

Glasgow No 70002

Index. No. 38192  
(For London Office only.)

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

31 OCT 1945

Ship's Name <b>"EMPIRE CROCOD" N.N. GREENLAND</b>	Official Number <b>169768</b>	Nationality and Port of Registry <b>British Trom</b>	Gross Tonnage <b>about 2940 2938</b>	Date of Build <b>1945</b>	Port of Survey <b>Trom</b>
Moulded Dimensions: Length <b>310.0</b> Breadth <b>46.4</b> Depth <b>25.2</b> <i>To Centre of Rudder Stock 310.44</i>					Date of Survey <b>September 1945</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>6727</b> tons					Surveyor's Signature <b>H. Dickson</b>
Coefficient of fineness for use with Tables <b>.765</b>					Particulars of Classification <b>+100 A-1 (Contemplated)</b>

<b>Depth for Freeboard (D).</b> Moulded depth ... .. <b>25.17</b> Stringer plate ... <b>40</b> ... .. <b>.03</b> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <b>25.20</b>	<b>Depth correction.</b> (a) Where D is greater than Table depth (D - Table depth) R = $(25.20 - 20.70) \times 2.388 = +10.75$ <b>4.50</b> (b) Where D is less than Table depth (if allowed) (Table depth - D) R = <b>✓</b> If restricted by superstructures <b>✓</b>	<b>Round of Beam correction.</b> Moulded Breadth (B) <b>46.4</b> Standard Round of Beam = $\frac{B \times 12}{50} = 11.12$ Ship's Round of Beam = <b>11</b> Difference <b>.12</b> Restricted to Correction = $\frac{\text{Diff.}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.12}{4} \times .538 = +.02$
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## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	31.22	31.21	7.9	-	31.21
" overhang ... ..	2.0	1.00	-	-	1.00
R.Q.D. enclosed ... ..					
" overhang ... ..					
Bridge enclosed ... ..	76.0	76.00	9.0	-	76.00
" overhang aft ... ..	4.0	3.00	-	-	3.00
" overhang forward ... ..	2.0	1.00	-	-	1.00
Fore-cabin enclosed ... ..	31.23	31.23	7.0	-	31.23
" overhang ... ..					
Trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..					
" forward ... ..					
Total ... ..	146.44	143.44			143.44

Standard Height of Superstructure	6.604
" R.Q.D.	✓
Deduction for complete superstructure	36.03
Percentage covered $\frac{S}{L} =$	47.17
" $\frac{S_1}{L} =$	46.20
" $\frac{E}{L} =$	
Percentage from Table, Line A. ✓	
(corrected for absence of forecastle (if required))	
Percentage from Table, Line B. 32.77	
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required) ✓	
Deduction =	36.03 × 32.77 = -11.81

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	41.04	1		41.04	18.0	18.0	1		18
1/2 L from A.P. ... ..	18.265	4		73.04	1.5	1.5	4		6
3/4 L " ... ..	4.575	2		9.03	-	-	2		-
Amidships ... ..	-	4		-	-	-	4		-
3/4 L from F.P. ... ..	9.03	2		18.06	-	-	2		-
1/2 L " ... ..	36.53	4		146.12	15.0	15.0	4		60
F.P. ... ..	82.09	1		82.09	66.0	66.0	1		66
Total ... ..				369.38					150

Mean actual sheer aft =  
Mean standard sheer aft = } **Deficient**

Mean actual sheer forward =  
Mean standard sheer forward = } **Deficient**

Length of enclosed superstructure forward of amidships =  
  " aft of " = } **Sheer Deficient**

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{219.38 - .2358}{18} = +6.27$   
If limited on account of midship superstructure. ✓

If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **25.20**  
 Summer freeboard = **4.50**  
 Moulded draught (d) = **20.70**

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **5.17 = 5 1/4**Addition for Winter North Atlantic Freeboard (if required) = **7 1/4**

## Deduction for Fresh Water.

Displacement in salt water at summer load water line  
 $\Delta = 20.92$  full draft  
**6520 tons**  
 Tons per inch immersion at summer load water line  
 $T = 20.92$  full draft  
**29.2**  
 Deduction =  $\frac{\Delta}{40T}$  inches  
 = **5.58 = 5 1/2**

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.765 + .68}{1.36} = \frac{1.445}{1.36}$ 

	+	-
Depth Correction ... ..	10.75	-
Deduction for superstructures ... ..	-	11.81
Sheer correction ... ..	6.27	-
Round of Beam correction ... ..	.02	-
Correction for Thickness of Deck amidships ... ..	-	-
Other corrections, scantlings, etc. ... ..	-	-
	17.04	11.81

Summer Freeboard = **54.12**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, **W-1**, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ... ..	10 3/4	Tropical Fresh Water Freeboard ... ..	3 7/4
Fresh Water Line " " ... ..	5 1/2	Fresh Water " " ... ..	4 0 1/2
Tropical Line " " ... ..	5 1/4	Tropical " " ... ..	4 0 3/4
Winter Line below " " ... ..	5 1/4	Winter " " ... ..	4 1 1/4
Winter North Atlantic Line " " ... ..	7 1/4	Winter North Atlantic " " ... ..	5 1 1/4



the Surveyor should endorse the form on this side with his signature and the date.

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Trade of ship *International Trade*

Names of sister ships *This ship is similar to "EMPIRE DIAM" Gls Rpt 67643 and "EMPIRE JESSIE" (Gls Rpt 66774) Heavy Deckings are not fitted and a Timber Foreward is desired. Also S. B. Co. Troon Yard N° 448*

Builder's name and yard number

Owners *Ministry of War Transport*

Fee £ *13 0 0*