Rpt. C.11 (Comp.).

24 APR 19..

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD. MDB. No — 18261.
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index No. 39032
(For London Office only.)

Ship's Name	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	
M.V. "BRITISH ENSIGN." FURNESS. S.B.C°. YARD N° 393.	181615	BRITISH LONDON.	8738	1947.	Port of Survey MIDDLESBROUGH

Date of Survey WHILE BUILDING.

Surveyor's Signature — E. Flynn —

CR. LINE OF RUDDER STOCK ABAFT AFTER PERP. — 10¾"
Moulded Dimensions : Length 465'-0" 463·90 Breadth 61'-9" Depth 33'-11"
MOULDED DISPLACEMENT AT 27'-4⅞" MOULDED DRAFT — 17,031 — TPI — 59·58.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 28·829 — 18069. tons
DEPTH OF KEEL BELOW BASE LINE. — 1·64"
Coefficient of fineness for use with Tables — ·764 ·762

Particulars of Classification ✠ 100A1. CARRYING PETROLEUM IN BULK.
LONGITUDINAL FRAMING AT BOTTOM AND AT DECK (CLASS CONTEMPLATED)

DEPTH FOR FREEBOARD (D).

Moulded depth ... 33·917 ... 33·92
Stringer plate ... ·82 ... ·07
Sheathing on exposed deck NIL.

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

Depth for Freeboard (D) = 33·99

DEPTH CORRECTION.

(a) Where D is greater than Table depth (D−Table depth) R =
$(33·99 − 31·06) \times 3 = 8·79 \; (+)$

(b) Where D is less than Table depth (if allowed) (Table depth−D) R =

If restricted by superstructures no.

ROUND OF BEAM CORRECTION.
NOTE :— NO CAMBER ABAFT N° 8. FRAME IE 16'-0" FROM A.P.
Moulded Breadth (B) 61'-9"
Standard Round of Beam $\dfrac{B \times 12}{50} = 14·82$
Ship's Round of Beam 14·97
Difference ·15
Restricted to
Correction $= \dfrac{\text{Diff}°}{4} \times \left(1 - \dfrac{S_1}{L}\right) = \dfrac{·15}{4} \times ·5871 = ·022$
SEE ALSO SKETCH OF CAMBER ON REPORT C.11. (−)

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S₁)	Height	Height Correction	Effective Length (E)
Poop enclosed Equiv ...	97·99	97·99	8'-0"	✓	97·99
„ overhang ...	1·66	·84			·84
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed Equiv ...	42·83	42·83	8'-0"	✓	42·83
„ overhang aft ...	3·50	2·62			2·62
„ overhang forward ...	1·17	·58			·58
F'cle enclosed Equiv ...	48·91	48·91	8'-0"	✓	48·91
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	196·06	193·75			193·75

Standard Height of Superstructure 7·5
„ „ R.Q.D.
Deduction for complete superstructure 42·00
Percentage covered $\dfrac{S}{L} = 42·08$
„ „ $\dfrac{S_1}{L}$ } 41·58
„ „ $\dfrac{E}{L}$ }
Percentage from Table, Line A. 32·58
(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) Tanker
Deduction = $42 \times ·3258 = 13·68$ (−)

SHEER CORRECTION. NOTE :— NO SHEER ABAFT N° 8 FRAME IE 16'-0" FROM A.P.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	56·59	1	56·59	55·625"	55·62	1	55·62
⅙L from A.P. ...	25·18	4	100·72	25·75"	25·75	4	103·00
⅔L „ ...	6·225	2	12·45	6·25"	6·25	2	12·50
Amidships ...	✓	4	✓	—	✓	4	
⅔L from F.P. ...	12·45	2	24·90	12·25"	12·25	2	24·50
⅙L „ ...	50·36	4	201·44	50·50"	50·50	4	202·00
F.P. ...	113·18	1	113·18	113·50"	113·50	1	113·50
Total ...			509·28				511·12

$\dfrac{\text{Mean actual sheer aft}}{\text{Mean standard sheer aft}} =$ Excess.

$\dfrac{\text{Mean actual sheer forward}}{\text{Mean standard sheer forward}} =$ Excess

$\dfrac{\text{Length of enclosed superstructure}}{L}$ forward of amidships = } Tanker.
„ „ aft of „ =

Correction = $\dfrac{\text{Difference between sums of products}}{18}\left(·75 - \dfrac{S}{2L}\right) = \dfrac{1·84}{18}(·75 - ·2104) = ·06 \; (−)$ ·5896
If limited on account of midship superstructure. If limited to maximum allowance of 1½ ins. per 100 ft.

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

Depth to Freeboard Deck = 33·99 Ft.
Summer freeboard = 6·58
Moulded draught (d) = 27·41
Deduction for Tropical freeboard and addition for
Winter freeboard = $\dfrac{d}{4}$ inches = 6·85 = 6¾"
Addition for Winter North Atlantic Freeboard (if required) = 6·85 + 4·66 = 11·51 = 11½"

Deduction for Fresh Water.

Displacement in salt water at summer load water line
$\Delta = 17153$
Tons per inch immersion at summer load water line
$T = 59·58$
Deduction $= \dfrac{\Delta}{40 \, T}$ inches
= 7·20
= 7¼"

TABULAR FREEBOARD corrected for Flush Deck (if required) 79·17

Correction for coefficient $\dfrac{·762 + ·68}{1·36} = \dfrac{1·442}{1·36}$ = 83·95

	+	−
Depth Correction ...	8·79	
Deduction for superstructures ...		13·68
Sheer correction ...		·06
Round of Beam correction ...		·02
Correction for Thickness of Deck amidships ...	✓	
Other corrections, scantlings, etc. ...	✓	
	8·79	13·76	−4·97

Summer Freeboard = 78·98

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

30. 4 1947

Tropical Fresh Water Line above Centre of Disc	...	...	14	Tropical Fresh Water Freeboard	...	6'-7"
Fresh Water Line „ „	...	...	7¼	Fresh Water „	...	6'-5½" 5'-11¾"
Tropical Line „ „	...	...	6¾	Tropical „	...	6'-0¼"
Winter Line below „	...	...	6¾	Winter „	...	7'-1¾"
Winter North Atlantic Line „ „	...	...	11½	Winter North Atlantic „	...	7'-6½"

002559-002567-0018
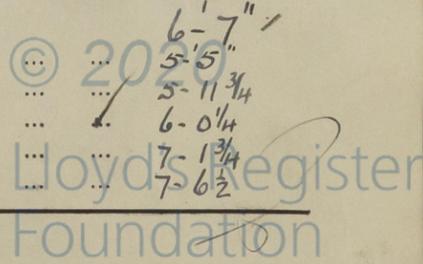
British Ensign.

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.

$$\text{Equivalent Camber} \quad 15 \times \frac{13\frac{1}{2}}{12} \times 2 = \quad 33.75 \quad\checkmark \qquad \text{Mean height} = \frac{51.338}{61.75} \times 12 = 9.98\ \text{ins}.$$

$$15.875 \times \frac{13\frac{1}{2}}{12} = \quad \frac{17.875}{51.625}\checkmark \qquad \text{Camber @ } \underline{\cancel{L}} = 9.98 \times \frac{3}{2} = \underline{14.97}\ \text{ins}$$

$$\text{less} \quad \frac{50 \times .62 \times \frac{2}{3} \times 2}{144}\ \phi \qquad \frac{.287}{51.338}$$

$$\underline{\text{Poop.}} \quad 94.25 + .90 + (\tfrac{2}{3} \times 4.25) \qquad\qquad \underline{\text{Forecastle}} \quad 54.5 - \frac{(15.75 \times 10)}{28.22}$$

$$= \underline{97.99}\ \text{ft} \qquad\qquad\qquad\qquad\qquad\qquad = 54.5 - 5.59 = \underline{48.91\ \text{feet}}$$

$$\text{Overhang} = 99.65 - 97.99 = 1.66\ \text{feet}.$$

$$\underline{\text{Bridge}} \quad 40.5 + (\tfrac{2}{3} \times 3.5) = \underline{42.83\ \text{feet}}.$$

$$\text{Overhang forward} \quad 44.00 - 42.83 = \underline{1.17\ \text{feet}}$$

Trade of ship _____ TANKER

Names of sister ships _____ M.V. BRITISH ADMIRAL– FURNESS S.B.Cº YARD Nº 390 AND M.V. BRITISH EMPRESS–FURNESS S.B.Cº YARD Nº 391

Builder's name and yard number _____ FURNESS. S.B.Cº – YARD Nº 393.

Owners _____ BRITISH TANKER Cº LTD.

Fee £ _____ : _____ WILL BE CHARGED ON FIRST ENTRY REPORT.

ML-D