Rpt. C.11 (Comp.).

Empire Grete
38359

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
(COMPUTATION FOR STEAMER, ~~SAILING SHIP, TANKER.~~) (TUG)

Index No. 38645
(For London Office only.)

Ship's Name	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build
"EMPIRE JUNA".	181268	BRITISH HULL.	296.	1946

Port of Survey ... Hull.

Date of Survey ... During construction

Surveyor's Signature ... *J R Macleod*

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

Moulded Dimensions : Length 115'·0" Breadth 27'·6" Depth 13'·6"

Moulded displacement at moulded draught = 85 per cent. of moulded depth   580   tons

Coefficient of fineness for use with Tables ·559 (take ·68)   T = 5·96

DEPTH FOR FREEBOARD (D).

Moulded depth ... ... 13·5'

Stringer plate ... ... ·35 ... ·03

Sheathing on exposed deck

$T\left(\dfrac{L-S}{L}\right) =$ ✓

Depth for Freeboard (D) = 13·53

DEPTH CORRECTION.

(a) Where D is greater than Table depth
(D—Table depth) R =
$\dfrac{(13·53 - 7·67)·885}{5·86} = +5·19"$

(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) 27·5'

Standard Round of Beam = $\dfrac{B \times 12}{50}$ 6·60"

Ship's Round of Beam = 8"

Difference + 1·40"

Restricted to

Correction = $\dfrac{\text{Diff}^e}{4} \times \left(1 - \dfrac{S_1}{L}\right) = \dfrac{1·40}{4} = -·35"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S₁)	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 ...					

Standard Height of Superstructure ....

" " R.Q.D. ....

Deduction for complete superstructure ....

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

" " $\dfrac{S_1}{L} =$

" " $\dfrac{E}{L} =$

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 HEIGHTS TAKEN FROM TOP OF KEEL TO UPPER DECK AT SIDE

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	21·50	1	21·50	16'·5¾"	35·75	1	35·75
⅙L from A.P. ...	9·565	4	38·26	15'·2¼"	20·25	4	81·00
⅔L " ...	2·365	2	4·73	14'·2"	8·00	2	16·00
Amidships ...	—	4	—	13'·6"	—	4	—
⅔L from F.P. ...	4·73	2	9·46	13'·9"	3·00	2	6·00
⅙L " ...	19·13	4	76·52	15'·1½"	19·50	4	78·00
F.P.	43·00	1	43·00	17'·11½"	53·50	1	53·50
Total ...			193·47				270·25

Mean actual sheer aft
─────────────────────── = } Excess
Mean standard sheer aft

Mean actual sheer forward
───────────────────────── =
Mean standard sheer forward

Length of enclosed superstructure
─────────────────────────────── forward of amidships = } nil.
L

" " aft of " =

Correction = $\dfrac{\text{Difference between sums of products}}{18}\left(·75 - \dfrac{S}{2L}\right) = \dfrac{76·78}{18} \times ·75 = -3·20"$

If limited on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft. = -1·73"

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

	Ft.
Depth to Freeboard Deck =	13·53
Summer freeboard =	1·35
Moulded draught (d) =	12·18

Deduction for Tropical freeboard and addition for

Winter freeboard = $\dfrac{d}{4}$ inches = 3·05 = 3"

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

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\triangle = 634$

Tons per inch immersion at summer load water line

$T = 6·18$

Deduction = $\dfrac{\triangle}{40 T}$ inches = 2½

DRAUGHTS.	EXT.DISP.	T.
11'·5¾	586	6·02
10'·6	517	5·79
9'·6	449	5·54

	11·50 + 1·73		13·23
TABULAR FREEBOARD corrected for Flush Deck (if required)			
Correction for coefficient	nil		
	+	−	
Depth Correction ...	5·19	−	
Deduction for superstructures ...	−	−	
Sheer correction ...	−	1·73	
Round of Beam correction ...		·35	
Correction for Thickness of Deck amidships ...		−	
Other corrections, scantlings, etc. ...	−	−	
	5·19	2·08	3·11
Summer Freeboard =			16·34

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

Tropical Fresh Water Line above Centre of Disc ...	5½"	Tropical Fresh Water Freeboard ...	1'·4¼"	
Fresh Water Line " "	2½"	Fresh Water "	1'·10¾"	
Tropical Line " "	3"	Tropical "	1'·1¼"	
Winter Line below " "	3"	Winter "	1'·7¼"	
Winter North Atlantic Line " "	5"	Winter North Atlantic "	1'·9¾"	

1·8·46

5m T 11/41. McC.

013750 - 013759 - 0186

6/8/46

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 IN THE FAR EAST.

Names of sister ships   "EMPIRE NINA" - "EMPIRE GRETA".

Builder's name and yard number   COCHRANE & SONS LTD- SELBY. YARD Nº 1315.

Owners   MINISTRY OF TRANSPORT.

Fee £ TO BE CHARGED WITH FIRST ENTRY.

MS.