
| | $\frac{E}{L} = 97.88\%$ |
| Percentage from Table, Line A. <i>97.39%</i> | (corrected for absence of forecastle (if required)) |
| Percentage from Table, Line B. <i>97.39%</i> | (corrected for absence of forecastle (if required)) |
| Interpolation for bridge less than 2L (if required) | |
| Deduction = <i>42 x .9739 = -40.90"</i> | |

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|------------------------|-------------------|---|--------|---------|-----------------|--------------------|---|--------|---------|
| A.P. | 54.90 | 1 | 54.90 | 38 | 37.87 | 63.37 | 1 | 63.37 | |
| 1/4 L from A.P. | 24.43 | 4 | 97.72 | 9.5 | 6.00 | 28.20 | 4 | 112.80 | |
| 2/4 L " | 6.04 | 2 | 12.08 | 2.37 | -6.20 | 6.97 | 2 | 13.94 | |
| Amidships | | 4 | | | | | 4 | | |
| 3/4 L from F.P. | 12.08 | 2 | 24.16 | 14.9 | 23.50 | 16.10 | 2 | 32.20 | |
| 1/4 L " | 48.86 | 4 | 195.44 | 59.6 | 62.80 | 65.14 | 4 | 260.56 | |
| F.P. | 109.80 | 1 | 109.80 | 12.1 | 120.87 | 146.37 | 1 | 146.37 | |
| Total | | | | | | | | | 629.24 |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{135.14}{18} \left(\frac{.75 - .50}{1.75} \right) = -1.88"$

If limited on account of midship superstructure.

Mean actual sheer aft = *Excess.*

Mean standard sheer aft = *Excess.*

Mean actual sheer forward = *Excess.*

Mean standard sheer forward = *Excess.*

Length of enclosed superstructure forward of amidships = $\left. \begin{array}{l} L \\ " \\ " \end{array} \right\} C.S.S.$

" " aft of " = $\left. \begin{array}{l} " \\ " \end{array} \right\} C.S.S.$

Actual T.O.H. = 9'-7 1/2"

Standard T.O.H. = 7'-6"

2'-1 1/2"

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

1810-003130-0181 1/2

| | | | |
|---|---|--|---------------------------------|
| Deduction for Tropical Freeboard. | Deduction for Fresh Water. | TABULAR FREEBOARD corrected for Flush Deck (if required) | <i>86.79</i> |
| Addition for Winter and Winter North Atlantic Freeboard. | Displacement in salt water at summer load water line | Correction for coefficient | <i>89.84</i> |
| Depth to Freeboard Deck = <i>31.33</i> | $\Delta =$ <i>15300</i> | | |
| Summer freeboard = <i>4.27</i> | Tons per inch immersion at summer load water line | Depth Correction | <i>4.20</i> |
| Moulded draught (d) = <i>27.06</i> | $T =$ <i>52.7 at 26.6' draught.</i> | Deduction for superstructures | <i>-40.90</i> |
| Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>6 3/4"</i> | Deduction = $\frac{\Delta}{40 T}$ inches = <i>7.19 = 7 1/4"</i> | Sheer correction | <i>-1.88</i> |
| Addition for Winter North Atlantic Freeboard (if required = | | Round of Beam correction | <i>-</i> |
| | | Correction for Thickness of Deck amidships | <i>-</i> |
| | | Other corrections, scantlings, etc. | <i>-</i> |
| | | | <i>4.20 42.78 - 38.58</i> |
| | | | Summer Freeboard = <i>51.26</i> |

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

| | | | |
|---|---------------|---------------------------------------|------------------|
| Tropical Fresh Water Line above Centre of Disc | <i>14"</i> | Tropical Fresh Water Freeboard | <i>3'-7 1/4"</i> |
| Fresh Water Line " " | <i>7 1/4"</i> | Fresh Water " " | <i>3'-8"</i> |
| Tropical Line " " | <i>6 3/4"</i> | Tropical " " | <i>3'-8 1/2"</i> |
| Winter Line below " " | <i>6 3/4"</i> | Winter " " | <i>4'-10"</i> |
| Winter North Atlantic Line " " | <i>✓</i> | Winter North Atlantic " " | <i>✓</i> |

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | |
|---|----------------------|---------------|-----------|------------------------------|-----------|-----------|-----------|------------|------------------|
| Description of Hatchway | No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6 | No. 7 | No. 8 | Image of opening |
| Dimensions of Hatchway | 20'6" x 20'0" | 21'9" x 24'0" | 36' x 24' | 21' x 24' | 30' x 24' | 27' x 24' | 15' x 24' | 4'1" x 24' | |
| COAMINGS | Height above Deck | 30 | 30 | 30 | 30 | 30 | 30 | 11" | |
| | Thickness | .50 | .50 | .50 | .50 | .50 | .50 | .50 | |
| | Stiffeners | .62 | .62 | .62 | .62 | .62 | .62 | .50 | |
| | Brackets, Stays | 15" | 15" | 15" | 15" | 15" | 15" | 15" | |
| HATCH BEAMS | Number | 3 | 5 | 6 | 3 | 5 | 5 | 2 | None |
| | Spacing | 5'-0" | 4'-7 1/2" | 5'-0" 1/2 | 5'-0" | 5'-0" | 4'-6" | 5'-0" | |
| | Scantling and Sketch | 18" x 38 | 21" x 44 | 21" x 44 | 21" x 44 | 21" x 44 | 21" x 44 | 21" x 44 | |
| | Bearing Surface | 5" | 5" | 5" | 5" | 5" | 5" | 3" | |
| FORE AND AFTERS | Number | 9 | 9 | Hatchways on Fore and Afters | 9 | 9 | 9 | 9 | |
| | Spacing | .50 | .50 | .50 | .50 | .50 | .50 | .50 | |
| | Scantling and Sketch | 3 | 5 | 6 | 3 | 5 | 5 | 2 | |
| | Bearing Surface | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| HATCH COVERS | Material | Wood | Wood | Wood | Wood | Wood | Wood | Wood | |
| | Thickness | 2 3/4 | 2 3/4 | 2 3/4 | 2 3/4 | 2 3/4 | 2 3/4 | 2 3/4 | |
| | How fitted | F + A | F + A | F + A | F + A | F + A | F + A | F + A | |
| | Bearing Surface | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| Spacing of Cleats | 3'-0" | 3'-0" | 2'-0" | 2'-0" | 2'-0" | 2'-0" | 2'-0" | 2'-0" | |
| Number of Tarpaulins | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle, funnel - machinery space ventilation coamings are on a trunk about 2' above base deck which are permanently attached. Funnel + ventilator are strong + well supported.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

None

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

16 on same ports, specially stiffened + strong 5 intake pipes for mechanical ventilators, 7" dia 24" dia x .62 thick + compelled to stand alone.

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

All 3'-0" high fitted with goose necks, covered with wire gauge.

Particulars of Gangway Cargo and Coaling Ports:—

None

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Particulars of Scuppers and Sanitary Discharge Pipes —

Shelter deck space in scuppered by 5'-3 1/2" scupper (P.S.) discharge overboard abt. 12" below main deck + fitted with coal steel storm valve. There are no sanitary discharges from space below shelter deck.

Particulars of Side Scuttles:—

None below shelter deck.

Particulars of Guard Rails:—

Fitted all fore + aft on shelter deck, 41" high 3 high rails strong + efficient.

Particulars of Gangways, Lifelines, etc.:—

Steel rails on sides of lower Life lines fitted when required.

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 | | | | | | |
| Forward Well | | | | | | |
| State position of each freeing port (F. and A. position and height above deck edge) | | | | | | |
| 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. | | | | | | |

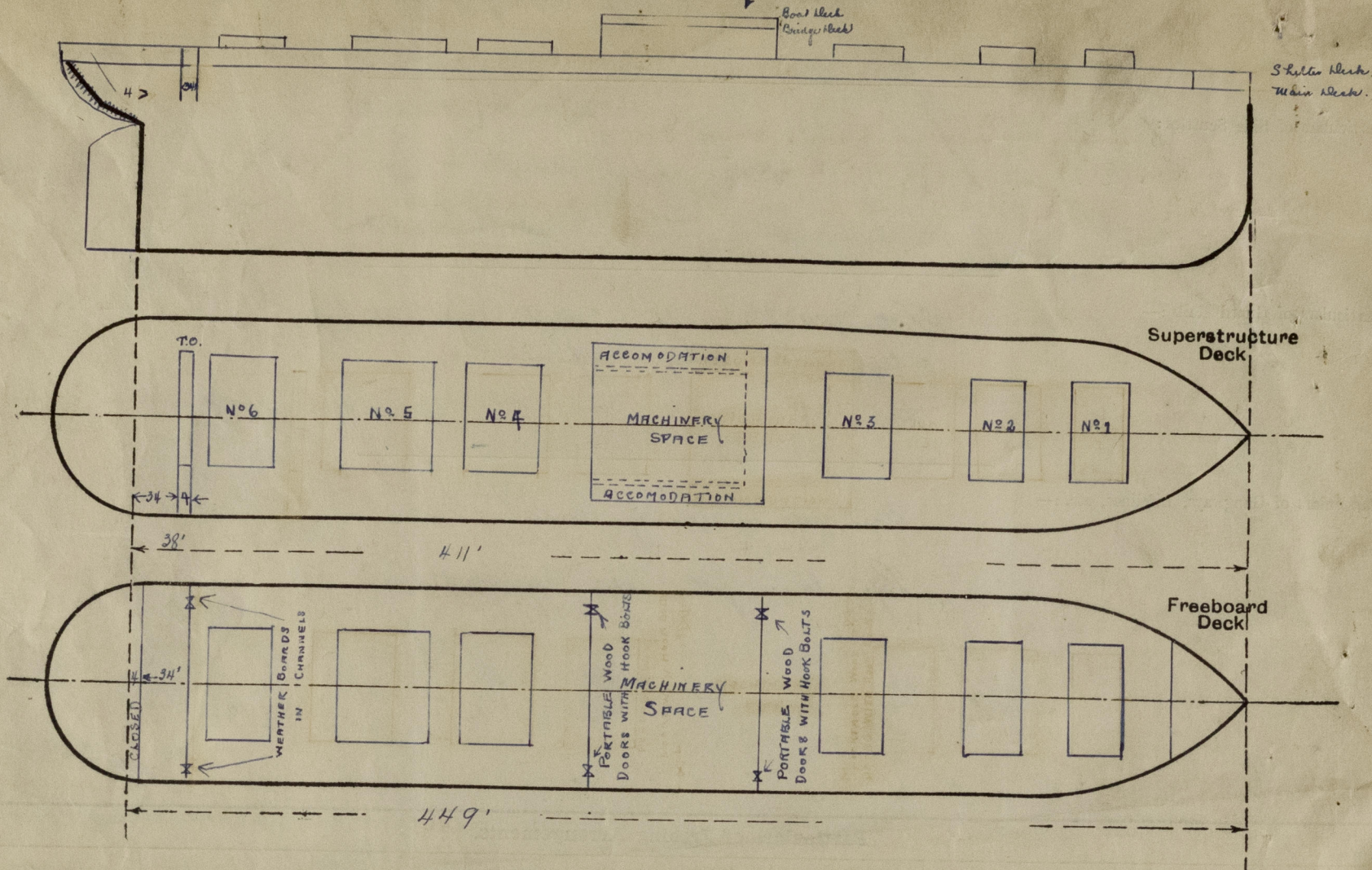
Particulars of Superstructures, Trunks, Casings, Deckhouses.

| | Coaming | Plating | Stiffeners | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
|---|---------|---------|-------------|---------|-------------------------------|------------------|-----------------|-------------------|
| Poop Bulkhead | 5/16 | 5/16 | 5 x 3 x .38 | 30" | None | None | | |
| Raised Quarter Deck Bulkhead | | | | | | | | |
| Bridge, After Bulkhead | 5/16 | 5/16 | 4 x 3 x .38 | 30" | None | 5'-0" x 3'-1" | 18" | |
| Bridge, Forward Bulkhead | | | | | | | | |
| Forecastle Bulkhead | | | | | | | | |
| Trunk, Aft | | | | | | | | |
| Trunk, Forward | | | | | | | | |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | | | | | | | | |
| Exposed Machinery Casings on Superstructure Decks | | | | | | | | |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | | | | | | | | |
| Deckhouses on Flush Deck Ships | | | | | | 5'-0" x 3'-1" | 12 | 9'-7 1/2" |

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

| | |
|---|---|
| Poop Bulkhead | No openings. |
| Raised Quarter Deck Bulkhead | |
| Bridge, After Bulkhead | Weather boards in riveted channels full height. |
| Bridge, Forward Bulkhead | |
| Forecastle Bulkhead | |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | |
| Exposed Machinery Casings on Superstructure Decks | |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | |
| Deckhouses on Flush Deck Ships | Portable wooden doors with hook bolts. |

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:—



Vessel surveyed at New York afloat + on dry-dock.

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

Sheer drops aft of midships $6\frac{3}{8}$.

6/11/11

Builder's name and yard number Sun S. B. Co. Chester, Pa.
 Names of sister ships Harry Luckenbach, Dorothy Luckenbach, William Luckenbach.
 Owners Luckenbach S. S. Co. Inc.
 Fee £ \$ 110.00 Received by me _____
2.50 Effort
Charged at New York.



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