

No. 6282.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

| | | | | | |
|--|-----------------|--|--|------------------------------|---|
| Ship's Name s.s. "BERKEL" | Official Number | Nationality and Port of Registry Swedish, Stockholm. | Gross Tonnage about 1560 | Date of Build 1946 | Port of Survey Stockholm. Date of Survey While building. Surveyor's Signature <i>Hans Otto Albertson</i> Particulars of Classification *100A1 with freeboard (Contemplated) |
| Moulded Dimensions: Length 83.62 M Breadth 12.040 M Depth 5.485 to 2nd deck. Freeboard " 83,808 M " " 7,925 " upper " Moulded displacement at moulded draught = 85 per cent. of moulded depth 3188 metric tons Coefficient of fineness for use with Tables .68 (.661 actual) | | | | | |

| | | |
|---|---|--|
| Depth for Freeboard (D). Moulded depth ... 5.485 M Stringer plate 10 m/m 2nd deck 0.010 M Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 5.495 M. | Depth correction. (a) Where D is greater than Table depth (D—Table depth) R = <input checked="" type="checkbox"/> (b) Where D is less than Table depth (if allowed) (Table depth—D) R = 8.33 (5.587-5.495) 21.16 = -16 m.m. If restricted by superstructures <input checked="" type="checkbox"/> | Round of Beam correction. Moulded Breadth (B) 12.040 Standard Round of Beam = $\frac{B \times 12}{50} =$ 241 m.m. Ship's Round of Beam = Nil. Difference - 241 Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{241 \times .0079}{4} =$ 11 m.m. |
|---|---|--|

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) m/m | Equivalent Enclosed Length (S ₁) | Height m/m | Height Correction | Effective Length (E) |
|-------------------------|-----------------------------|--|-----------------|-------------------|----------------------|
| Poop enclosed ... | 8368 | 8368 | | | 8368 |
| » overhang ... | 30 | 15 | | | 15 |
| R.Q.D. enclosed | | | | | |
| » overhang | | | | | |
| Bridge enclosed... | 74120 | 74120 | 2440 | | 74120 |
| » overhang aft ... | 40 | 30 | | | 30 |
| » overhang forward | | | | | |
| F'cle enclosed ... | | | | | |
| » overhang ... | | | | | |
| Trunk aft ... | | | | | |
| » forward ... | | | | | |
| Tonnage opening aft ... | 1250 | 616 | 483 diff | | 616 |
| » » forward | | | | | |
| Total ... | 83808 | 83149 | | | 83149 |

Standard Height of Superstructure **1906**
» » R.Q.D. ☒
Deduction for complete superstructure **852**
Percentage covered $\frac{S}{L} = 100$
» » $\frac{S_1}{L} =$ **99.21**
» » $\frac{E}{L} =$
Percentage from Table, Line A.
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. **99.02**
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required)
Deduction = **852 x .9906 = -844 m.m.**

SHEER CORRECTION.

| Station | Standard Ordinate | S M | Product | Actual Ordinate m/m | Effective Ordinate | S M | Product |
|---------------------|-------------------|----------|-------------|---------------------|--------------------|----------|--------------|
| A.P. ... | 952 | 1 | 952 | 813 | 1347 | 1 | 1347 |
| 1/6 L from A.P. ... | 424 | 4 | 1696 | 346 | 599 | 4 | 2396 |
| 2/6 L » ... | 105 | 2 | 210 | 62 | 148 | 2 | 296 |
| Amidships ... | - | 4 | - | 0 | - | 4 | - |
| 2/6 L from F.P. ... | 209 | 2 | 418 | 313 | 325 | 2 | 650 |
| 1/6 L » ... | 847 | 4 | 3388 | 989 | 1150 | 4 | 4600 |
| F.P. ... | 1904 | 1 | 1904 | 2050 | 2584 | 1 | 2584 |
| Total ... | | | 8568 | +534 | | | 12892 |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{4324}{18} \times .25 = -61 \text{ m.m.}$
If limited on account of midship superstructure. ☒
Actual height of superstructure = **2440**
Ltd " " " = **1906**
534
Mean actual shear aft = **11787**
Mean standard shear aft = **45**
Mean actual shear forward = **Excess.**
Mean standard shear forward = **Excess.**
Length of enclosed superstructure forward of amidships = **11787**
» » aft of » = **45**
C.S.S.

| | | |
|--|---|---|
| Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. 25 m.m. cant up of Depth to Freeboard Deck = 5.520 Summer freeboard = .076 Moulded draught (d) = 5.444 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48} \text{ inches} =$ 113 m.m. Addition for Winter North Atlantic Freeboard (if required) = 164 m.m. | Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ 3867 Tons per inch immersion at summer load water line $T =$ 8.53 Deduction = $\frac{\Delta}{40 T} \text{ inches} =$ 113 m.m. | TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient Depth Correction ... 16 Deduction for superstructures ... 844 Sheer correction ... 45 Round of Beam correction ... + Correction for Thickness of Deck amidships 25 Other corrections, scantlings, etc. ... 905 Summer Freeboard = 64.76 |
|--|---|---|

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

| | | | |
|--|----------|--------------------------------|------------|
| Tropical Fresh Water Line above Centre of Disc | 113 m.m. | Tropical Fresh Water Freeboard | 37 m.m. |
| Fresh Water Line | 113 m.m. | Fresh Water | minus 37 " |
| Tropical Line | 113 m.m. | Tropical | 76 " |
| Winter Line below | 113 m.m. | Winter | 139 " |
| Winter North Atlantic Line | 164 m.m. | Winter North Atlantic | 240 " |

S/S. Berkel.

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

| | Full displacement tons metric. | Tons per cm. |
|----------------------|-----------------------------------|--------------|
| At 75% moulded depth | 2776 | 8,070 |
| At 85% " " | 3217 | 8,270 |
| At 95% " " | 3669 | 8,450 |

Sheer forward:-

$$\frac{1}{2} L = 41.904 \quad \text{sheer at fore-castle bhd} = 1384 + 534 = 1918$$

$$\text{Fore } \frac{8.120}{33.784} \quad \text{equiv sheer at F.P.} = 1918 \times \frac{41.904^2}{33.784^2} = 2951 \text{ m.m.}$$

Excess Tween deck height 534

sheer at stem 2050

Fore-castle
1015
3599

Trade of ship General.

Names of sister ships s.s. "BIFROST", Finnboda Yard No. 331.

Builder's name and yard number Messrs. A/B Finnboda Varf, Stockholm, Yard No. 332.

Owners Messrs. Stockholms Rederi A/B Svea, Stockholm.

Fee £

[Signature]



© 2020

Lloyd's Register
Foundation