

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~having *Poop Bridge and Forecastle*Port of Survey *London*Date of Survey *2nd 13th December, 1932.*Name of Surveyor *Geo. A. Paine & Co. Ltd.*Particulars of Classification *+100A1**Shl. No. 1-29.**HIND 100 ARISA* (Type of Superstructures.)Ship's Name
ENRICO MAZZARELLA

Nationality and Port of Official Number

Registry *ITALIAN**BRITISH* *PALESTINE*
NEWCASTLE *448102*

Gross Tonnage

4963

Date of Build

*1924/11*Moulded Dimensions: Length *399.66'* Breadth *53.0'* Depth *29'-7 1/2"*Moulded displacement at moulded draught = 85 per cent. of moulded depth *11770* tonsCoefficient of fineness for use with Tables *772*

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	<i>29.62</i>	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	<i>53.00</i>
Stringer plate	<i>.04</i>	(29.66 - 26.65) 3 = +9.03"		Standard Round of Beam = $\frac{B \times 12}{50}$	<i>12.72</i>
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	<i>13.50</i>
T $\left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Difference	<i>.78</i>
Depth for Freeboard (D) =	<i>29.66</i>			Restricted to	
				Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right)$	<i>= .78 x .526 = .41</i>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	<i>36.25</i>	<i>36.25</i>	<i>8.0'</i>		<i>36.25</i>	Standard Height of Superstructure <i>7.50</i>
" overhang ...						" " R.Q.D.
R.Q.D. enclosed ...						Deduction for complete superstructure <i>41.98</i>
" overhang ...						Percentage covered $\frac{S}{L} =$ <i>47.56%</i>
Bridge enclosed ...	<i>117.5</i>	<i>117.50</i>	<i>8.0'</i>		<i>117.50</i>	" " $\frac{S_1}{L} =$ <i>47.40%</i>
" overhang aft ...	<i>2.66</i>	<i>2.00</i>	<i>8.0'</i>		<i>2.00</i>	" " $\frac{E}{L} =$ <i>47.40%</i>
" overhang forward ...						Percentage from Table, Line A.
F'cle enclosed ...	<i>33.66</i>	<i>33.66</i>	<i>8.0'</i>		<i>33.66</i>	(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, Line B.
Trunk aft ...						(corrected for absence of forecastle (if required))
" forward ...						Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...						Deduction = <i>41.98 x .3379 = -14.19</i>
" " forward ...						
Total ...	<i>190.07</i>	<i>189.41</i>			<i>189.41</i>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>49.97</i>	1		<i>49.97</i>	<i>60"</i>	<i>60.00</i>	1		<i>60.00</i>
1/4 L from A.P. ...	<i>22.24</i>	4		<i>88.96</i>	<i>28"</i>	<i>26.86</i>	4		<i>107.44</i>
1/2 L " ...	<i>5.49</i>	2		<i>10.98</i>	<i>6.5"</i>	<i>6.69</i>	2		<i>13.38</i>
Amidships ...		4					4		
3/4 L from F.P. ...	<i>10.98</i>	2		<i>21.96</i>	<i>14"</i>	<i>13.19</i>	2		<i>26.38</i>
1/4 L " ...	<i>44.48</i>	4		<i>177.92</i>	<i>53"</i>	<i>52.93</i>	4		<i>211.72</i>
F.P. ...	<i>99.94</i>	1		<i>99.94</i>	<i>120"</i>	<i>120.00</i>	1		<i>120.00</i>
Total ...				<i>449.73</i>					<i>538.92</i>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{89.19}{18} \left(.75 - .2378 \right) = -2.55$

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 = *29.66*

Summer freeboard = *5.71*

Moulded draught (d) = *23.95*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *6"*

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

T =

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	<i>9.03</i>	
Deduction for superstructures ...		<i>14.19</i>
Sheer correction ...		<i>2.55</i>
Round of Beam correction ...		<i>.10</i>
Correction for Thickness of Deck amidships ...		
Other corrections, scantlings, etc. ...		
	<i>9.03</i>	<i>16.84</i>

Summer Freeboard = *68.40*SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck: *5'-8 1/2"*

Tropical Fresh Water Line above Centre of Disc ...	
Fresh Water Line " " ...	
Tropical Line " " ...	
Winter Line below " " ...	
Winter North Atlantic Line " " ...	

Tropical Fresh Water Freeboard ...	
Fresh Water " " ...	
Tropical " " ...	
Winter " " ...	
Winter North Atlantic " " ...	

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
FREEBOARD DECK						BRIDGE DECK	POOP DECK	BUNKER ON E.R. CASING TOP		
Description of Hatchway	N° 1	N° 2	N° 3	N° 4	N° 5	N° 3	N° 6			
Dimensions of Hatchway	33'9" x 22'0"	35'0" x 22'0"	17'6" x 22'0"	35'0" x 22'0"	35'0" x 22'0"	17'6" x 22'0"	10'0" x 17'0"	4'11" x 21'6"		
COAMINGS	Height above Deck	30"	30"	30"	30"	30"	30"	30"		
	Thickness	44"	44"	44"	44"	44"	44"	44"		
	Sides	8'3" x 40 BA	7'10" x 40 BA	As N° 1	As N° 2	7'3" BA	6'3" BA	all around		
	Stiffeners	3 x 2	3 x 2			1.8P each side	1.8P each side			
HATCH BEAMS	Number	5	5	2	5	5	2			
	Spacing	5'7"	5'9"	5'10"	5'9"	5'9"	5'10"			
	Scantling and Sketch	22" x 38"	As N° 1							
	Bearing Surface	3"	3"	3"	3"	3"	3"			
FORE AND AFTERS	Number						2			
	Spacing						4'3"			
	Unsupported Lengths						10'0"			
	Scantling* and Sketch	None	None	None	None	None	2 1/2" x 2 1/2" x 40 BA	None		
HATCH COVERS	Material	Wood					Wood	Wood		
	Thickness	3"					3"	3"		
	How fitted	F & A					ATHWARTSHIP	F & A		
	Bearing Surface	3" and 4 1/2"					3" and 6"	3"		
Spacing of Cleats	24"	24"	24"	24"	24"	24"	24"	24"		
Number of Tarpaulins	2	2	2	2	2	2	2	2		
*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 fiddle, funnel and ventilator coamings:— Motor Vessel - No fiddle. Funnel & ventilator in good condition. Engine room skylight of steel strongly constructed.										

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

E 1 Steel companionway on poop leading to steering engine space. Opening in deck 2'6" x 5'0" casing 6'3" high fitted with 2" thick solid hard wood hinged door workable both sides - 23" x 52" sill 19" high.

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

1 on forecabin head	8 1/2" diameter	coaming 16" high and 3/8" thick	leading to F.P.
2 " " "	16" " "	32" " "	to hold.
2 " fore well deck	17" " "	36" " "	3/8" " "
2 " bridge deck	22" " "	33" " "	3/8" " "
2 " aft well deck	18" " "	36" " "	3/8" " "
2 " poop	22" " "	30" " "	3/8" " "
1 " poop	22" " "	30" " "	3/8" " "

Efficient
Temporary closing appliances complete

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

3 on forecabin head	leading to F.P.T. and D.B. Tanks	2 1/2" diameter	12" high
6 " bridge deck	" " D.B. Tanks	2" " "	18" " "
2 " aft well deck	" " "	3" " "	18" " "
2 " poop	" " AFT	2 1/2" " "	12" " "
4 " fore well deck	" " D.B. Tanks	4" " "	32" " "
4 " bridge deck	" " "	4" " "	32" " "
4 " aft well deck	" " "	4" " "	32" " "

Efficient
Temporary closing appliances

Particulars of Gangway Cargo and Coaling Ports:—

None.



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Particulars of Scuppers and Sanitary Discharge Pipes:—

1 scupper each side midships from bridge space.
All sanitary discharge from space above foreboard deck, fitted with storm valve on ship's side.

Particulars of Side Scuttles:—

None below foreboard deck. All side scuttles of strong construction & fitted with hinged deadlights.

Particulars of Guard Rails:—

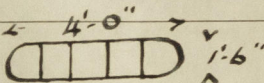
Forecastle head & Poop. — Open rails all round. — 3 rails 43" high. Main chain spaced 60"
Bridge. — Plate bulwarks ahead of saloon. 43" high then open rails. 43" high. — 3 rails. Main chain spaced 60" aft of bulwarks.
Forward & After well decks. — Plate bulwarks. 42" high.

Particulars of Gangways, Lifelines, etc.:—

None

Suitable provision is made for
rigging lifelines available for use in
any part of the ship which might have
to be used by the crew in the regular working
of the ship

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	110'	42"		7	38.6 sq'	22 #
Forward Well	102.25'	42"	do. 4'-0" x 1'-6"	7	38.6 sq'	20.4 #

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.

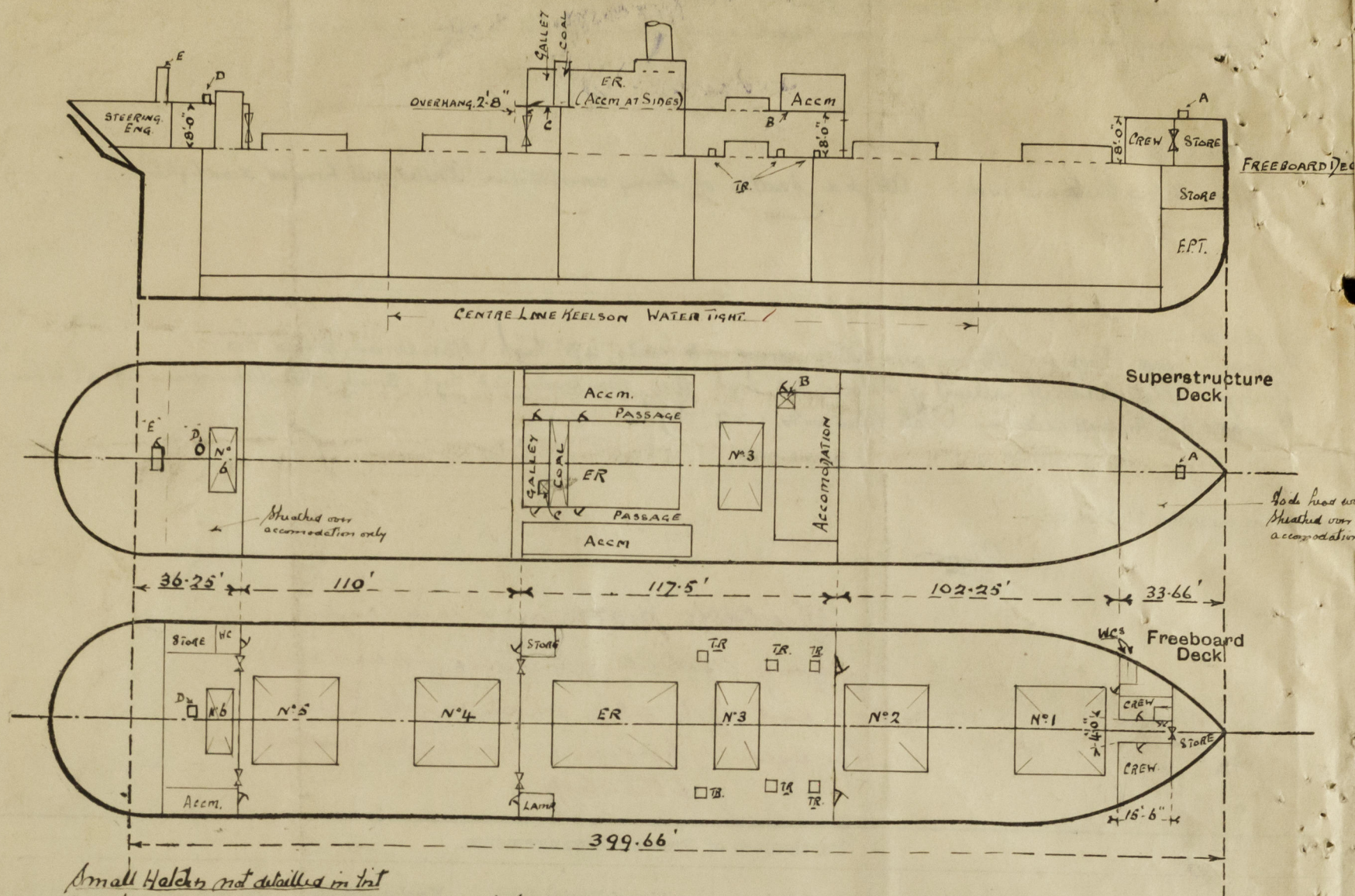
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..	.40	.34	7"x3"x40 BA	28" - 30"	Sup. T & B.	2 - 38"x61" 2 - 24"x60"	23"	8'-0"
Raised Quarter Deck Bulkhead ...	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead ... ..	.40	.34	3"x3"x40"	30"	None	2 - 38"x50" 2 - 24"x60"	22"	8'-0"
Bridge, Forward Bulkhead ... ..	.44	.40	9"x3"x50 BA	30"	Sup.	2 - 42"x52"	23"	8'-0"
Forecastle Bulkhead ... ..	.34	.30	3"x3"x40	30"	None	1 - 24"x60"	22"	8'-0"
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Super-structure Decks	✓	.32	3"x3"x32	30"	BxTs. Top. Continues at bottom.	2 - 30"x68"	10"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	.32	3"x3"x32	30"	"	None	✓	✓
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead	2 - Shifting boards 2 3/4" thick in riveted channels. — 1 strong steel hinged down to the H.L. — workable both sides. — 1 - 2" thick hard wood door to Aft.
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead	2 - Shifting boards 2 3/4" thick in riveted channels — 2 strong steel hinged down to the H.L. — workable both sides.
Bridge, Forward Bulkhead	Two strong steel hinged doors, secured by dogs spaced 10 1/2" to 12" apart — workable from outside only.
Forecastle Bulkhead	One steel hinged door workable both sides, strongly constructed — leading to H.L. & lavatory.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Super-structure Decks	Two steel hinged doors strongly constructed. Port door workable both sides — Starboard door workable from outside only.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	No openings.
Deckhouses on Flush Deck Ships ...	✓

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:—



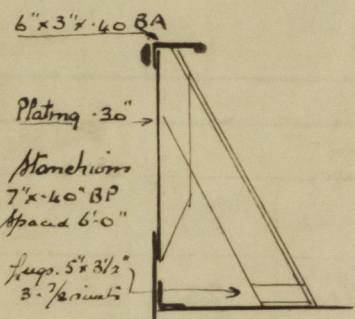
Small Hatches not detailed in list

- A. Hatch to F.P. 26" x 23" coaming 14" high 3/8" thick 3" wood coam. 3" surface. cleats, battens & 2 tarpaulins
- B. Flush hatch to Store in bridge space. - 30" x 33" filled with wood grating. door in horse casing 29" x 60" fill 18" - 2" Teak framed.
- C. " " " bridge space. (in galley) 30" x 30" " 3" wood coam. locking bar. Galley door 14" x 66" fill 10"
- D. Turned rope on poop. 22" diameter. 30" high. *capable of being securely closed*
- T.R. - Turning hatches in bridge space 24" x 28" coamings. 11" high x 1/2" thick 3" wood coam. bearing surface 1 1/4". cleats battens & 2 tarpaulins.

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



TIMBER LOAD LINE REQUIREMENTS


Steering engine is at midan head. controlled from bridge & from poop.



BULWARKS 3'-6" high FORE & AFT HELLS

Sockets and eye plates ~~may~~ *supplies* to be fitted in place at the first opportunity

Sockets  12"  10 3/4" channel. ~~to be~~ welded to deck & spaced not more than 10'-0" apart

Eye plates  9 x 3/8" ~~to be~~ filled not more than 10'-0" apart & 6'-6" from ends

Holes now drilled in bulwark rail bar for lashings for uprights.

Information obtained on board.

at 7'-10" draft. — deadweight

8'-6"	38.85 tons per inch
19'-0"	5410 tons
24'-2"	8000 tons

Special Survey N° 2. due 11/32 part held but not now advanced

Survey held whilst vessel in dry dock

Builder's name and yard number A. Mc. Millan & Son Ltd. Dumbarton N° 636

Names of sister ships S.S. OAKWORTH

Owners Walglish Steam Shipping Co. Ltd. (R. S. Walglish Ltd. Managers)

Fee £ 12-15-0

Received by me

(*af* - 7 DEC 1932)



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