

RETAIN

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. 29467
(For London Office only).

Jhd 3189

| | | | | | |
|---|----------------------|---|------------------------|------------------------|---|
| Ship's Name "OAKWOOD" | Official Number — | Nationality and Port of Registry British (Municipality of Shipping) London | Gross Tonnage 6071. | Date of Build 1920. | Port of Survey LIVERPOOL |
| Moulded Dimensions: Length 401.95 Breadth 53.24 Depth 34.5 | | | | | Date of Survey 10th April 1940 subsequently |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth tons | | | | | Surveyor's Signature Franklin W. Robinson |
| Coefficient of fineness for use with Tables .782 estimated. | | | | | Particulars of Classification 100 A. 1. 5h. 5k with freeboard. Keel reinforcement contemplated. 20.40. |

| | | |
|---|--|---|
| Depth for Freeboard (D). Moulded depth ... 34.50 Stringer plate ... $\frac{1}{2}$04 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓ Depth for Freeboard (D) = 34.54 | Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = $(34.54 - 26.80) 3 = +13.22$ ✓ $\frac{7.74}{3} = 2.58$ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = ✓ If restricted by superstructures ✓ | Round of Beam correction. Moulded Breadth (B) 53.00 Standard Round of Beam = $\frac{B \times 12}{50} = 12.72$ Ship's Round of Beam 13.18 <i>equiv</i> Difference 1.59 ✓ Restricted to ✓ Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.59^2}{4} \times (.82) = +.53$ |
|---|--|---|

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|-------------------------|--|--------|-------------------|----------------------|
| Poop enclosed ... | 34.0 | 34.00 | 8-0 | ✓ | 34.00 |
| " overhang ... | 4" | .17 | | | .17 |
| R.Q.D. enclosed ... | | | | | |
| " overhang ... | | | | | |
| Bridge enclosed ... | | | 8-0 | | |
| " overhang aft ... | | | | | |
| " overhang forward ... | | | | | |
| Fore enclosed ... | 38-0 | 38.00 | 7-9 | | 38.00 |
| " overhang ... | 4" | .17 | | | .17 |
| Trunk aft ... | | | | | |
| " forward ... | | | | | |
| Tonnage opening aft ... | | | | | |
| " forward ... | | | | | |
| Total ... | 72.67 | 72.34 | | | 72.34 |

Standard Height of Superstructure **7.50** ✓
 " " R.Q.D. ✓
 Deduction for complete superstructure **42.00**
 Percentage covered $\frac{S}{L} = 18.08$ ✓
 $\frac{S_1}{L} = 18.00$ ✓
 $\frac{E}{L} = 18.00$ ✓
 Percentage from Table, Line A. **9.00** ✓
 (corrected for absence of forecastle (if required)) ✓
 Percentage from Table, Line B. ✓
 (corrected for absence of forecastle (if required)) ✓
 Interpolation for bridge less than .2L (if required) ✓
 Deduction = $42 \times 0.900 = -37.8$ ✓

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|---------------------|-------------------|---|---|---------|-----------------|--------------------|---|---|---------|
| A.P. ... | 50.20 | 1 | | 50.20 | 22.00 | 72.00 | 1 | | 72.00 |
| 1/4 L from A.P. ... | 22.34 | 4 | | 89.36 | 23.50 | 23.50 | 4 | | 94.00 |
| 1/2 L " ... | 5.52 | 2 | | 11.04 | 5.86 | 5.86 | 2 | | 11.72 |
| Amidships ... | ✓ | 4 | | ✓ | 0 | ✓ | 4 | | ✓ |
| 3/4 L from F.P. ... | 11.04 | 2 | | 22.08 | 11.57 | 11.57 | 2 | | 23.14 |
| 3/4 L " ... | 44.68 | 4 | | 178.72 | 46.21 | 46.21 | 4 | | 184.84 |
| F.P. ... | 100.39 | 1 | | 100.39 | 126.00 | 126.00 | 1 | | 126.00 |
| Total ... | | | | 451.79 | | | | | 511.70 |

Mean actual sheer aft = Excess
 Mean standard sheer aft
 Mean actual sheer forward = Excess
 Mean standard sheer forward
 Length of enclosed superstructure forward of amidships = } Nil
 " " aft of " = } Nil

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{59.91}{18} \left(\frac{.75 - .0904}{2} \right) = -2.20$
 If limited on account of midship superstructure. *No allowance* ✓
 If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

| Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 34.54 Summer freeboard = 8.12 Moulded draught (d) = 26.42 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.61 = 6 1/2 ✓ Addition for Winter North Atlantic Freeboard (if required) = ✓ | 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 = 7 1/4 ✓ | TABULAR FREEBOARD corrected for Fresh Deck (if required) Correction for coefficient 7821.68 1.462/1.36 ✓ <table border="1"> <thead> <tr> <th></th> <th>+</th> <th>-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction ...</td> <td>23.22</td> <td></td> </tr> <tr> <td>Deduction for superstructures ...</td> <td></td> <td>3.78</td> </tr> <tr> <td>Sheer correction ...</td> <td></td> <td></td> </tr> <tr> <td>Round of Beam correction ...</td> <td></td> <td>.53</td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td></td> <td></td> </tr> <tr> <td>Summer Freeboard =</td> <td>97.47</td> <td></td> </tr> </tbody> </table> | | + | - | Depth Correction ... | 23.22 | | Deduction for superstructures ... | | 3.78 | Sheer correction ... | | | Round of Beam correction ... | | .53 | Correction for Thickness of Deck amidships ... | | | Other corrections, scantlings, etc. ... | | | Summer Freeboard = | 97.47 | |
|--|---|--|--|---|---|----------------------|-------|--|-----------------------------------|--|------|----------------------|--|--|------------------------------|--|-----|--|--|--|---|--|--|---------------------------|--------------|--|
| | + | - | | | | | | | | | | | | | | | | | | | | | | | | |
| Depth Correction ... | 23.22 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deduction for superstructures ... | | 3.78 | | | | | | | | | | | | | | | | | | | | | | | | |
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| Round of Beam correction ... | | .53 | | | | | | | | | | | | | | | | | | | | | | | | |
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| Summer Freeboard = | 97.47 | | | | | | | | | | | | | | | | | | | | | | | | | |

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

| | | | |
|--|---------|------------------------------------|------------|
| Tropical Fresh Water Line above Centre of Disc ... | 13 3/4" | Tropical Fresh Water Freeboard ... | 8'-1 1/2" |
| Fresh Water Line " " ... | 7 1/4" | Fresh Water " " ... | 6'-11 3/4" |
| Tropical Line " " ... | 6 1/2" | Tropical " " ... | 7'-7" |
| Winter Line below " " ... | 6 1/2" | Winter " " ... | 8'-8" |
| Winter North Atlantic Line " " ... | ✓ | Winter North Atlantic " " ... | ✓ |