

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

N.N. RANILLA (COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name EMPIRE TAGANA EX HYDRA TAGANA EX HENNING MAERSK	Official Number 180878	Nationality and Port of Registry BRITISH NORWEGIAN LONDON	Gross Tonnage 10,062 10128 10068 M.O.T. 31.7.52	Date of Build 1940 RE-COMMISSIONED 1941	Port of Survey HAMBURG (KIEL DISTRICT) Date of Survey 11 th APRIL 1946 Surveyor's Signature <i>Joe Swanderson</i> Particulars of Classification 100A1 CARRYING PETROLEUM IN BULK
Moulded Dimensions: Length ⁴⁸⁶ 485 Breadth 66.5 Depth 35.9 Moulded displacement at moulded draught = 85 per cent. of moulded depth 22300 tons Coefficient of fineness for use with Tables .793					

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 35.90 Stringer plate063 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 35.963	(a) Where D is greater than Table depth (D-Table depth) R = $(35.96 - 32.40) \times 3 = +10.68$ 3.56 (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures	Moulded Breadth (B) 66.5 Standard Round of Beam = $\frac{B \times 12}{50} = 15.96$ Ship's Round of Beam = 15.75 Difference .21 Restricted to Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.21}{4} \times .6242 = -.03$

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed EQUIV...	109.07	109.07	7.5	-	109.07
" overhang ...	1.43	.72	"		.72
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed EQUIV...	37.5	37.50	7.5	-	37.50
" overhang aft ...					
" overhang forward ...					
F'cle enclosed EQUIV...	35.31	35.31	7.5	-	35.31
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	183.31	182.60			182.60

Standard Height of Superstructure 7.5	
" " R.Q.D. ✓	
Deduction for complete superstructure 42	
Percentage covered $\frac{S}{L} = 37.72$	
" " $\frac{S_1}{L} =$	
" " $\frac{E}{L} =$	37.58
Percentage from Table, Line A. 28.58	
(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)	
Deduction = 42 x 28.58 = - 12.00	

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S
A.P. ...	58.60	1		58.60	58.0	58.0	1
1/4 L from A.P. ...	26.075	4		104.30	29.5	29.5	4
1/2 L " ...	6.445	2		12.89	4.0	4.0	2
Amidships ...	-	4		-	-	-	4
3/4 L from F.P. ...	12.89	2		25.78	15.8	15.8	2
3/4 L " ...	52.15	4		208.60	57.1	57.1	4
F.P. ...	117.20	1		117.20	116.5	116.5	1
Total ...				527.37			

Mean actual sheer aft	defined but > .75
Mean standard sheer aft =	
Mean actual sheer forward	same
Mean standard sheer forward =	
Length of enclosed superstructure forward of amidships =	
" " aft of " =	Tank

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{33.13}{18} \left(.75 - \frac{.1886}{.5614} \right) = -1.03$
If limited on account of midship superstructure.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 35.96 Summer freeboard = 7.37 Moulded draught (d) = 28.59 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 7.15 = 7 1/4 Addition for Winter North Atlantic Freeboard (if required) = 7.15 + 4.86 = 12.01 = 12	Deduction for Fresh Water. Displacement in salt water at summer load water line Δ = 20975 Tons per inch immersion at summer load water line T = 66.30 Deduction = $\frac{\Delta}{40 T}$ inches = 7.81 = 8	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{743 + 68}{1.36} = \frac{1.473}{1.36}$ Depth Correction ... 10.68 Deduction for superstructures ... 12.00 Sheer correction ... 1.03 Round of Beam correction03 Correction for Thickness of Deck amidships ... Other corrections, scantlings, etc. ... Summer Freeboard = 88.48
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-			
Tropical Fresh Water Line above Centre of Disc ... 387 mm 15 1/4	Tropical Fresh Water Freeboard ... 6'-1 1/4"	2248 mm	
Fresh Water Line " " ... 203 ... 8	Fresh Water " " ... 6'-8 1/2"	1861	
Tropical Line " " ... 184 ... 7 1/4	Tropical " " ... 6'-9 1/4"	2045	
Winter Line below " " ... 184 ... 7 1/4	Winter " " ... 7'-11 1/4"	2064	
Winter North Atlantic Line " " ... 303 ... 12	Winter North Atlantic " " ... 8'-4 1/2"	2483	

2.5.46

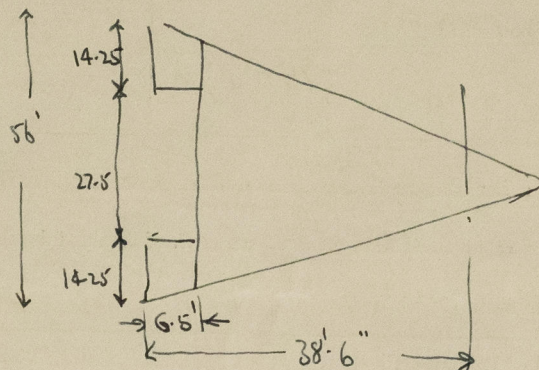
Empire Tanager.

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.

FORECASTLE. UNDER $\frac{1}{10}$ IN LENGTH
EQUIVALENT

$$\frac{2 \times 14.25 \times 6.5}{56}$$

$$\begin{array}{r} 38.5 \\ - 6.5 \\ \hline 32.0 \\ + 3.31 \\ \hline 35.31 \end{array}$$



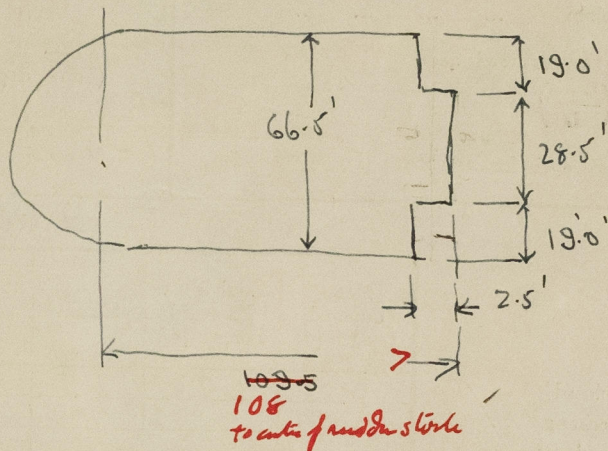
POOP

EQUIVALENT

$$\begin{array}{r} 28.5 \times 2.5 \\ \hline 66.5 \\ + 1.07 \\ \hline 67.57 \end{array}$$

$$\begin{array}{r} 108.5 \\ 108.57 \\ \hline 217.07 \\ \hline 217.07 \end{array}$$

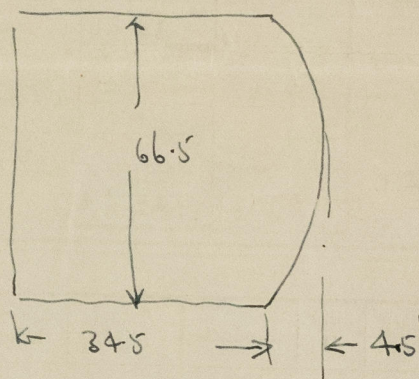
OVERHANG.



BRIDGE

EQUIVALENT

$$\begin{array}{r} 34.5 + \frac{2}{3} \times 4.5 \\ \hline = 37.5 \end{array}$$



Trade of ship NOT KNOWN

Names of sister ships

Builder's name and yard number NAKSKOV - SKIBSVÆRFT DENMARK YARD N° 93.

Owners MINISTRY OF WAR TRANSPORT

Fee £ 20

A/c rendered from
London 24/4/46



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