

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

20 APR 1944

Ship's Name EMPIRE ALDERNEY <i>MIL. 50.</i>	Official Number 180,114	Nationality and Port of Registry BRITISH. GOOLE. HULL.	Gross Tonnage 288.	Date of Build 1944.	Port of Survey HULL.
Moulded Dimensions: Length 135'-0" Breadth 21'-6" Depth 9'-0"					Date of Survey DURING CONSTRUCTION
Moulded displacement at moulded draught = 85 per cent. of moulded depth 481 tons					Surveyor's Signature <i>J.M. Macleod</i>
Coefficient of fineness for use with Tables 758 $T.P.I. = 6.098$					Particulars of Classification 100 A.1. "CARRYING PETROLEUM IN BULK" LIMITING PORTS BEST CASE (CONTEMPLATED)

Depth for Freeboard (D).		Depth correction.		Round of Beam correction.	
Moulded depth	9'-0"	(a) Where D is greater than Table depth (D - Table depth) R = $(9'-0" - 9'-0") \times 1.038 = +0.03$		Moulded Breadth (B)	21'-6"
Stringer plate	30	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = $(9'-0" - 9'-0") \times 1.038 = +0.03$		Standard Round of Beam = $\frac{B \times 12}{50} =$	5'-6"
Sheathing on exposed deck	NONE.			Ship's Round of Beam =	6'-0"
T $\left(\frac{L-S}{L}\right) =$				Difference	0'-4"
Depth for Freeboard (D) =	9'-03"	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) =$	$\frac{0'-4"}{4} \times (1 - \frac{6'-0"}{21'-6"}) = -0'-07"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	40'-9"	40'-75"	7'-6"	✓	40'-75"
„ overhang	1'-9"	0'-88"		✓	0'-88"
R.Q.D. enclosed	✓				
„ overhang	✓				
Bridge enclosed	✓				
„ overhang aft	✓				
„ overhang forward	✓				
F'cle enclosed	13'-9"	13'-75"	6'-6"	✓	13'-75"
„ overhang	1'-9" AT SIDES	0'-87"		✓	0'-87"
Trunk aft	67'-38" x 10'-5 1/2"	32'-90"	2'-6"	x 2.5/6	13'-71"
„ forward					
Tonnage opening aft					
„ forward					
Total	58'-00"	89'-15"			69'-96"

Standard Height of Superstructure	6'-0"
„ „ R.Q.D.	✓
Deduction for complete superstructure	19'-5"
Percentage covered $\frac{S}{L} =$	42.96%
„ „ $\frac{S_1}{L} =$	66.04%
„ „ $\frac{E}{L} =$	51.82%
Percentage from Table, Line A. Tanker	43.00%
(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 =	19.5% x 43% = 8.39%

SHEER PARALLEL WITH KEEL FOR 33'-9" EACH SIDE MIDSHIPS. SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	23'-50"	1		23'-50"	27"	27	1		27'-0"
1/4 L from A.P.	10'-455"	4		41'-82"	59 1/8"	5'-625"	4		22'-5"
1/2 L	2'-585"	2		5'-17"	0	-	2		-
Amidships	-	4		-	0	-	4		-
3/4 L from F.P.	5'-17"	2		10'-34"	0	-	2		-
1/4 L	20'-91"	4		83'-64"	9"	9	4		36'-0"
F.P.	47'-00"	1		47'-00"	42"	42	1		42'-0"
Total				211'-47"					127'-5"

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{83'-97" - 214'8"}{18} = +2'-50"$

If limited on account of midship superstructure.

Mean actual sheer aft = $\frac{27'-0" + 42'-0"}{2} = 34'-5"$

Mean actual sheer forward = $\frac{22'-5" + 36'-0"}{2} = 29'-2 1/2"$

Length of enclosed superstructure forward of amidships = $\frac{1}{2} L = 111'-23 1/2"$

„ „ aft of „ = $\frac{1}{2} L = 111'-23 1/2"$

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard.	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 536$ Tons per inch immersion at summer load water line $T = 619$ Deduction = $\frac{\Delta}{40T}$ inches $= \frac{536}{40 \times 619} = 2.17 \approx 2 1/4$	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{758 + 68}{136} = \frac{1438}{136}$
Depth to Freeboard Deck = 9'-03"		
Summer freeboard = 0'-71"		
Moulded draught (d) = 8'-32"		
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 2'-08" = 2'		
Addition for Winter North Atlantic Freeboard (if required) = ✓		
	DRAFT. 8'-6" 7'-6" 6'-6"	EXT. Δ 545 470 401 T. 6-2 6-078 5-92
		Depth Correction ... 0'-03"
		Deduction for superstructures ... 8'-39"
		Sheer correction ... 2'-50"
		Round of Beam correction ... 0'-07"
		Correction for Thickness of Deck amidships ... -
		Other corrections, scantlings, etc. ... -
		Summer Freeboard = 8'-45"

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

Tropical Fresh Water Line above Centre of Disc	✓	Tropical Fresh Water Freeboard	0'-8 1/2"
Fresh Water Line	2 1/4"	Fresh Water	0'-6 1/4"
Tropical Line	Not assigned	Tropical	0'-10 1/2"
Winter Line	below	Winter	✓
Winter North Atlantic Line	Not assigned	Winter North Atlantic	✓

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 68'-3"
allowance for
Poop or Hang - 10 1/2"
67'-4 1/2"

omit

TANKER.

Trade of ship LIMITING PORTS - GREST - ELBE.

Names of sister ships ✓

Builder's name and yard number MESSRS JOHN HARKER LTD. YARD No 166.

Owners THE MINISTRY OF WAR TRANSPORT.

Fee £ TO BE CHARGED WITH FIRST ENTRY.

D



© 2021

Lloyd's Register
Foundation