

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. 32-17
(For London Office only.)

Computation of Freeboard for ~~Steamer~~ Sailing Ship, Tanker

Having Forecastle and Rained Quarter Deck.

SOUTHERN ENTERPRISE

(Type of Superstructures.)

Ship's Name
M.S. SHAZA.

Nationality and Port of Official Number
British. London, Mombasa 149493.

Gross Tonnage
239

Date of Build
1927

Port of Survey Mombasa.

Date of Survey 28th October 1932.

Name of Surveyor R. Sarfant.

Moulded Dimensions: Length 120.0' Breadth 24.0' Depth 9.0'

Moulded displacement at moulded draught = 85 per cent. of moulded depth 459 tons

Coefficient of fineness for use with Tables .730

Particulars of Classification +100 A.I.
Carrying Petroleum in Bulk for Service on the East Coast of Africa, Kismayu to Zindzi.
S.S. Mombasa No 1-31

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 = (9.02 - 8.00) x .923 = +.94	Moulded Breadth (B) 24.0'
Stringer plate ... 1/2"	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 5.76'$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 6.0'
Depth for Freeboard (D) = 9.02'		Difference 24.00 - 24.00 = 0.00
		Restricted to 5.41'
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{24^2}{4} (1 - .4859) = 1.03$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...	37.10	37.10	2'-0"	$\frac{2.0}{3.133}$	23.68'
" overhang ...					
Bridge enclosed...					
" overhang aft ...					
" overhang forward					
F'cle enclosed ...	21.20	21.20	2'-0"	$\frac{2.0}{6.00}$	7.07'
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	58.30	58.30			30.75'

Standard Height of Superstructure	6.00
" " R.Q.D.	3.133'
Deduction for complete superstructure	18.0'
Percentage covered $\frac{S}{L} =$	48.59'
" " $\frac{S_1}{L} =$	48.59'
" " $\frac{E}{L} =$	25.63'
Percentage from Table, Line A (corrected for absence of forecastle (if required))	17.94'
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = 18.00 x .1794 =	3.23'

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	22.00	1		22.00	19.00	19.00	1		19.00
1/4 L from A.P. ...	4.79	4		39.16	7.90	7.90	4		31.60
1/2 L " ...	2.42	2		4.84	1.97	1.97	2		3.94
Amidships ...		4					4		
3/4 L from F.P. ...	4.84	2		9.68	3.74	3.74	2		7.48
3/4 L " ...	19.58	4		78.32	15.01	15.01	4		60.04
F.P. ...	44.00	1		44.00	40.00	40.00	1		40.00
Total ...				198.00					162.06

Mean actual sheer aft = Deficient
Mean standard sheer aft =

Mean actual sheer forward = Deficient
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = } Sheer
" " aft of " = } deficient

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{198.00 - 162.06}{18} \left(.75 - \frac{58.30}{2 \times 120.00} \right) = \frac{35.94}{18} (.75 - .2429) = +1.01$

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 = 9.02'
Summer freeboard = 9.4'
Moulded draught (d) = 8.62'

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 2.02 = 2"

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

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

2"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	94	-
Deduction for superstructures ...	-	3.23
Sheer correction ...	1.01	-
Round of Beam correction ...	-	.03
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc. to Compd	5.87	-
Summer Freeboard =	11.13	

SUMMER FREEBOARD

	Centre of Disc	Line, Steel, Deck
Tropical Fresh	...	0'-11 1/4"
Fresh Water Line	...	0'-7 1/2"
Tropical Line	...	0'-7 1/2"
Winter Line	...	1'-1 1/4"
Winter North Atlantic Line	...	1'-1 1/4"

MARKING FORM
1-6 AUG 1938

MARKING FORM
25 MAY 1939

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PARTICULARS

PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

		O. F. Bunkers	N ^o 1	N ^o 2	N ^o 3				
		P+S	P+S	P+S	P+S				
Description of Hatchway	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...
COAMINGS	Height above Deck	...	...	...	...
	Thickness	...	...	...	...
	Stiffeners	...	...	...	...
	Brackets, Stays	...	...	...	...
HATCH BEAMS	Number	...	...	...	...
	Spacing	...	...	...	...
FORE AND AFTERS	Number	...	...	...	...
	Spacing	...	...	...	...
	Unsupported Lengths	...	...	...	...
	Scantling* and Sketch	...	...	...	...
HATCH COVERS	Material	...	...	...	...
	Thickness	...	...	...	...
Spacing of Cleats		...	...	...	...
Number of Tarpaulins		...	...	...	...

Particulars of fiddley, funnel and ventilator coamings :—

Fitted with steel hinged covers, permanently attached.

Particulars of Flush Bunker Scuttles :—

— None! —

Particulars of Companionways :—

One aft to Stow 2'-10" x 2'-6", having 1'-6" coaming, fitted with steel cover, secured by steel strip and locks. -
One forward, to forecabin 4'-9" x 4'-9" x 3'-4" of steel plates $\frac{1}{2}$ " thick.
Fitted with $1\frac{1}{2}$ " hardwood hinged door, capable of being manipulated from both sides. Sill 1'-4" high. -

in exposed positions on freeboard and superstructure decks:—

2 fitted to forecabin, having 2'-10" coaming, and supplied with wooden plugs and canvas covers. /

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

ions on freeboard, raised quarter, or superstructure decks:—

2 to Bulkheads. Of Steel, 5 feet from deck to opening, and fitted with wire gauze covers.

2 to forward Cofferdam, 9" from deck to opening, and fitted with wire gauze covers.

Particulars of Gangway Cargo and Coaling Ports:—

— None. —

Discharge Pipes :-

1 *Sanitary* discharge pipe aft, 3 3/4" diameter, and fitted with N.R. valve.
Openings 3'-3" below freeboard deck.

of Side Scuttles :-

2 fitted each side of forecabin 8 1/2" diameter, and supplied with deadlights.

Particulars of Guard Rails :-

Efficient steel guard rails 3'-6" high, fitted to weather decks.

Particulars of Gangways, Lifelines, etc. :-

— None —

Provision made for rigging lifelines

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						
Forward Well			Open rails in fore well. 2 - 2" scuppers fitted each side of R.Q.D. -			

State position of each freeing port { After Well :-
(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 :-
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								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead	5/16"	5/16"	✓	✓	✓	No opening	✓	2'-0"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	.30	.26	3 x 2 1/2 x .25	30	✓	✓	✓	2'-0"
Exposed Machinery Casings on Superstructure Decks	5/16"	5/16"	2 1/2 x 1 1/2 x 1/4	2'-5"	✓	5'-5" x 2'-0"	1'-6"	4'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead	
Raised Quarter Deck Bulkhead ...	No opening.
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead	No opening.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	5/16" steel hinged doors, secured by dogs worked from both sides.
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships ...	

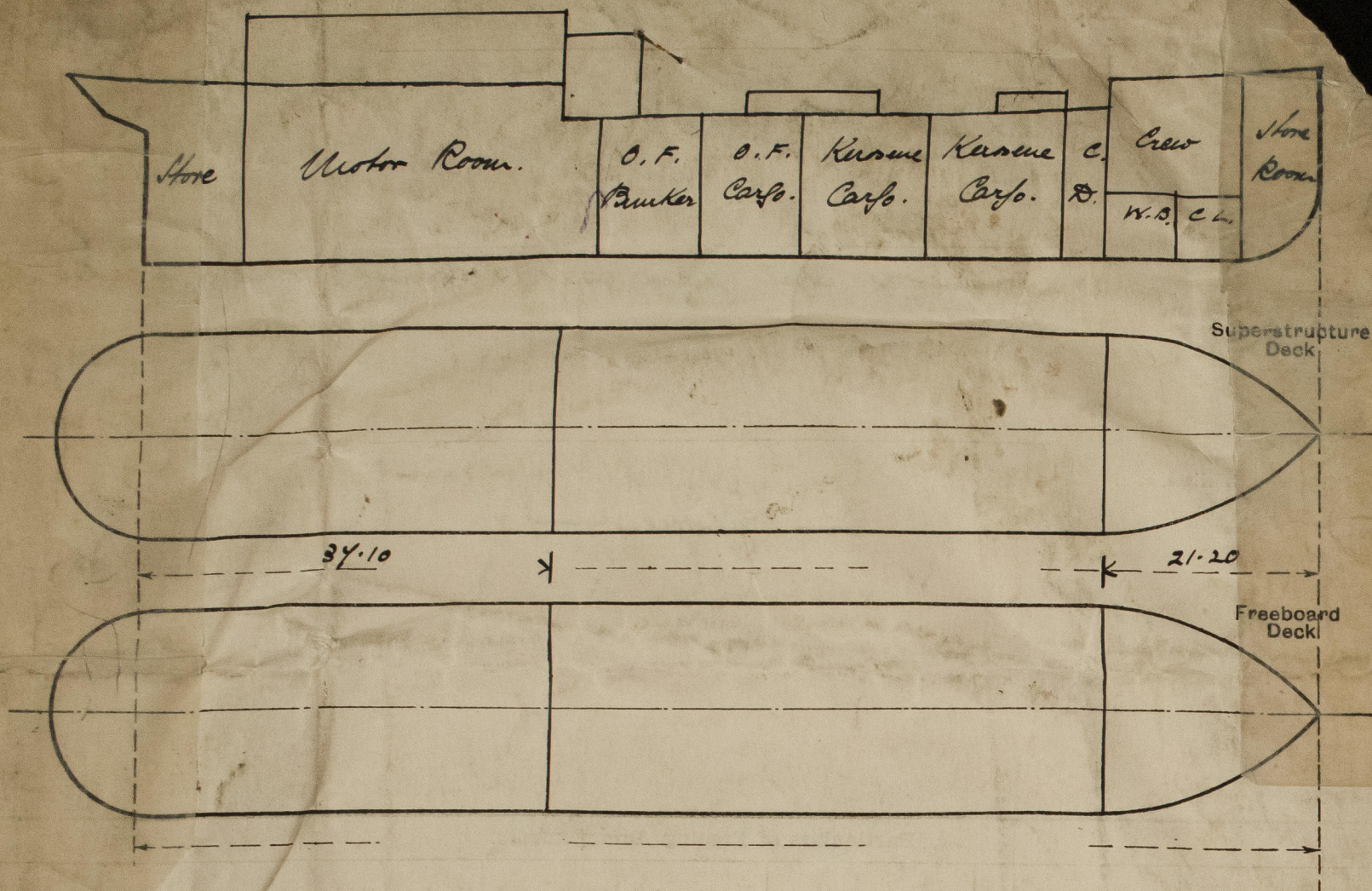


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Superstructure, bulkheads, trunks, deckhouses, coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—



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

The vessel was examined afloat, and all compartments and fittings mentioned in his report were found in efficient condition.

Builder's name and yard number *N.V. Bael's Scheepwerf W: 104.*

Names of sister ships

Owners

The Shell Company of East Africa Ltd.

Fee £

Received by me

R. R. R. R.



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