Rpt. C.11 (Comp.).

Linkcine Barbara 37866.

- 1 JUL 1946 Hbd. 2563

Index No. 38618
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, ~~SAILING SHIP, TANKER.)~~ (TUG)

Ship's Name	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build
SIMONIA.	180904	BRITISH. London	275	1946

Port of Survey: Hull

Date of Survey: During construction

Surveyor's Signature: J. McLeod

Particulars of Classification: ✠100 A.1. FOR TOWING SERVICES (CONTEMPLATED)

Moulded Dimensions: Length 105'0" Breadth 26'6" Depth 13'0"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 504 tons

Coefficient of fineness for use with Tables ·68 (·574 actual) T = 5·2

DEPTH FOR FREEBOARD (D).

Moulded depth ... ... 13·0'

Stringer plate ... ... ·029

Sheathing on exposed deck

$T\left(\frac{L-S}{L}\right)$ = SEE SKETCH $\frac{24.5}{105} \times \frac{2.5}{12}$ ·05

Depth for Freeboard (D) = ~~13·08~~ 13·029

DEPTH CORRECTION.

(a) Where D is greater than Table depth (D—Table depth) R = (13·08 − 7·00) × ·808 = +4·91" (6·08)

(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) 26·5'

Standard Round of Beam = $\frac{B \times 12}{50}$ = 6·36

Ship's Round of Beam = 7½"

Difference 1·14

Restricted to —

Correction = $\frac{Diff^e}{4} \times \left(1 - \frac{S_1}{L}\right)$ = $\frac{1.14}{4}$ = −·29

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S_1)	Height	Height Correction	Effective Length (E)
Poop enclosed					
„ overhang					
R.Q.D. enclosed					
„ overhang					
Bridge enclosed					
„ overhang aft ...					
„ overhang forward ...					
F'cle enclosed					
„ overhang					
Trunk aft					
„ forward					
Tonnage opening aft ...					
„ „ forward ...					
Total					

(Flush deck — written diagonally across table)

Standard Height of Superstructure

„ „ R.Q.D. —

Deduction for complete superstructure

Percentage covered $\frac{S}{L}$ =
„ „ $\frac{S_1}{L}$ = } Flush deck.
„ „ $\frac{E}{L}$ =

Percentage from Table, Line A.
(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 = Nil.

SHEER CORRECTION.

SHEERS MEASURED FROM TOP OF KEEL TO DECK AT SIDE

Station	Standard Ordinate	SM	Product	Actual Ordinate	Effective Ordinate	SM	Product
A.P.	20·50	1	20·50	~~16·0~~ 36·00	36·00	1	36·00
⅙L from A.P. ...	9·12	4	36·48	~~14·46~~ 17·50	17·50	4	70·00
$\frac{2}{6}$L „ ...	2·255	2	4·51	~~13·5~~ 6·00	6·00	2	12·00
Amidships ...	—	4	—	~~13·0~~ Nil	—	4	—
$\frac{2}{6}$L from F.P. ...	4·51	2	9·02	~~13·35~~ 4·25	4·25	2	8·50
⅙L „ ...	18·25	4	73·00	~~15·0~~ 24·00	24·00	4	96·00
F.P.	4·00	1	4·00	~~18·0~~ 60·00	60·00	1	60·00
Total ...			184·51				282·50

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

$\frac{\text{Length of enclosed superstructure}}{L}$ forward of amidships =
„ „ aft of „ = } Nil

Correction = $\frac{\text{Difference between sums of products}}{18}\left(\cdot75 - \frac{S}{2L}\right)$ = $\frac{97.99}{18}$ × ·75 = −4·08"

If limited on account of midship superstructure. No: flush deck

If limited to maximum allowance of 1½ ins. per 100 ft. Yes −1·58

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

		Ft.
Depth to Freeboard Deck	=	13·03
Summer freeboard	=	1·21
Moulded draught (d)	=	11·82

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 2·95 = 3"

Addition for Winter North Atlantic Freeboard (~~if required~~) = 5"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ = 557

Tons per inch immersion at summer load water line

T = 5·30

Deduction = $\frac{\Delta}{40\,T}$ inches = 2·63 = 2¾"

MEAN DRAUGHT	EXT. DISP.	T.
12'0"	532	5·22
11'0"	468	5·03
10'0"	408	4·84

TABULAR FREEBOARD corrected for Flush Deck ~~(if required)~~ 10·50 + 1·57 — 12·07

Correction for coefficient 1·00 — 12·07

	+	−
Depth Correction	4·91	—
Deduction for superstructures	—	—
Sheer correction	—	1·58
Round of Beam correction	—	·29
Correction for Thickness of Deck amidships ...	—	·60
Other corrections, scantlings, etc.	—	—
	4·91	2·47

+2·44

Summer Freeboard = 14·51

SB. 2·7·48

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck :— 1'-2½"

Tropical Fresh Water Line above Centre of Disc	...	5¾"	Tropical Fresh Water Freeboard	„	0'-8¾"
Fresh Water Line „ „	...	2¾"	Fresh Water	„	0'-11¾"
Tropical Line „ „	...	3"	Tropical	„	0'-11½"
Winter Line below „	...	3"	Winter	„	1'-5½"
Winter North Atlantic Line „ „	...	5"	Winter North Atlantic	„	1'-7½"

4·7·46

8/7/46

5m T 11/41. McC.

012734-012743-0002

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.

Trade of ship FOR TOWING SERVICES.

Names of sister ships "EMPIRE BARBARA". "NEREIDIA".

Builder's name and yard number COCHRANE & SONS LTD. YARD No 1308.

Owners OVERSEAS TONAGE & SALVAGE CO LD.

Fee £4 TO BE CHARGED WITH FIRST ENTRY.