

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

13 DEC 1932

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having poop, bridge and fore-castle

(Type of Superstructures.)

Ship's Name S.S. "MASUNDA"	Nationality and Port of Registry British Glasgow	Official Number 160258	Gross Tonnage 5250	Date of Build 1929-7
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Moulded Dimensions: Length 402'0" Breadth 54'9" Depth 31'0 1/2"
Moulded displacement at moulded draught = 85 per cent. of moulded depth 12910 tons
Coefficient of fineness for use with Tables 778

Port of Survey Rotterdam
Date of Survey 12th of December 1932
Name of Surveyor L. Vuyk
Particulars of Classification 100 A1

Depth for Freeboard (D) Moulded depth <u>31.04</u> Stringer plate <u>0.4</u> Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <u>31.08</u>	Depth correction (a) Where D is greater than Table depth (D - Table depth) R = $(31.08 - 26.80) \times 3.00 = + 12.84$ 4.28 (b) Where D is less than Table depth (if allowed) (Table depth - D) R = If restricted by superstructures	Round of Beam correction Moulded Breadth (B) <u>54.75</u> Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>13.14</u> Ship's Round of Beam = <u>13.75</u> Difference <u>0.61</u> Restricted to <u>0.4662</u> Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>0.07</u>
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>44.75</u>	<u>44.75</u>	<u>7.5</u>	-	<u>44.75</u>
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	<u>126.00</u>	<u>126.00</u>	<u>9.0</u>	-	<u>126.00</u>
" overhang aft					
" overhang forward					
Fore-castle enclosed	<u>47.50</u>	<u>43.85</u>	<u>8.0</u>	-	<u>43.85</u>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	<u>218.25</u>	<u>214.60</u>			<u>214.60</u>

Standard Height of Superstructure	<u>7.50</u>
" " R.Q.D.	-
Deduction for complete superstructure	<u>42.00</u>
Percentage covered $\frac{S}{L} =$	<u>54.29%</u>
" " $\frac{S_1}{L} =$	<u>53.38%</u>
" " $\frac{E}{L} =$	<u>53.38%</u>
Percentage from Table, Line A. (corrected for absence of fore-castle (if required))	
Percentage from Table, Line B. (corrected for absence of fore-castle (if required))	<u>39.38</u>
Interpolation for bridge less than 2L (if required)	
Deduction =	<u>42.00 x 39.38 = 16.54</u>

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P.	<u>50.20</u>	1	<u>50.20</u>	<u>66.00</u>	<u>66.00</u>	1	<u>66.00</u>
1/8 L from A.P.	<u>22.34</u>	4	<u>89.36</u>	<u>29.23</u>	<u>29.23</u>	4	<u>116.92</u>
2/8 L "	<u>5.52</u>	2	<u>11.04</u>	<u>7.29</u>	<u>7.29</u>	2	<u>14.58</u>
Amidships		4				4	
3/8 L from F.P.	<u>11.04</u>	2	<u>22.08</u>	<u>12.41</u>	<u>12.41</u>	2	<u>24.82</u>
1/8 L "	<u>44.68</u>	4	<u>178.72</u>	<u>49.77</u>	<u>49.77</u>	4	<u>199.08</u>
F.P.	<u>100.40</u>	1	<u>100.40</u>	<u>111.00</u>	<u>111.00</u>	1	<u>111.00</u>
Total			<u>451.80</u>				<u>532.40</u>

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

If limited on account of midship superstructure.

$$\frac{451.80}{18} \left(.75 - \frac{214.60}{402} \right) = - 2.14$$

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 =	<u>31.08</u>
Summer freeboard =	<u>5.96</u>
Moulded draught (d) =	<u>25.12</u>

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.28 = 6 1/4
Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$
Tons per inch immersion at summer load water line

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

TABULAR FREEBOARD corrected for Flush Deck (if required)
Correction for coefficient

	+	-
Depth Correction	<u>12.84</u>	-
Deduction for superstructures	-	<u>16.54</u>
Sheer correction	-	<u>2.14</u>
Round of Beam correction	-	<u>0.07</u>
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	<u>12.84</u>	<u>18.75</u>

Summer Freeboard = 71.41SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	
Fresh Water Line " "	
Tropical Line " "	
Winter Line below " "	<u>6 1/2</u>
Winter North Atlantic Line " "	

Tropical Fresh Water Freeboard	
Fresh Water " "	
Tropical " "	
Winter " "	<u>6 1/2</u>
Winter North Atlantic " "	

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
No. 2 A No. 2 A									
Description of Hatchway	No. 1	No. 2	No. 3	No. 4	Hatch on Bridge deck	Hatch on freeboard dk	Hatch on poopdeck		
Dimensions of Hatchway	27'0" x 20'0"	30'0" x 20'0"	30'0" x 20'0"	30'0" x 20'0"	15'0" x 18'0"	21'0" x 20'0"	13'0" x 10'0"		
COAMINGS	Height above Deck	46"	46"	42"	42"	30"	10 x 3 1/2 x .50	30"	
	Thickness	.44	.44	.44	.44	.44	.44	.44	
	Stiffeners	9 x 3 1/2 x .48	9 x 3 1/2 x .48	9 x 3 1/2 x .48	9 x 3 1/2 x .48	7 x 3 x .40	none	7 x 3 x .40	
	Brackets, Stays	2 slaps 1 8 x .50	2 slaps 1 8 x .50	2 slaps 1 8 x .50	2 slaps 1 8 x .50	none	none	none	
HATCH BEAMS	Number	4	4	4	4	2	3	none	
	Spacing	5'4"	6'0"	6'0"	6'0"	5'0"	5'2"	fitted	
	Scantling and Sketch	20/11 x .38	20/11 x .38	20/11 x .38	20/11 x .38	18/9 x .36	18/9 x .36		
	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"		
FORE AND AFTERS	Number	none fitted						one	
	Spacing							5'0"	
	Unsupported Lengths								
	Scantling* and Sketch							12 x .36	
HATCH COVERS	Material	pine						pine	
	Thickness	3"						3"	
	How fitted	longitudinally						transverse	
	Bearing Surface	3"						3"	
Spacing of Cleats	23'							23'	
Number of Tarpaulins	two							two	
*Are wood fore and afters steel shod at all bearing surfaces? fore and after on poopdeck hatch all steel / Are battens and wedges efficient and in good condition? Yes. / Locking bars fitted Are tarpaulins in good condition and in accordance with rule requirements? Yes. / to 1st Hatchway Are lashings provided in accordance with rule requirements? Yes. / (Hall 20/10/44)									

Particulars of fiddle, funnel and ventilator coamings:— Fiddle, funnel and ventilators in efficient condition. Gratings on fiddle top fitted with efficient steel hinged covers. Engine skylight all steel with steel flaps strongly constructed.

Particulars of Flush Bunker Scuttles:— none fitted.

Particulars of Companionways:— Entrance tunnel escape on forward end poopdeck 3'0" x 2'4" x 3'0" high steel hinged down on afterside 1'0" x 1'5" sill 9"

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
 On forecastle deck - 4 vents 8" dia. coaming 36' x .30 led to enclosed forecabin } Ventilators are constructed in accordance with the Rules and coamings closed with wood plugs and canvass covers.
 On bridge deck - 2 vents 15" dia. coaming 30' x .32 led to holdspace.
 On freeboard deck - 1 vent 21" dia. coaming 13'0" x .34 led to holdspace. *slayed*
 On poopdeck - 1 vent 12" dia. coaming 30" x .30 led to enclosed poop.
 1 vent 9" dia. coaming 30" x .28 led to afterpeak.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
 On forecastle deck - 1 air pipe 4" dia. x 21" high from forepeak
 On freeboard dk forewell - 2 " " 5" " x 21" " from double bottom tanks
 On bridge deck - 2 " " 4" " x 21" " from double bottom tanks
 On freeboard dk afterwell - 2 " " 5" " x 21" " from double bottom tanks
 On poopdeck - 2 " " 3" " x 21" " from double bottom tanks
 1 " " 4" " x 21" " from afterpeak.
 All air pipes are closed with wood plugs and canvass covers.

Particulars of Gangway Cargo and Coaling Ports:— none fitted.

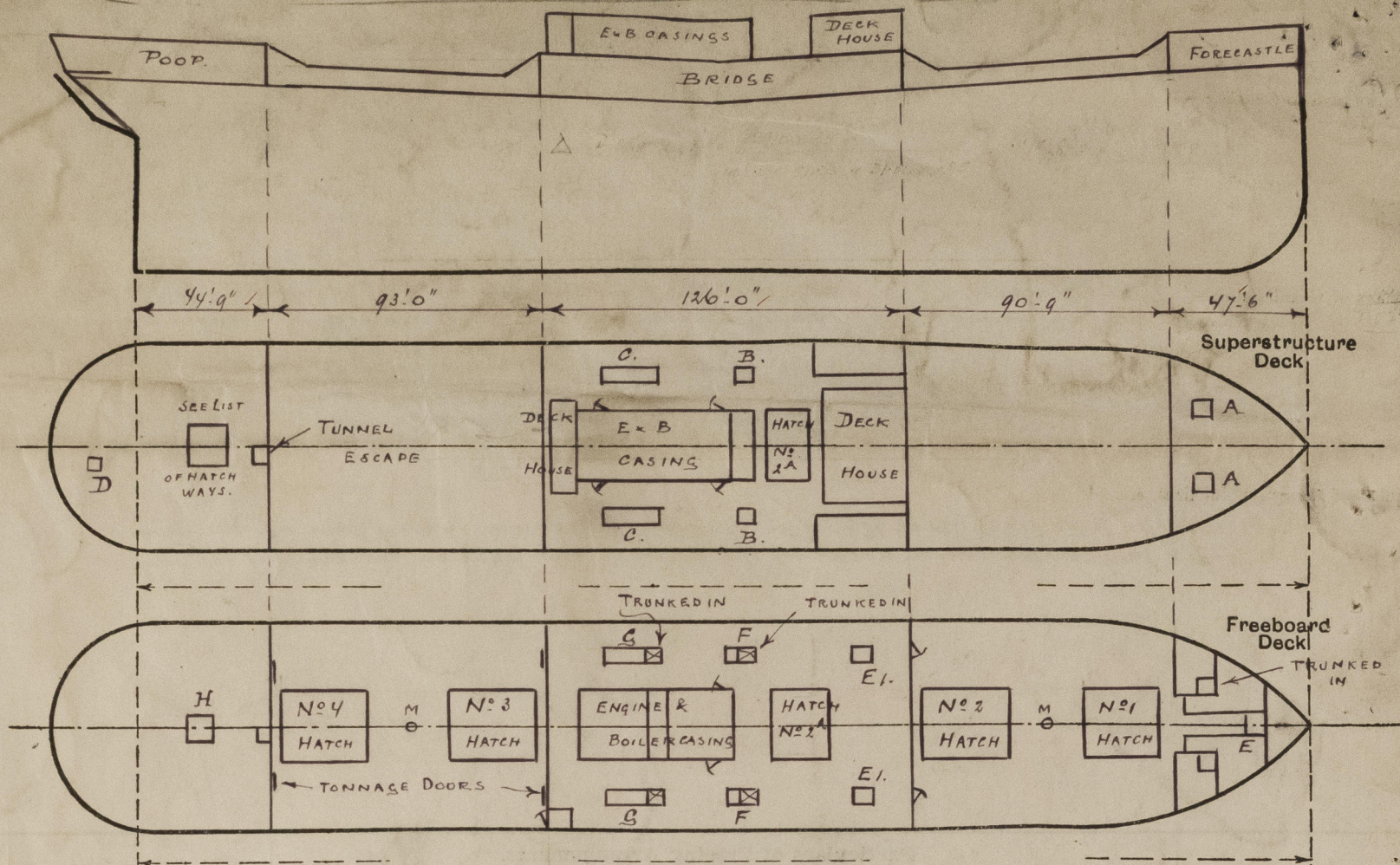


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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—

The Particulars for Convention freeboard have been obtained whilst the vessel was discharging her cargo, she will be placed in drydock before leaving this port.



Small hatches on forecastle deck	A	3'6" x 3'6"	coaming 18"	hatches 2 1/2"	cleats spaced 21"	2 tarpaulins
bridge deck	B	6'0" x 5'0"	"	18"	"	2 1/2"
	C	2'0" x 5'0"	"	18"	"	2 1/2"
poop deck	D	2'6" x 2'6"	"	10" BA	"	2 1/2"
on freeboard deck under forecastle	E	3'2" x 3'0"	"	10" BA	"	2 1/2"
" " " " bridge	E1	5'10" x 5'0"	"	42"	"	3"
" " " " "	F	3'0" x 5'0"	"	10" BA	"	2 1/2"
" " " " "	G	15'0" x 5'0"	"	10" BA	"	2 1/2"
" " " " poop	H	9'0" x 8'0"	"	10"	with steel bolted watertight cover	

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

The vessel has been examined and all timber deck cargo requirements of the Convention will be complied with before the vessel leaves this port.

TIMBER FREEBOARD. The centre keelson in No 2 & 4 double bottom tanks will be made reasonably watertight with permanent bulwarks fitted in fore and afterwell 3'9" in height, stiffened on upper edge by 7 x 3 1/2 x 40 BA and supported by strong bulwark stanchions consisting of 6 x 3 x 40 BA lashed to bulwark with 5 rivets and connected to deck stringer plate in way of deck beams with single lug 6 x 6 x 50 spaced 5'9" apart.

Poop and forecastle deck fitted with rail and stanchions; Bridge deck bulwark steel 3'5" in height. All openings to spaces below freeboard deck are securely closed and battened down as required.

Access to the quarters of the crew, to machinery space and to all other parts used in the necessary working of the ship is at all times available.

Guard lines and lifelines will be fastened to the uprights on each side of the deck cargo to a height of at least 4'0" above the cargo spaced not more than 12" apart vertically.

A lifeline will also be fitted at the centre line of the ship.

Wood uprights fitted in strong 3 1/2 x 3 1/2" angle sockets connected to deck stringer plates by electric welding spaced ± 10'0" apart and 6'0" from end bulkheads of erections and secured by strong iron bands connected to bulwark rail.

Eyeplates for lashings connected to top of sheerstake with 3 rivets spaced 10'0" apart and 6'0" from end bulkheads of erections.

Steering arrangements are effectively protected from damage by cargo and carried over afterwell by strong steel wire on guide sheaves fitted on shrouts.

No hands steering gear is fitted on poop deck but a relieving tackle has been supplied.

Builder's name and yard number

A. Stephen & Sons Ltd. Glasgow Yard number 524.

Names of sister ships

The Owners have requested to receive the first hand assignment by cablegram if possible.

Owners

S.S. "Magdala" Co. Ltd. MacLay & McFartyne Ltd. Mgrs.

Fee

163.20

will be

Received by me

Exp.

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