

7 APR 1931

Index No. 33848
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

| | | | | | | |
|---|---|---|---------------------------------|---|--|--|
| Computation of Freeboard for Steamer, Sailing Ship, Tanker | | | | | Port of Survey <u>Hamburg</u> | |
| having <u>Forecastle, forward bridge & after bridge</u> | | | | | Date of Survey <u>4th of April 31</u> | |
| (Type of Superstructures.) | | | | | | |
| Ship's Name <u>F.H. Bedford Jr.</u> | Nationality and Port of Registry <u>Danzig</u> | Official Number <u>11952</u> | Gross Tonnage <u>11.1930</u> | Date of Build <u>11.1930</u> | Name of Surveyor <u>Wk. Jemel</u> | |
| Moulded Dimensions: Length <u>520.0</u> Breadth <u>70.0</u> Depth <u>38.9</u> | | | | Particulars of Classification <u>+100 A 1</u> | | |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>27190</u> tons | | | | carrying petroleum in bulk | | |
| Coefficient of fineness for use with Tables <u>.793</u> | | | | Brackles system | | |
| Depth for Freeboard (D) | | Depth correction | | Round of Beam correction | | |
| Moulded depth <u>38.75</u> | | (a) Where D is greater than Table depth (D-Table depth) R = $(38.82 - 34.67) \times 3$ = + <u>12.45</u> | | Moulded Breadth (B) <u>70.0</u> | | |
| Stringer plate <u>.84</u> <u>.07</u> | | (b) Where D is less than Table depth (if allowed) (Table depth-D) R = | | Standard Round of Beam = $\frac{B \times 12}{50} = 16.80$ | | |
| Sheathing on exposed deck T $\left(\frac{L-S}{L}\right) =$ <u>✓</u> | | If restricted by superstructures | | Ship's Round of Beam = <u>17.25</u> | | |
| Depth for Freeboard (D) = <u>38.82</u> | | | | Difference <u>.45</u> | | |
| | | | | Restricted to <u>✓</u> | | |
| | | | | Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{.45}{4} \times .731 = -.08$ | | |

DEDUCTION FOR SUPERSTRUCTURES.

| Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|--|--------|-------------------|----------------------|
| All dates see letter | | | | |
| No. 10/1/4. 1931 | | | | |
| from | | | | |
| Mr. Stewart. | | | | |

| | |
|---|-------------|
| Standard Height of Superstructure | <u>7.5</u> |
| " " R.Q.D. | <u>✓</u> |
| Deduction for complete superstructure | <u>42.0</u> |
| Percentage covered $\frac{S}{L} = \frac{142.16}{520} = 27.34\%$ | |
| " " $\frac{S_1}{L} = \frac{139.91}{520} = 26.90\%$ | |
| " " $\frac{E}{L} = \frac{139.91}{520} = 26.90\%$ | |
| Percentage from Table, Line A. | <u>✓</u> |
| (corrected for absence of forecastle (if required)) | |
| Percentage from Table, Line B. Tankers <u>18.83%</u> | |
| (corrected for absence of forecastle (if required)) | |
| Interpolation for bridge less than .2L (if required) | |
| Deduction = $42.0 \times 18.83 = -7.91$ | |

SHEER CORRECTION.

| Actual Standard Ordinate | S | M | Product | Standard Actual Ordinate | Effective Ordinate | S | M | Product |
|--------------------------|---|---|---------|--------------------------|--------------------|---|---|---------|
| 83.62 | 1 | | | | | 1 | | |
| 30.00 | 4 | | | | | 4 | | |
| 2.875 | 2 | | | | | 2 | | |
| | 4 | | | | | 4 | | |
| 9.25 | 2 | | | | | 2 | | |
| 51.125 | 4 | | | | | 4 | | |
| 128.37 | 1 | | | | | 1 | | |

Mean actual sheer aft = $\frac{209.37}{180.0} = 112.55\%$
 Mean standard sheer aft = $\frac{180.0}{180.0} = 100.0\%$

Mean actual sheer forward = $\frac{351.37}{372.04} = 94.44\%$
 Mean standard sheer forward = $\frac{372.04}{372.04} = 100.0\%$

Length of enclosed superstructure forward of amidships = ✓
 " " aft of " = ✓

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - \frac{S}{2L}}{.75} \right) = \frac{20.67}{18} \left(\frac{.75 - .136}{.75} \right) = +.70$

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 = 38.82
 Summer freeboard = 8.75
 Moulded draught (d) = 30.07

Correction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 7.52Addition for Winter North Atlantic Freeboard (if required) = 5.20

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 24450$

Tons per inch immersion at summer load water line

 $T = 81.5$ Deduction = $\frac{\Delta}{40T}$ inches $= \frac{24450}{40 \times 81.5}$ $= 7.50$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\times \frac{1.473}{1.36} =$

| | + | - |
|---|-------|------|
| Depth Correction | 12.45 | - |
| Deduction for superstructures | - | 7.91 |
| Sheer correction | .70 | - |
| Round of Beam correction | - | .08 |
| Correction for Thickness of Deck amidships | - | - |
| Other corrections, scantlings, etc. | - | - |
| | 13.15 | 7.99 |

92.10

99.74

Summer Freeboard = 104.90

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck: 8'-9" = 26.67

| | |
|---|--------|
| Tropical Fresh Water Line above Centre of Disc | |
| Fresh Water Line " " | 8'-1½" |
| Tropical Line " " | 8'-1½" |
| Winter Line below " " | 9'-4½" |
| Winter North Atlantic Line " " | 9'-9½" |

| | | |
|---------------------------------------|------|-----|
| Tropical Fresh Water Freeboard | 15' | 381 |
| Fresh Water " " | 7½" | 190 |
| Tropical " " | 7½" | 190 |
| Winter " " | 7½" | 190 |
| Winter North Atlantic " " | 12½" | 317 |

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after bridge

Peep enclosed ...

,, overhang ...

R.Q.D. enclosed ...

,, overhang ...

For Bridge enclosed ...

,, overhang aft ...

,, overhang forward ...

F'cle enclosed *open* ...

,, overhang ...

Trunk aft ...

,, forward ...

Tonnage opening aft ...

,, forward ...

Total ...

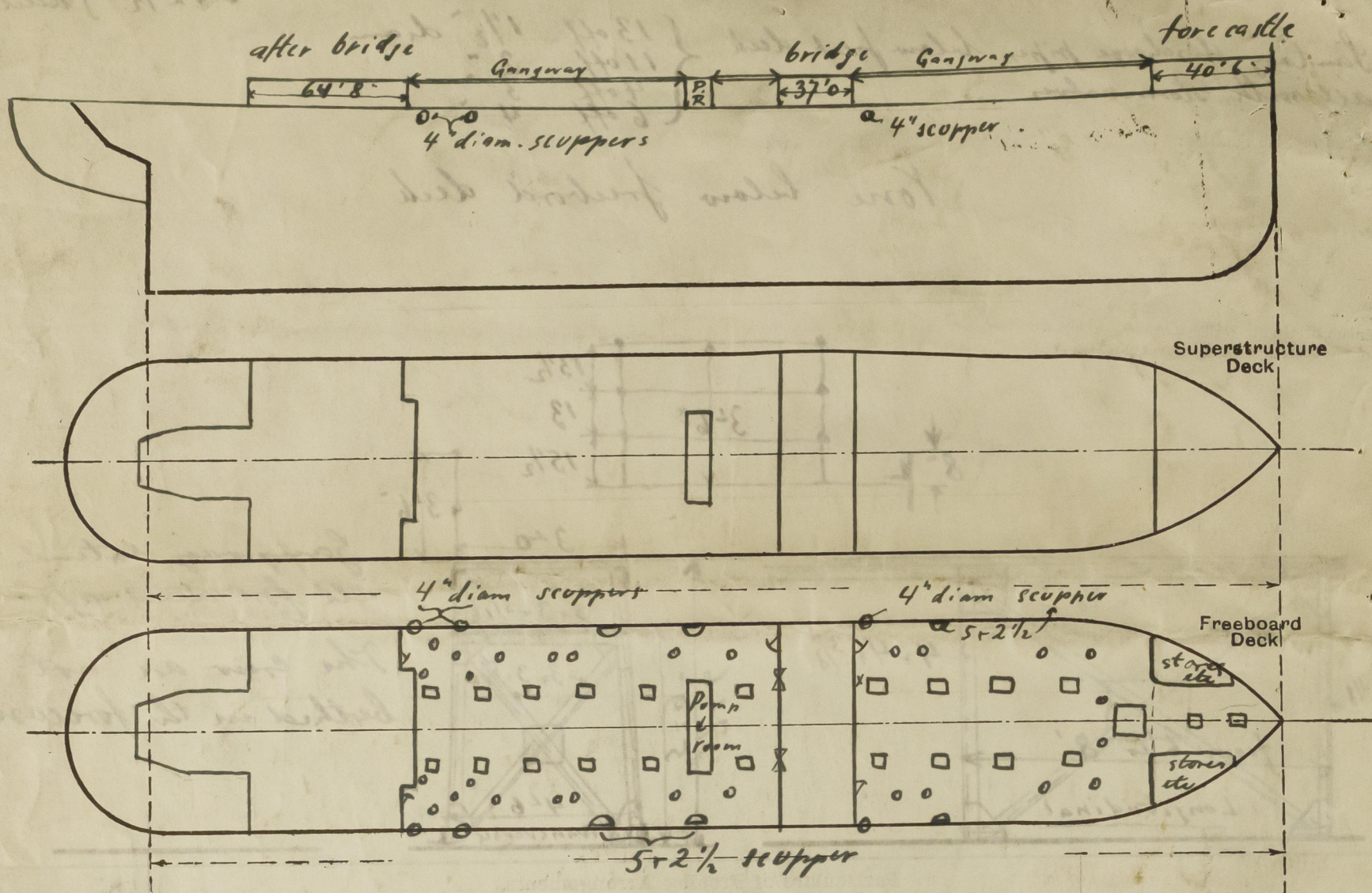
| Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|--|--------|-------------------|----------------------|
| 64.66 ✓ | 64.66 ✓ | 7.5 | - | 64.66 ✓ |
| | | | | |
| | | | | |
| 37.00 ✓ | 37.00 ✓ | 7.5 | - | 37.00 ✓ |
| | | | | |
| 40.50 ✓ | 38.25 ✓ | 7.5 | - | 38.25 ✓ |
| | | | | |
| | | | | |
| 142.16 | 139.91 ✓ | | | 139.91 ✓ |

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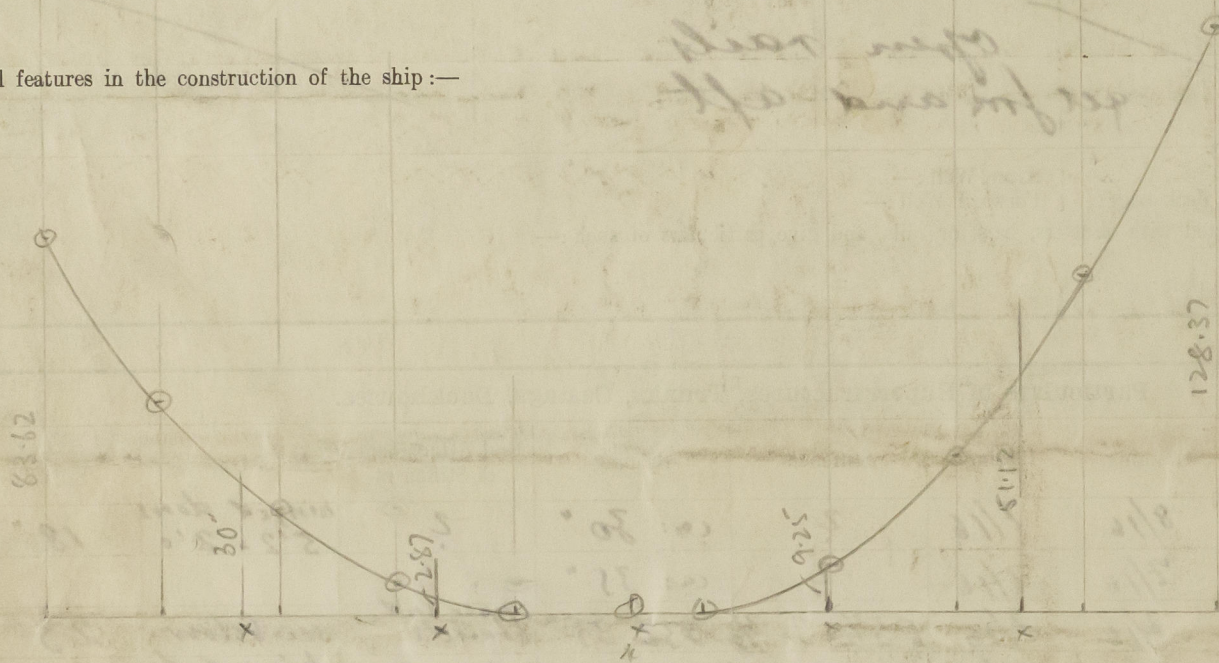
| Station | Standard Ordinate | S M | Product | Actual Ordinate | Effective Ordinate | S M | Product |
|-------------------------------|-------------------|--------|---------|-----------------|--------------------|--------|---------|
| A.P. ... | 62.00 ✓ | 1 | 62.00 | 83.62 | 62.00 | 1 | 62.00 |
| $\frac{1}{8}$ L from A.P. ... | 27.59 ✓ | 4 | 110.36 | 30.00 | 27.59 | 4 | 110.36 |
| $\frac{2}{8}$ L " ... | 6.82 ✓ | 2 | 13.64 | 2.875 | 6.82 | 2 | 13.64 |
| Amidships ... | - | 4 | - | - | - | 4 | - |
| $\frac{3}{8}$ L from F.P. ... | 13.64 ✓ | 2 | 27.28 | 9.25 | 9.25 | 2 | 18.50 |
| $\frac{1}{8}$ L " ... | 55.19 ✓ | 4 | 220.76 | 51.125 | 51.125 | 4 | 204.50 |
| F.P. ... | 124.00 ✓ | 1 | 124.00 | 128.37 ✓ | 128.37 | 1 | 128.37 |
| Total ... | | | 558.04 | | | | 537.37 |

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{20.67}{18} (.75 - .136) =$$

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:—



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



Memorandum Report No. 21977

Builder's name and yard number Forness S.B. Co. Ltd.

Names of sister ships in structure and general arrangements (but not in sheer or displacement) similar to M.S. Heinrich v. Riedemann

Owners Standard Shipping Company

Fee £

Received by me



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