

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~  
having Loop, Trunk and Forecastle

(Type of Superstructures.)

|                                    |  |                                  |                              |                               |
|------------------------------------|--|----------------------------------|------------------------------|-------------------------------|
| Ship's Name<br><b>M.V. "HELIX"</b> | Nationality and Port of Registry<br><b>BRITISH LONDON.</b> | Official Number<br><b>162562</b> | Gross Tonnage<br><b>3007</b> | Date of Build<br><b>1931.</b> |
|------------------------------------|--|----------------------------------|------------------------------|-------------------------------|

Moulded Dimensions: Length **305 ft.** Breadth **50 ft.** Depth **19.25 ft.**  
Moulded displacement at moulded draught = 85 per cent. of moulded depth **5540** tons  
Coefficient of fineness for use with Tables

Port of Survey **PIRAEUS.**  
Date of Survey **22<sup>nd</sup> & 23<sup>rd</sup> MARCH 1932.**  
Name of Surveyors **Robert G. Knox.**  
**Arthur W. Oxford.**  
Particulars of Classification **100 A1**  
**CARRYING PETROLEUM IN BULK.**

|   |   |  |
|---|---|--|
| <b>Depth for Freeboard (D)</b><br>Moulded depth ... ..<br>Stringer plate ... ..<br>Sheathing on exposed deck<br>$T \left( \frac{L-S}{L} \right) =$<br>Depth for Freeboard (D) = | <b>Depth correction</b><br>(a) Where D is greater than Table depth<br>$(D - \text{Table depth}) R =$<br>(b) Where D is less than Table depth (if allowed)<br>$(\text{Table depth} - D) R =$<br>If restricted by superstructures | <b>Round of Beam correction</b><br>Moulded Breadth (B)<br>Standard Round of Beam = $\frac{B \times 12}{50} =$<br>Ship's Round of Beam =<br>Difference<br>Restricted to<br>Correction = $\frac{\text{Diff}^\circ}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ |
|---|---|--|

### DEDUCTION FOR SUPERSTRUCTURES.

|                            | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height | Height Correction | Effective Length (E) |   |
|----------------------------|-------------------------|--|--------|-------------------|----------------------|---|
| Poop enclosed ... ..       | 86.17'                  |  | 7'-6"  |                   |                      | Standard Height of Superstructure   |
| „ overhang ... ..          |                         |  |        |                   |                      | „ „ R.Q.D.  |
| R.Q.D. enclosed ... ..     |                         |  |        |                   |                      | Deduction for complete superstructure   |
| „ overhang ... ..          |                         |  |        |                   |                      | Percentage covered $\frac{S}{L} =$  |
| Bridge enclosed ... ..     |                         |  |        |                   |                      | „ „ $\frac{S_1}{L} =$   |
| „ overhang aft ... ..      |                         |  |        |                   |                      | „ „ $\frac{E}{L} =$   |
| „ overhang forward ... ..  |                         |  |        |                   |                      | Percentage from Table, Line A.<br>(corrected for absence of forecastle (if required)) |
| Forecastle enclosed ... .. | 49.83'                  |  | 7'-6"  |                   |                      | Percentage from Table, Line B.<br>(corrected for absence of forecastle (if required)) |
| „ overhang ... ..          |                         |  |        |                   |                      | Interpolation for bridge less than .2L (if required)                                  |
| Trunk aft 16.9' ... ..     |                         |  | 5'-6"  |                   |                      | Deduction =   |
| „ forward ... ..           |                         |  |        |                   |                      |   |
| Tonnage opening aft ... .. |                         |  |        |                   |                      |   |
| „ „ forward ... ..         |                         |  |        |                   |                      |   |
| Total ... ..               |                         |  |        |                   |                      |   |

### SHEER CORRECTION.

| Station                         | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|---------------------------------|-------------------|---|---|---------|-----------------|--------------------|---|---|---------|
| A.P. ... ..                     |                   | 1 |   |         |                 |                    | 1 |   |         |
| $\frac{1}{6}L$ from A.P. ... .. |                   | 4 |   |         |                 |                    | 4 |   |         |
| $\frac{2}{6}L$ „ ... ..         |                   | 2 |   |         |                 |                    | 2 |   |         |
| Amidships ... ..                |                   | 4 |   |         |                 |                    | 4 |   |         |
| $\frac{3}{6}L$ from F.P. ... .. |                   | 2 |   |         |                 |                    | 2 |   |         |
| $\frac{4}{6}L$ „ ... ..         |                   | 4 |   |         |                 |                    | 4 |   |         |
| F.P. ... ..                     |                   | 1 |   |         |                 |                    | 1 |   |         |
| Total ... ..                    |                   |   |   |         |                 |                    |   |   |         |

Mean actual sheer aft =  
Mean standard sheer aft =

Mean actual sheer forward =  
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =  
L

„ „ aft of „ =

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

If limited on account of midship superstructure.

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

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

Depth to Freeboard Deck = Ft.  
Summer freeboard =  
Moulded draught (d) =

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches =

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 =

### TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

|   | + | - |
|---|---|---|
| Depth Correction ... ..                           |   |   |
| Deduction for superstructures ... ..              |   |   |
| Sheer correction ... ..                           |   |   |
| Round of Beam correction ... ..                   |   |   |
| Correction for Thickness of Deck amidships ... .. |   |   |
| Other corrections, scantlings, etc. ... ..        |   |   |

Summer Freeboard =

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

|   |  |
|---|--|
| Tropical Fresh Water Line above Centre of Disc ... .. |  |
| Fresh Water Line „ „ ... ..                           |  |
| Tropical Line „ „ ... ..                              |  |
| Winter Line below „ „ ... ..                          |  |
| Winter North Atlantic Line „ „ ... ..                 |  |

|                                       |  |
|---------------------------------------|--|
| Tropical Fresh Water Freeboard ... .. |  |
| Fresh Water „ „ ... ..                |  |
| Tropical „ „ ... ..                   |  |
| Winter „ „ ... ..                     |  |
| Winter North Atlantic „ „ ... ..      |  |



## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS                             |  |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
|---|--|-----------------------|----------------------------------|------------------------------------|---|-----------------------------|----------------------------|--|--|-----------------------------|-------------------------|--|
| Description of Hatchway   | 10. O.T. HATCHES<br>To Side Tanks<br>Upper Deck. | 3. O.T.<br>TRUNK TOP. | 2 O.T.<br>TRUNK TOP.             | 2 O.T.<br>TRUNK TOP<br>To BUNKERS. | 3. O.T. MANHOLE<br>OPENINGS TO<br>SETTLING TANKS. | 1 G.T.<br>To POOP<br>SPACE. | ENTRANCE<br>to Rump Room.  | 2 MANHOLE<br>OPENINGS TO<br>COFFERDAM. | FORECASTLE<br>To FORWARD<br>PUMP ROOM. | FORECASTLE<br>To FORE HOLD. | FORECASTLE<br>To STORE. |  |
| Dimensions of Hatchway  | 5'-0" x 2'-6"                                    | 7'-6" x 8'-0"         | 6'-0" x 8'-0"                    | 2'-9" x 2'-9"                      | 18" x 12"   | 2'-6" x 3'-0"               | 7'-0" x 14'-0"             | 20" x 14"                              | 3'-4" x 3'-14"                         | 9'-0" x 10'-6"              | 2'-6" x 2'-6"           |  |
| COAMINGS  | Height above Deck                                | 4'-6"                 | 2'-6"                            | 2'-6"                              | 9"  | 6"                          | 2'-0"                      | 7'-6"                                  | 6"                                     | 2'-6"                       | 2'-6"                   |  |
|   | Thickness { Sides<br>Ends                        |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
|   | Stiffeners                                       |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
|   | Brackets, Stays                                  | BA 5" x 3"            |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
| HATCH<br>BEAMS  | Number   |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
|   | Spacing  |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
|   | Scantling and Sketch                             |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
|   | Bearing Surface                                  |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
| FORE<br>AND<br>AFTERS   | Number   |                       | OT. ACCESS                       | OT. ACCESS                         |   |                             | 2 GT.<br>HATCHES<br>ON TOP |  |  | OT. ACCESS                  |                         |  |
|   | Spacing  |                       | HATCH IN TOP                     | HATCH IN                           |   |                             | TOP PLATE.                 |  |  | HATCH IN                    |                         |  |
|   | Unsupported Lengths                              |                       | PLATE.                           | TOP PLATE.                         |   |                             | 2'6" x 2'6"                |  |  | TOP PLATE.                  |                         |  |
|   | Scantling* and Sketch                            | NONE.                 | 2'6" x 2'6"                      | 2'6" x 2'6"                        | NONE.   | NONE.                       | CORNING.                   | NONE.                                  | NONE.                                  | 2'6" x 2'6"                 | NONE.                   |  |
|   | Bearing Surface                                  |                       | CORNING<br>7" HIGH<br>8 TOGGLES. | CORNING.<br>7" HIGH.<br>8 TOGGLES  |   |                             | 7" HIGH.<br>8 TOGGLES.     |  |  | 7" HIGH.<br>8 TOGGLES.      |                         |  |
| HATCH<br>COVERS   | Material   | STEEL.                | STEEL.                           | STEEL.                             | STEEL.  | STEEL.                      | STEEL.                     | STEEL.                                 | STEEL.                                 | STEEL.                      | STEEL.                  |  |
|   | Thickness  |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
|   | How fitted                                       | Hinged OT.            | OT.                              | OT.                                | OT.   | Hinged GT.                  | Hinged GT.                 | OT.                                    | Hinged OT.                             | OT.                         | Hinged GT.              |  |
|   | Bearing Surface                                  | 12 TOGGLES            | 24 TOGGLES                       | 22 TOGGLES                         | 8 TOGGLES   | 18 BOLTS.                   | 6 TOGGLES                  | 8 TOGGLES                              | 23 BOLTS                               | 12 TOGGLES                  | 31 TOGGLES              |  |
| Spacing of Cleats   |  |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
| Number of Tarpaulins  |  |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
| *Are wood fore and afters steel shod at all bearing surfaces ?              |  |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
| Are battens and wedges efficient and in good condition ?                    |  |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
| Are tarpaulins in good condition and in accordance with rule requirements ? |  |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |
| Are lashings provided in accordance with rule requirements ?                |  |                       |                                  |                                    |   |                             |                            |  |  |                             |                         |  |

## Particulars of fiddley, funnel and ventilator coamings :—

Engine Room ventilators and flunnel in efficient condition.  
Engine Room skylights of steel strongly constructed.  
Cover hinged

Particulars of Flush Bunker Scuttles:—

2 Nov. ✓

Particulars of Companionways :—

2 Steel companionways, 4'8" x 3'4" x 6'6" leading to enclosed fore-castles, strong teak wood doors 2" thick with 9" sill. Capable of being manipulated from both sides.

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

Forecastle deck:  
 3-4" diam. Gooenects - 18" from deck to Crew space. ✓  
 14-8" " - 18" coaming  $\frac{1}{2}$ " to Crew space. ✓  
 1-9" " - 18" "  $\frac{1}{2}$ " to Pump room. ✓  
 1-12" " - 24" "  $\frac{1}{2}$ " to Fore hold. ✓  
 1-12" " - 24" "  $\frac{1}{2}$ " to Crew space. ✓  
 2-3" " Gooenects - 16" from deck to Fore peak. ✓

Trunk deck.  
 2-3" diam. Gooenects - 16" from deck to Cofferdam. ✓  
 Closing apparatus

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

None.

## Particulars of Gangway Cargo and Coaling Ports :—

None.

## Particulars of Scuppers and Sanitary Discharge Pipes

3. 2. "scuppers, port and starboard, from Forecastle Space fitted with gunmetal storm valves on ship's side. Discharges from each main, etc. in poop and forecabin all fitted with gunmetal storm valves on ship's side and efficient traps at the inboard end.  
All remaining scuppers fitted with efficient gunmetal storm valves on ship's side.

## Particulars of Side Scuttles :

All side scuttles in poop and forecables fitted with efficient hinged deadlights permanently attached.

Particulars of Guard Rails :—

|                  |            |             |                         |
|------------------|------------|-------------|-------------------------|
| Foreboard deck:  | 3'-6" high | - 3 rails - | Stanchions spaced 4'-0" |
| Hulk top:        | 3'-6"      | - 3 " -     | " " 5'-0"               |
| Deck:            | 3'-6"      | - 3 " -     | " " 3'-6"               |
| Forecastle deck: | 3'-6"      | - 3 " -     | " " 4'-0"               |

Particulars of Gangways, Lifelines, etc. :—

Gun's top forms gangway between poop and fore-castle. /

| 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 ... ..                    | <i>Open rails between Loops and Forecasts.</i> |                   |                       |                  |                |                     |
| Forward Well ... ..                  |  |                   |                       |                  |                |                     |

State position of each freeing port ... .. { After Well :—  
(F. and A. position and height above deck edge) { Forward Well :—

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.

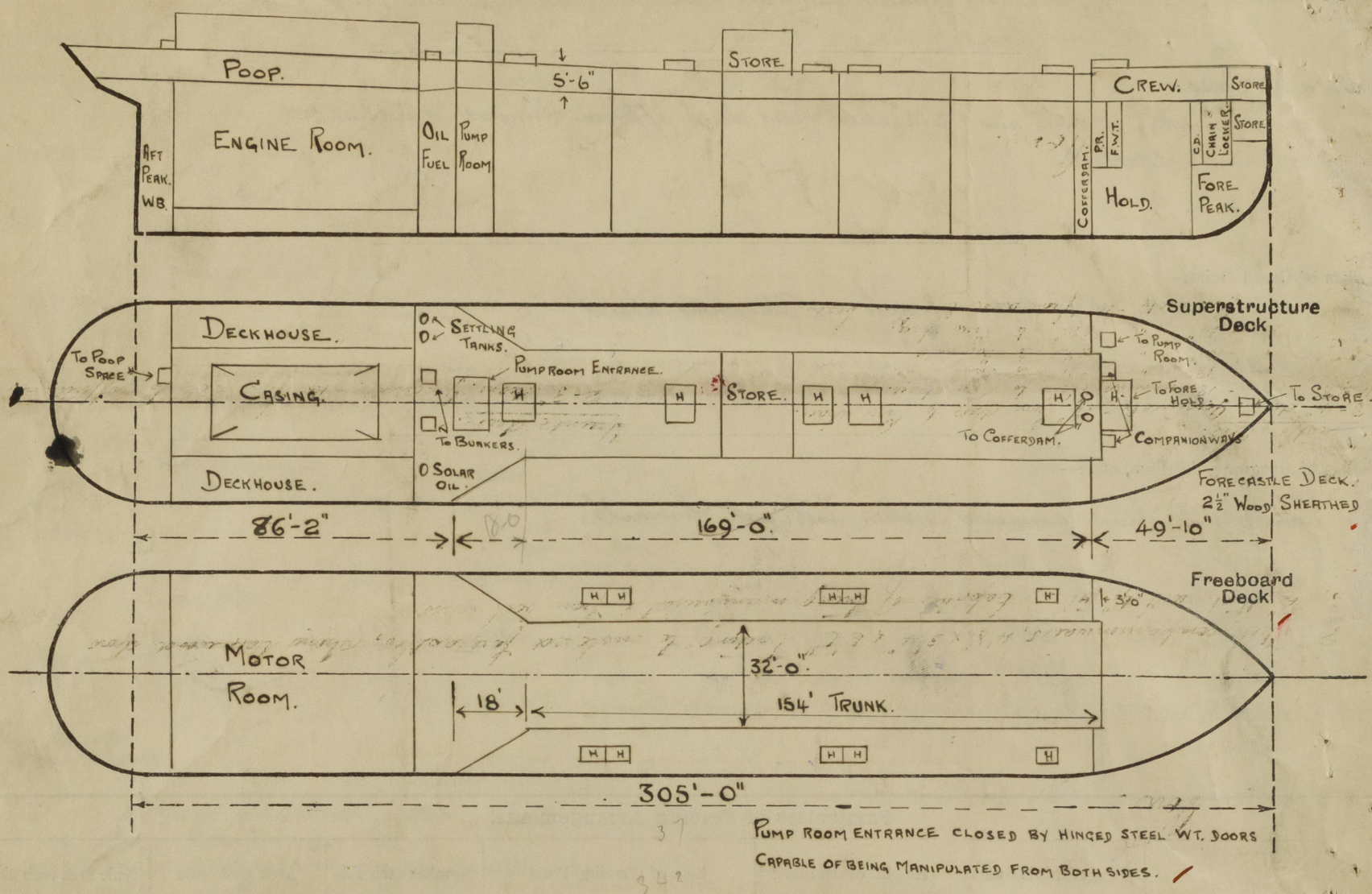
| Particulars of Superstructures, Trunks, Casings, Deckhouses.                               |                           |         |                 |         |                               |                  |                 |                   |
|--|---------------------------|---------|-----------------|---------|-------------------------------|------------------|-----------------|-------------------|
|  | Coaming                   | Plating | Stiffeners      | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
| Poop Bulkhead ... ..   | X                         | X       | 5 1/2" x 3" BH. | 34"     | Brackets.                     | ✓                | ✓               | ✓                 |
| Raised Quarter Deck Bulkhead ...   |                           |         |                 |         |                               |                  |                 |                   |
| Bridge, After Bulkhead ... ..  |                           |         |                 |         |                               |                  |                 |                   |
| Bridge, Forward Bulkhead ... ..  |                           |         |                 |         |                               |                  |                 |                   |
| Forecastle Bulkhead ... ..   | X                         | 7       | 3" x 3"         | 32"     | ✓                             | 2-6'6" x 3'4"    | 9"              | ✓                 |
| Trunk, Aft ... ..  |                           |         |                 |         |                               |                  |                 |                   |
| Trunk, Forward ... ..  |                           |         |                 |         |                               |                  |                 |                   |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks ...                        | Enclosed by deck house. ✓ |         |                 |         |                               |                  |                 |                   |
| Exposed Machinery Casings on Superstructure Decks ... ..                                   |                           |         |                 |         |                               |                  |                 |                   |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... .. |                           |         |                 |         |                               |                  |                 |                   |
| Deckhouses on Flush Deck Ships ...   |                           |         |                 |         |                               |                  |                 |                   |

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

|  |   |   |
|--|---|---|
| Poop Bulkhead ... ..   | ✓ | <i>No opening.</i>  |
| Raised Quarter Deck Bulkhead ...   | ✓ |   |
| Bridge, After Bulkhead ... ..  | ✓ |   |
| Bridge, Forward Bulkhead ... ..  | ✓ |   |
| Forecastle Bulkhead ... ..   | ✓ |   |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks ...                                | ✓ | <i>See strong oak wood doors capable of manipulation from both sides.</i> |
| Exposed Machinery Casings on Super-structure Decks ... ..  | ✓ |   |
| Exposed Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... .. | ✓ |   |
| Deckhouses on Flush Deck Ships ...   | ✓ |   |



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:—



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

Builder's name and yard number *Hawthorn Leslie & Co. Ltd. Newcastle-on-Tyne - Yard No 576.*

Names of sister ships ☒

Owners *Anglo Saxon Petroleum Co. Ltd. London.*

PART Fee £ *25* : *0* : *0* Received by me *To be collected at London.*

TRAVELLING EXPENSES: £ *1* : *0* : *0* *9/4/32 from London*

*P. H. T. Awe*



© 2020  
Lloyd's Register  
Foundation