*Amended*

Rpt. C.11 (Comp.)

# LLOYD'S REGISTER OF SHIPPING
### UNITED WITH THE BRITISH CORPORATION REGISTER
# SURVEYS FOR FREEBOARD
### (COMPUTATION FOR ~~STEAMER~~, ~~SAILING SHIP~~, TANKER)

| Ship's Name | Official Number | Nationality and Port of Registry | Gross Tonnage | Date of Build |
|---|---|---|---|---|
| 'BRITISH ENDURANCE' | | BRITISH / LONDON | 8414 / ~~8456~~ | 1936-10 |

Port of Survey ..........

Date ~~of Survey~~ 2-12-55

Surveyor's Signature ..........

Moulded Dimensions: Length 464.21 Breadth 61.75 Depth 34.04

Freeboard Length 464.21

Moulded displacement at moulded draught = 85 per cent. of moulded depth 18198 tons
(excluding bossing)

Coefficient of fineness for use with Tables .77

Particulars of Classification + 100 A1

CP-1-B.

### DEPTH FOR FREEBOARD (D).

Moulded depth ... ... ... 34.04

Stringer plate ...82"... ... .07

Wood Sheathing on exposed deck

$T\left(\dfrac{L-S}{L}\right) =$

Depth for Freeboard (D) = 34.11

### DEPTH CORRECTION.

(a) Where D is greater than Table depth
(D − Table depth) R =

$\dfrac{(34.11 - 30.94)\,3}{3.17} = +9.51$

(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) 61.75

Standard Round of Beam $= \dfrac{B \times 12}{50} =$ 14.82

Ship's Round of Beam = 15

Difference .18

Restricted to

Correction $= \dfrac{\text{Diff}^e}{4} \times \left(1 - \dfrac{S_s}{L}\right) = \dfrac{.18}{4} \times .5732 = .03$

### DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S₁) | Height | Height Correction | Effective Length (E) |
|---|---|---|---|---|---|
| Poop enclosed ... ... | 103.00 | 103.00 | 8.0' | — | 103.00 |
| „ overhang ... | 3.50 | 1.75 | | | 1.75 |
| R.Q.D. enclosed ... | | | | | |
| „ overhang ... | | | | | |
| Bridge enclosed ... | 36.00 | 36.00 | 8.0' | — | 36.00 |
| „ overhang aft ... | 3.00 | 2.25 | | | 2.25 |
| „ overhang forward ... | 3.50 | 1.75 | | | 1.75 |
| F'cle enclosed EQUIVT ... | 53.35 | 53.35 | 8.0 | — | 53.35 |
| „ overhang ... | | | | | |
| Trunk aft ... | | | | | |
| „ forward ... | | | | | |
| Tonnage opening aft ... | | | | | |
| „ „ forward... | | | | | |
| Total ... | 202.35 | 198.10 | | | 198.10 |

Standard Height of Superstructure 7.50

„ „ R.Q.D. ..........

Deduction for complete superstructure 42.00

Percentage covered $\dfrac{S}{L} =$ 43.59

$\left.\begin{array}{c} \dfrac{S_1}{L} \\ \dfrac{E}{L} \end{array}\right\}$ 42.68

Percentage from Table, ~~Line A~~ TANKER 33.68
(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 = 42.00 × .3368 = 14.15

### SHEER CORRECTION.

| Station | Standard Ordinate | SM | Product | Actual Ordinate | Effective Ordinate | SM | Product |
|---|---|---|---|---|---|---|---|
| A.P. ... ... | 56.42 | 1 | 56.42 | 38.00 | 38.00 | 1 | 38.00 |
| ⅙L from A.P. ... | 25.105 | 4 | 100.42 | 21.87 | 21.87 | 4 | 87.48 |
| ⅔L „ ... | 6.205 | 2 | 12.41 | 6.00 | 6.00 | 2 | 12.00 |
| Amidships ... | 0 | 4 | 0 | 0 | 0 | 4 | 0 |
| ⅔L from F.P. ... | 12.41 | 2 | 24.82 | 12.25 | 12.25 | 2 | 24.50 |
| ⅙L „ ... | 50.21 | 4 | 200.84 | 50.12 | 50.12 | 4 | 200.48 |
| F.P. ... ... | 112.84 | 1 | 112.84 | 113.00 | 113.00 | 1 | 113.00 |
| Total ... | | | 507.75 | | | | 475.46 |

$\left.\begin{array}{l}\text{Mean actual sheer aft}\\ \text{Mean standard sheer aft}\end{array}\right\}$ DEFICIENT.

$\left.\begin{array}{l}\text{Mean actual sheer forward}\\ \text{Mean standard sheer forward}\end{array}\right\}$

$\dfrac{\text{Length of enclosed superstructure}}{L}$ forward of amidships =

„ „ aft of „ =

Correction $= \dfrac{\text{Difference between sums of products}}{18}\left(.75 - \dfrac{S}{2L}\right) = \dfrac{32.29}{18}(.75 - .2179) = 1.0$

If limited on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100ft.

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

| | Ft. |
|---|---|
| Depth to Freeboard Deck = | 34.11 |
| Summer freeboard = | 6.69 |
| Moulded draught (d) = | 27.42 |
| Keel allowance = | |
| Extreme draught = | |
| Deduction for Tropical free-board and addition for = | |

Winter freeboard $= \dfrac{d}{4}$ inches $= 6.85 = 6^3/_4$

Addition for Winter North Atlantic Freeboard (if required) = 6.85 + 4.64 = 11.49 = 11½

### 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 $= \dfrac{\Delta}{40\,T}$ inches

7½

### TABULAR FREEBOARD ~~corrected for Flush Decks~~ (if required) 78.75

Correction for coefficient $\dfrac{.77 + .68}{1.36}$ 84.00

| | + | − |
|---|---|---|
| Depth Correction ... ... ... | 9.51 | |
| Deduction for superstructures ... ... | | 14.15 |
| Sheer correction ... ... ... | 1.00 | — |
| Round of Beam correction ... ... | | .03 |
| Correction for Thickness of Deck amidships ... | | |
| Other corrections, scantlings, etc. ... ... | | |
| | 10.51 | 14.18 |

AB 2.12.55

− 3.67

Summer Freeboard = 80.33"

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

| | | |
|---|---|---|
| Tropical Fresh Water Line above Centre of Disc ... | 1.4¼ | |
| Fresh Water Line „ „ ... | 7½ | |
| Tropical Line „ „ ... | 6¾ | |
| Winter Line below „ „ ... | 6¾ | |
| Winter North Atlantic Line „ „ ... | 11½ | |

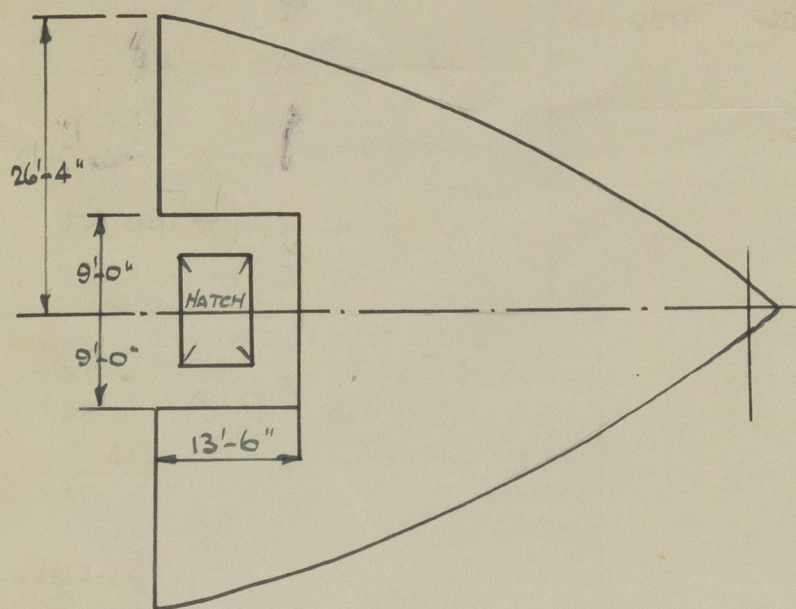| | | |
|---|---|---|
| | | 6'-8¼ |
| Tropical Fresh Water Freeboard | | 5'-6¾ |
| Fresh Water „ | | 6'-0¾ |
| Tropical „ | | 6'-1½ |
| Winter „ | | 7'-3 |
| Winter North Atlantic „ | | 7'-7¾ |

5m,0,55. T.

003679-003686-0142

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.

FORECASTLE :-

$$\frac{13.5 \times 9}{26.33} = 4.615$$

TOTAL LENGTH ENCLOSED = 57.96 — 4.61
                                                = 53.35

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £            :            :

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950," paragraph 11.)