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Rpt. C.11 (Comp.).

OWNERS' C.11 ISSUED

Lloyd's Register of Shipping.

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(For London Office only.)

19 JAN 1951

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name GEMMA	Official Number	Nationality and Port of Registry DUTCH WILLEMSTAD.	Gross Tonnage	Date of Build 1949	Port of Survey SUNDERLAND
Moulded Dimensions: Length 16.73 m Breadth 19.050 m Depth 5.715 m To CR. OF RUDDER STOCK					Date of Survey DURING CONSTRUCTION
Moulded displacement at moulded draught = 85 per cent. of moulded depth 8795 Ton = 8716 m³ tons					Surveyor's Signature D. S. FORSYTH
Coefficient of fineness for use with Tables 807					Particulars of Classification + 100 A1 CARRYING PETROLEUM IN BULK (CONTEMPLATED)

DEPTH FOR FREEBOARD (D).				
Moulded depth	5.715
Stringer plate	12
Sheathing on exposed deck	$T \left(\frac{L-S}{L} \right) =$			
Depth for Freeboard (D) =	5.727			

DEPTH CORRECTION.	
(a) Where D is greater than Table depth (D-Table depth) R =	✓
(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	8.23 (7.782-5.727) 29.475 = -505 m/-
If restricted by superstructures	2.055 ✓

ROUND OF BEAM CORRECTION.	
Moulded Breadth (B)	19.050
Standard Round of Beam = $\frac{B \times 12}{50}$	381 m/-
Ship's Round of Beam	406 m/-
Difference	25 m/-
Restricted to	
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right)$	= $\frac{25}{4} \times 2.384 = -14.9$ m/-

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	30.020	30.020	2.286	-	30.020
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
Fore enclosed	13.563	13.563	2.286	-	13.563
" overhang					
Trunk aft (SEE OVER)		45.330	2.286	-	45.330
" forward					
Tonnage opening aft					
" forward					
Total	43.583	88.913			88.913

Standard Height of Superstructure	2.237 m/-
" " R.Q.D.	
Deduction for complete superstructure	1038 m/-
Percentage covered $\frac{S}{L} =$	37.33
" " $\frac{S_1}{L} =$	76.16
" " $\frac{E}{L} =$	
Percentage from Table, Line A. TANKER	70.58
(corrected for absence of fore-castle (if required))	
Percentage from Table, Line B.	
(corrected for absence of fore-castle (if required))	
Interpolation for bridge less than .2L (if required)	
Deduction = $1038 \times .7058 =$	-733 m/-

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	1226	1		1226	698	698	1		698
$\frac{1}{8}L$ from A.P.	545	4		2180	76	76	4		304
$\frac{3}{8}L$ "	136	2		272	-	-	2		
Amidships	-	4		-	-	-	4		
$\frac{5}{8}L$ from F.P.	272	2		544	-	-	2		
$\frac{7}{8}L$ "	1090	4		4360	38	38	4		152
F.P.	2433	1		2433	1295	1295	1		1295
Total				11035					2449

Mean actual sheer aft
Mean standard sheer aft =Mean actual sheer forward
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - \frac{S}{2L}}{.75 - \frac{S}{2L}} \right) = \frac{8586}{18} \left(\frac{.75 - .1866}{.75 - .1866} \right) = +269 \text{ m/-}$
If limited on account of midship superstructure. ✓

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **5.727**Summer freeboard = **.660**Moulded draught (d) = **5.067**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{48} \text{ inches} = 106 \text{ m/-} = 11 \text{ cm.}$

Addition for Winter North Atlantic Freeboard (if

required) = $106 + 97 = 203 \text{ m/-} = 20 \text{ cm.}$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 9190 \text{ Tons.}$

Tons per inch immersion at summer load water line

T = **49.9**Deduction = $\frac{\Delta}{40 T} \text{ inches}$ = **4.60"**= **117 m/-**= **12 cm.**

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.

1490

1629

136

136

505

733

269

1

269

1239

970

Summer Freeboard = **659**

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

Winter North Atlantic Line

2.3

1.2

1.1

1.1

2.0

Tropical Fresh Water Freeboard

Fresh Water

Tropical

Winter

Winter North Atlantic

66

43

54

55

55

86

20.9.1949

T.S.S. Gemma.

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.

TRUNK :-

S,

$$7.163 \times \frac{18.746 + 11.989}{2 \times 19.050} = 5.778$$

$$55.115 \times \frac{11.683}{19.050} = 33.790$$

$$9.955 \times \frac{11.683 + 8.763}{2 \times 19.050} = 5.342$$

$$.914 \times \frac{8.763}{19.050} = .420$$

45.330.

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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Foundation