

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

| | | | | | |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------|--------------------------------------------|------------------------------|-----------------------------------------------------------------------------------------------|
| Ship's Name PALUDINA | Official Number 182926 | Nationality and Port of Registry BRITISH LONDON. | Gross Tonnage APPROX. 6490. 6414 | Date of Build 1948 | NEWCASTLE-ON-TYNE Port of Survey |
| Moulded Dimensions: Length 426.0 ✓ Breadth 54.25 ✓ Depth 31.875 ✓ TO CENTRE OF RUDDER STOCK | | | | | Date of Survey DURING CONSTRUCTION. |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth 13,866 ✓ tons | | | | | Surveyor's Signature John M. Taylor. |
| Coefficient of fineness for use with Tables .775. ✓ | | | | | Particulars of Classification 100A.1. (CLASS CONTEMPLATED) CARRYING PETROLEUM IN BULK. |

| DEPTH FOR FREEBOARD (D). | DEPTH CORRECTION. | ROUND OF BEAM CORRECTION. |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Moulded depth ... 31.875. | (a) Where D is greater than Table depth (D-Table depth) R = (31.927-28.40) 3 = +10.58" ✓ | Moulded Breadth (B) 54.25 |
| Stringer plate63" .052 | (b) Where D is less than Table depth (if allowed) (Table depth-D) R = 3.527 ✓ | Standard Round of Beam = $\frac{B \times 12}{50} = 13.02$ ✓ |
| Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓ | If restricted by superstructures | Ship's Round of Beam 13.5 = 13.50 ✓ |
| Depth for Freeboard (D) = 31.927 ✓ | | Difference .48 ✓ |
| | | Restricted to |
| | | Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.48}{4} \times .5650 = -.07"$ ✓ |

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) | |
|-----------------------------------|-------------------------|----------------------------------------------|--------------|-------------------|----------------------|--------------------------------------------------------------|
| Poop enclosed Equiv. 90.75 | 88'-1" | 90.75 | 8'-0" | ✓ | 90.75 | Standard Height of Superstructure 7.50' ✓ |
| " overhang AT CENTRE. | 92'-1" | | | | | " " R.Q.D. ✓ |
| R.Q.D. enclosed | | | | | | Deduction for complete superstructure 42.00" ✓ |
| " overhang Equiv. 46.96 | 44'-3 1/2" | 46.96 | 7'-6" | ✓ | 46.96 | Percentage covered $\frac{S}{L} = 43.95$ ✓ |
| Bridge enclosed AT CENTRE. | 48'-3 1/2" | | | | | " " $\frac{S_1}{L} = 43.50$ ✓ |
| " overhang aft | 7'-7 1/2" | 5.72 | | | 5.72 | " " $\frac{E}{L} =$ |
| " overhang forward | 2'-6 1/2" | | | | | Percentage from Table, Line A. Tanker. 34.50 ✓ |
| F'cle enclosed | 41'-10 1/2" | 41.88 | 7'-6" | ✓ | 41.88 | (corrected for absence of forecastle (if required)) |
| " overhang | 41.875 | | | | | Percentage from Table, Line B. |
| Trunk aft | | | | | | (corrected for absence of forecastle (if required)) |
| forward | | | | | | Interpolation for bridge less than 2L (if required) |
| Tonnage opening aft | | | | | | Deduction = 42.00 × .3450 = 14.49" ✓ |
| forward | | | | | | |
| Total | 187.21 | 185.31 | | | 185.31 | |

SHEER CORRECTION. PLEASE ALSO SEE OVER

| Station | Standard Ordinate | S | M | Product | Actual Ordinate (INCHES) | Effective Ordinate | S | M | Product |
|---------------------|-------------------|---|---|---------------|--------------------------|--------------------|---|---|---------------|
| CR. OF RUDDER STOCK | 52.60 | ✓ | 1 | 52.60 | 43.75 | 43.75 | ✓ | 1 | 43.75 |
| 1/8 L from A.P. | 23.41 | ✓ | 4 | 93.64 | 4.375 | 4.375 | ✓ | 4 | 17.50 |
| 2/8 L " | 5.78 | ✓ | 2 | 11.56 | - | - | ✓ | 2 | - |
| Amidships | - | ✓ | 4 | - | - | - | ✓ | 4 | - |
| 2/8 L from F.P. | 11.57 | ✓ | 2 | 23.14 | - | - | ✓ | 2 | - |
| 1/8 L " | 46.82 | ✓ | 4 | 187.28 | 9.56 | 9.56 | ✓ | 4 | 38.24 |
| F.P. | 105.20 | ✓ | 1 | 105.20 | 91.25 | 91.25 | ✓ | 1 | 91.25 |
| Total | | | | 473.42 | | | | | 190.74 |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{282.68}{18} \left(.75 - \frac{2197}{2197} \right) = + 8.33"$ ✓

If limited on account of midship superstructure. **.5303** ✓

Mean actual sheer aft = **Deficient** ✓
Mean standard sheer aft =

Mean actual sheer forward = **Deficient** ✓
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = **Tanker.** ✓
" " aft of " =

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **31.927** ✓
Summer freeboard = **6.500** ✓
Moulded draught (d) = **25.427** ✓

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **6.36 = 6 1/4"** ✓
Addition for Winter North Atlantic Freeboard (if required) = **6.36 + 4.26 = 10.62 = 10 1/2"** ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line $\Delta = 12961$ ✓
Tons per inch immersion at summer load water line $T = 47.31$ ✓

Deduction = $\frac{\Delta}{40 T}$ inches = **6.85 = 6 3/4"** ✓
DRAFT (MEASURED FROM BOTTOM OF KEEL).
25'-0" 12675 47.12
26'-0" 13243 47.50
27'-0" 13817 47.87

TABULAR FREEBOARD corrected for Flush Deck (if required)
Correction for coefficient $\frac{.775 + .68}{1.36} = \frac{1.455}{1.36}$ ✓

Depth Correction ... **10.58** ✓
Deduction for superstructures ... **14.49** ✓
Sheer correction ... **8.33** ✓
Round of Beam correction ... **.07** ✓
Correction for Thickness of Deck amidships ...
Other corrections, scantlings, etc. ...

Summer Freeboard = **78.06** ✓

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

Tropical Fresh Water Line above Centre of Disc ... **13** ✓
Fresh Water Line " " ... **6 3/4"** ✓
Tropical Line " " ... **6 3/4"** ✓
Winter Line below " " ... **6 3/4"** ✓
Winter North Atlantic Line " " ... **10 1/2"** ✓

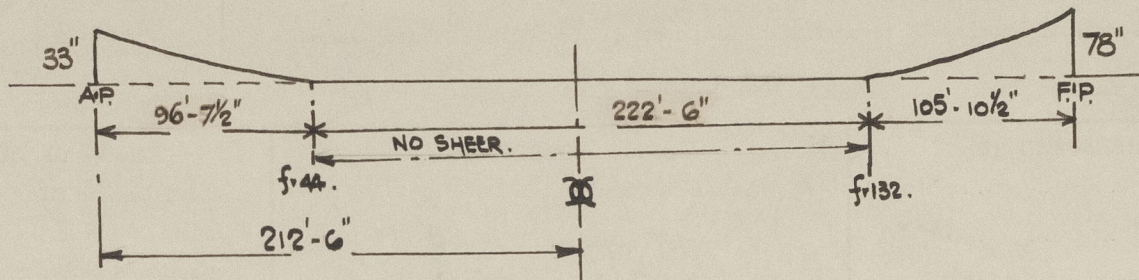
Tropical Fresh Water Freeboard ... **51.5** ✓
Fresh Water " " ... **51.5** ✓
Tropical " " ... **51.5** ✓
Winter " " ... **51.5** ✓
Winter North Atlantic " " ... **51.5** ✓

Paludina.

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.

SHEER. THIS VESSEL HAS NO SHEER OVER A PORTION OF HER MIDSHIP LENGTH.

RANGE OF SHEER IS AS INDICATED IN SKETCH.



Poop Equivalent

Length at ship's side = 88.08 ✓
 Camber = $4.0 \times \frac{2}{3}$ = 2.67 ✓
 Equiv. length = 90.75 ✓

Bridge Equivalent.

Length at ship's side = 44.29 ✓
 Camber = $4.00 \times \frac{2}{3}$ = 2.67 ✓
 Equiv. length = 46.96 ✓

Trade of ship INTERNATIONAL.

Names of sister ships -

Builder's name and yard number MESSRS SWAN HUNTER & WIGHAM RICHARDSON LTD N° 1771.

Owners ANGLO-SAXON PETROLEUM CO. LTD.

Fee £ TO BE CHARGED WITH F&S.

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