

Rpt. C.11

B.T. COPY

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 22726
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Complete Superstructure with Poop, Bridge & Forecastle on Skeels deck.

N.N. RIO TERCERO (Type of Superstructures.)

Port of Survey Cardiff

Date of Survey 29th Nov, 1932

Ship's Name

S.S. "EDOE"

Nationality and Port of Registry

British Port London

Official Number

4866

Date of Build

1912, 12mo

Name of Surveyor E. Brimblecombe.

Moulded Dimensions: Length

405.0

Breadth

53.79

Depth

26.0

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

19853

Coefficient of fineness for use with Tables

.789

Particulars of Classification +100A1 825

S.S. Lw. No. 3.2.25. dk with fbd.
S.S. Lw. No. 1-29.

Depth for Freeboard (D)

Moulded depth ... 26.0

Stringer plate03

Sheathing on exposed deck

 $T \left(\frac{L-S}{L} \right) =$

Depth for Freeboard (D) = 26.03

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 =

(27.00 - 26.03) 3 = -2.91

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) 53.79

Standard Round of Beam = $\frac{B \times 12}{50} = 12.91$

Ship's Round of Beam = 12.2"

Difference .41

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.41}{4} (1 - .995) = \text{NIL}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	31.0	31.00	9'-3"	✓	31.00
" overhang	.25	.12	+3 1/2" P.P.		.12
R.Q.D. enclosed					
" overhang					
Bridge enclosed...	369.75	369.75	9'-3"	✓	369.75
" overhang aft			+3 1/2" P.P.		
" overhang forward					
F'cle enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft	4.0	2.06	1/2 DIFF		2.06
" forward					
Total	405.0	402.93			402.93

Standard Height of Superstructure 7'-6"

" " R.Q.D. ✓

Deduction for complete superstructure 42"

Percentage covered $\frac{S}{L} = 100$ " " $\frac{S_1}{L} = 99.5$ " " $\frac{E}{L} = 99.5$

Percentage from Table, Line A.

(corrected for absence of forecastle (if required))

Percentage from Table, Line B. 99.38

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) C.S.S.

Deduction = $42 \times 99.38 = -41.74$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	50.50	1	50.50	36.0	60.50	1	60.50
1/4 L from A.P. ...	22.475	4	89.90	15.8	26.92	4	107.68
3/4 L " ...	5.555	2	11.11	3.94	6.66	2	13.32
Amidships ...	-	4	-	-	-	4	-
3/4 L from F.P. ...	11.11	2	22.22	9.75	12.59	2	25.18
1/4 L " ...	44.95	4	179.80	39.1	50.95	4	203.80
F.P. ...	101.00	1	101.00	90.0	114.50	1	114.50
Total			454.53				524.98

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{70.45}{18} \left(.75 - \frac{.50}{25} \right) = -.98$

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 = 26.03

Summer freeboard = 2.77

Moulded draught (d) = 23.26

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 5.81 = 5 3/4

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 11555$

Tons per inch immersion at summer load water line

T = 44.44

Deduction = $\frac{\Delta}{40 T}$ inches

= 6.50

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{789 + 68}{1.36} = \frac{1.469}{1.36}$

Depth Correction ... 2.91

Deduction for superstructures ... 41.74

Sheer correction98

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

Summer Freeboard = 3

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

Tropical Fresh Water Line above Centre of Disc ... 12 1/2"

Fresh Water Line " " ... 6 1/2"

Tropical Line " " ... 5 1/2"

Winter Line below " " ... 5 1/2"

Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ... 1' 9"

Fresh Water " " ... 2' 2 1/2"

Tropical " " ... 2' 3 1/2"

Winter " " ... 3' 3"

Winter North Atlantic " " ...

8 DEC 1932

MARKING FORM
31 OCT 1934
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23 MAY 1933
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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
← Shelter deck → ← Freeboard deck →											
Description of Hatchway			No. 1	No. 2	No. 3	No. 1	No. 2	No. 3			
Dimensions of Hatchway			25'-6" x 14'-0"	25'-6" x 16'-0"	22'-6" x 16'-0"	25'-6" x 14'-0"	25'-6" x 16'-0"	14'-0" x 16'-0"			
COAMINGS	{	Height above Deck	33"	33"	33"	12"	12"	12"			
		Thickness	1"	1"	1"	.75"	.75"	.75"			
		Stiffeners									
		Brackets, Stays	7" B.A.	7 each side	7 each side	6 each side					
HATCH BEAMS	{	Number	52 Webbs	3 B. Sees.	1 Bulkhead	2 Webbs	2 Webbs	1 Bulkhead			
		Spacing	4'-3"	4'-3"	4'-6"	4'-3"	4'-3"	4'-8"			
		Scantling and Sketch	19 x .40	20 x .40	19 x .40	19 x .40	19 x 20 x .40	21 1/2 x .40			
		Bearing Surface	12 x 6 1/2 x .50	12 x 6 1/2 x .50	12 x 6 1/2 x .50	12 x 6 1/2 x .50	12 x 6 1/2 x .50	12 x 6 1/2 x .50			
FORE AND AFTERS	{	Number									
		Spacing									
		Unsupported Lengths									
		Scantling* and Sketch		none							
HATCH COVERS	{	Material	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.			
		Thickness	3	3	3	3	3	3			
		How fitted	F4A	F4A	F4A	F4A	F4A	F4A			
		Bearing Surface	3	3	3	3	3	3			
Spacing of Cleats			24	24	24	24	24	24			
Number of Tarpaulins			2	2	2	1	1	1			

*Are wood fore and afters steel shod at all bearing surfaces? ☒

Are battens and wedges efficient and in good condition? ☒

Are tarpaulins in good condition and in accordance with rule requirements? ☒

Are lashings provided in accordance with rule requirements? ☒

Particulars of fiddley, funnel and ventilator coamings:—

All in good condition. ✓

E.R. skylight of steel, strongly constructed.

Fiddley grating covered by hinged steel storm covers. ✓

Particulars of Flush Bunker Scuttles :—

hone. ✓

Particulars of Companionways :—

None!

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :—

File dk. One to F.P. 17" dia x 27" above wood dk x .38 ✓
Two " holds 19" " x 28" " " " x .38 ✓

Skeltdk. Forward. Two to holds 19" dia x 29" above wood dk x .38

Amidships, " " " 19" " x 9'-9" " " " x .38 (against fore end harrigating Bridge but not stayed to it) ✓
" " " 19" " x 9'-9" " " " x .38 " after " "

apt. " " " 19' " x 9'-9" " " " x .38 (" after " " " boat dk but not stayed to it). "

One to tunnel 19" dia x 24" above wood dk x .36.

Wood plugs & canvas covers provided. ✓

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

File dk. One from F.P. 4" dia. x 4" high -

All of W.I. & Rights given to months. ✓

Alt. dk. Five from DB's 4" x 2'-7" high -

Canvas cover provided for closing.

Four	"	"	4"	"	x	3'-3"	"	✓
Two	"	"	3"	"	x	2'-10"	"	✓

Coop dk. One from Ap. 4" " x 4 1/2" "

ulars of Gangway Cargo and Coaling Ports :—

In sides of shelter tween dks. ✓

the gangway port each side 3'-9" x 5'-8" high, ringed door stiffened & secured by bolts through three channel bar strongbacks.

Three coaling ports each side $2'-1\frac{1}{2}" \times 2'-5\frac{1}{2}"$ High, Linged doors secured by bolts through two channel bar strongbacks.

Particulars of Scuppers and Sanitary Discharge Pipes:—

1 Scupper each side from Tonnage Well aft, open, led thro' sides below fbd dk.
 1 " " " Amidships from Shelter 'tween dk, bolted plate at deck, led thro' sides below fbd dk.
 (The remainder of the scuppers from the Shelter 'tween dks were found to have been permanently blanked at ship's sides by riveted plates).
 Six sanitary discharges port & five stbd, all from above Shelter dk led through sides above freeboard dk with storm valves.

Particulars of Side Scuttles:—

All of substantial construction, those below shelter deck fitted with hinged deadlights, those in poop, bridge & fore above shelter dk not fitted with deadlights.

Particulars of Guard Rails:—

Poop & Fore 3'-9" high, 4 rails, stanchions 4'-0" apart.
 At sides of Shelter dk substantial bulwarks 4'-3" high, with six freeing ports, forward and four each side aft, the ports being 2'-3" x 1'-5", sill 12", & all fitted with hinged shutters.

Particulars of Gangways, Lifelines, etc.:—

Lifelines provided for each side of Shelter dk forward & aft.

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well ... Tonnage Well	4'-3"	'tween dk	1'-6" (F+A) x 1'-9"	One	2.625 sq ft	✓
Forward Well ...						
State position of each freeing port ... } After Well:— Abreast Tonnage opening. 18" sill. ✓ (F, and A. position and height above deck edge) } Forward Well:— State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Hinged shutters! Additional area where sheer is less than standard.						

Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ...	none	.30	3 1/2" flanges of plates 3 1/2" x 3" x .30 between	2'-3" to 3'-3"	none	(1) 5'-5" x 4'-11"	24"	'tween dk
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	none	.30	3 1/2" flanges of plates 3 1/2" x 3" x .34 between	2'-4" to 2'-9"	none	(2) 5'-2" x 3'-0"	16"	'tween dk
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...								
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks ...	15 x .38	.36	3 1/2" x 3" x .38	3'-6"	none	(2ER) 4'-11" x 1'-11" (1 fid.) 4'-10" x 2'-0"	11 1/2" above wood dk	8'-0" to bridge dk & 8'-0" above bridge dk.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	15 x .38	.36	3 1/2" x 3" x .38	2'-1 1/2"	none	(2ER) 4'-11" x 2'-0"	15"	'tween dk
Deckhouses on Flush Deck Ships ...								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead ...	Hinged steel double doors each secured by 6 clips, worked from Tonnage well only.
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	Portable plates each secured by hook bolts, released from Tonnage well only.
Bridge, Forward Bulkhead ...	
Forecastle Bulkhead ...	
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks ...	Two to E.R. & one to fiddley, hinged steel doors worked both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	Two to E.R., hinged steel doors worked both sides.
Deckhouses on Flush Deck Ships ...	



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A hand-drawn plan view of a ship's hull, showing the layout of gun ports and gunwale ports. The hull is elongated with a central rectangular section. Along the upper edge, there are several small squares representing gun ports. Below these, there are three larger squares labeled "C.P." (Center Port). An arrow points to the space between the first and second "C.P." squares, with the text "Gunwale port each side." written below it. The hull is divided into sections by vertical lines.

State any special features in the construction of the ship:—

Small Latches:-

Top of E+B casing (16'-0" above Shlter dk). One 10'-5" x 16'-0", 14" x 62 coaming, 3" covers fore & aft on 2 1/4" rests, cleats 24", 2 tarpaulins.

Shelter dk. One W.T. Hatch 3'-10" x 3'-9", 32" x 34 coaming, linged steel W.T. cover secured by 6 butterfly nuts & bolts. One tonnage Hatch 4'-3" (4'-0" in clear) x 16'-0", wood P.P. coaming 6" (above wood dk) x 3" thick, 3" covers F.Y.A. on 2 1/2" rests with efficient lashing arrangements under.

Freeboard dk. Two 4'-0" x 3'-6", 10 x 3 1/2 x .50 BA coaming, 3" covers athwart. on 1 1/2" rests, cleats 24", 1 tarp. —
Two 8'-6" x 3'-6", 9 1/2 x 3/2 x .50 BA " , 3" " " " 1 1/2" " , " 24", 1 " . —
Two 8'-0" x 2'-6", 10 x 3 1/2 x .50 BA " , 3" " " " 1 1/2" " , " 24", 1 " . —

From D. W. scale:-

	<u>Drumht.</u>	<u>D.W.</u>
(LWL)	23'-2 $\frac{3}{4}$ "	7340
	22'-7 $\frac{1}{2}$ "	7000
	22'-0 $\frac{1}{2}$ "	6700
	21'-8"	6500
	20'-8 $\frac{1}{2}$ "	6000
	19'-9"	5500

All doors in poop b'd (on Skttrdk) of steel, worked both sides. ✓
All doors in file b'ds (on Skttrdk) of wood, except the two
doors of steel shown on plan, & all worked both sides. ✓

The vessel has been measured while in dry dock for ordinary docking survey. It is not intended to deal with the freeboard markings until the vessel returns from her present voyage to W. Africa. ✓

Builder's name and yard number

Names of sister ships S.S. "Ebani" (Rpt C11 ^{for coane} being forwarded by same post as this Rpt)

Owners African S.S. Co (Elder, Dempster & Co. Ltd. Mgrs)

Fee £ 12 : 15 : 0 Received by me