

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

 Index. No. 31624
 (For London Office only.)
 21 SEP 1932

 Having Shelter deck with Tonnage opening.
 (Type of Superstructures.)
Port of Survey LondonDate of Survey 20th Sept 1932Name of Surveyor C. H. Stocks

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

S.S. "MEREL"British
London14868010881925-9Moulded Dimensions: Length 245'0" Breadth 36'0" Depth 22'0" 14'50"Moulded displacement at moulded draught = 85 per cent. of moulded depth 2164 tonsCoefficient of fineness for use with Tables .697 as per Rule.Particulars of Classification +100A1S.S. Low No. 29 with freeboard

Depth for Freeboard (D)

Moulded depth 14'50"Stringer plate03

Sheathing on exposed deck

 $T \left(\frac{L-S}{L} \right) =$ ✓Depth for Freeboard (D) = 14'53"

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 =(16.33 - 14.53) 1.884 = -3.39If restricted by superstructures ✓

Round of Beam correction

Moulded Breadth (B) 36'0"Standard Round of Beam = $\frac{B \times 12}{50} =$ 8'64"Ship's Round of Beam = 9'0"Difference .36

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.36}{4} \times .0806 = -.01$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>4'00"</u>	<u>4'00"</u>	<u>7'5"</u>	<u>✓</u>	<u>4'00"</u>
" overhang ...	<u>4'00"</u>	<u>34'50"</u>	<u>7'5"</u>		<u>34'50"</u>
R.Q.D. enclosed ...	<u>69'00"</u>				
" overhang ...					
Bridge enclosed ...	<u>164'0"</u>	<u>164'00"</u>	<u>7'6" 6'10"</u>	<u>✓</u>	<u>164'00"</u>
" overhang aft ...	<u>4'0"</u>	<u>3'00"</u>			<u>3'00"</u>
" overhang forward					
Fore enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	<u>4'0"</u>	<u>19'75"</u>	<u>7'6"</u>	<u>✓</u>	<u>19'75"</u>
" " forward					
Total ...	<u>245'00"</u>	<u>225'25"</u>			<u>225'25"</u>

Standard Height of Superstructure 6'0"" " R.Q.D. ✓Deduction for complete superstructure 30'5"Percentage covered $\frac{S}{L} =$ 100%" $\frac{S_1}{L} =$ 91.94%" $\frac{E}{L} =$ 91.94%Percentage from Table, Line A. 90.09%(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 = 30'50" x .9009 = -27'48"

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>34'50"</u>	<u>1</u>		<u>34'50"</u>	<u>41'00"</u>	<u>59'00"</u>	<u>1</u>		<u>59'00"</u>
$\frac{1}{4}$ L from A.P. ...	<u>15'35"</u>	<u>4</u>		<u>61'40"</u>	<u>18'17"</u>	<u>26'25"</u>	<u>4</u>		<u>105'00"</u>
$\frac{2}{4}$ L " ...	<u>3'79"</u>	<u>2</u>		<u>7'58"</u>	<u>4'54"</u>	<u>6'49"</u>	<u>2</u>		<u>12'98"</u>
Amidships ...	<u>✓</u>	<u>4</u>		<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>4</u>		<u>✓</u>
$\frac{3}{4}$ L from F.P. ...	<u>7'59"</u>	<u>2</u>		<u>15'18"</u>	<u>9'26"</u>	<u>11'22"</u>	<u>2</u>		<u>22'44"</u>
$\frac{1}{4}$ L " ...	<u>30'70"</u>	<u>4</u>		<u>122'80"</u>	<u>37'13"</u>	<u>45'39"</u>	<u>4</u>		<u>181'56"</u>
F.P. ...	<u>69'00"</u>	<u>1</u>		<u>69'00"</u>	<u>84'00"</u>	<u>102'00"</u>	<u>1</u>		<u>102'00"</u>
Total ...				<u>310'46"</u>	<u>+18'00"</u>				<u>482'98"</u>

 Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{172'52}{18} \times (.75 - .50) = -2'40"$

If limited on account of midship superstructure,

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 14'53"Summer freeboard = .17Moulded draught (d) = 14'36"

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3'59" = 3'2"Addition for Winter North Atlantic Freeboard (if required) = 2"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 2596

Tons per inch immersion at summer load water line

 $T =$ 17'15"Deduction = $\frac{\Delta}{40T}$ inches $=$ 3'79" $=$ 3'3/4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient .697 + .68 = 1.377
1.36 1.36Depth Correction ✓ 3'39"Deduction for superstructures ✓ 27'48"Sheer correction ✓ 2'40"Round of Beam correction ✓ .01Correction for Thickness of Deck amidships ✓ ✓Other corrections, scantlings, etc. ✓ ✓31'30"31'69"33'28"

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

Tropical Fresh Water Line above Centre of Disc 3'3/4"Fresh Water Line " 3'3/4"Tropical Line " 0"Winter Line below " 3'2"Winter North Atlantic Line " 5'1/2"Tropical Fresh Water Freeboard 0' - 2" limitedFresh Water " minus 0' - 1'3/4"Tropical " 0' - 2" limitedWinter " 0' - 5'1/2"Winter North Atlantic " 0' - 7'1/2"
 MARKING FORM
 RECEIVED 3 OCT 1932

 MARKING FORM
 RECEIVED 29 SEP 1932

W429-0079(112)

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
← SHELTER DECK →					← UPPER DECK →						
Description of Hatchway	N°1	N°2	N°3	N°4	TONNAGE OPENING	N°1	N°2	N°3	N°4		
Dimensions of Hatchway	20' x 16'	30' x 16'	20' x 16'	16' x 16'	4'-0" x 16'-0"	14' x 10'-6"	40'-8" x 16'	24'-9" x 16'	16'-6" x 16'		
COAMINGS	Height above Deck	30 ✓	30 ✓	30 ✓	30 ✓	12" ✓	9" ✓	9" ✓	9" ✓	9" ✓	
	Thickness { Sides	.44 ✓	.50 ✓	.44 ✓	.44 ✓	.44 ✓	.40 ✓	.40 ✓	.40 ✓	.40 ✓	
	Thickness { Ends	.44 ✓	.44 ✓	.44 ✓	.44 ✓	.44 ✓	.40 ✓	.40 ✓	.40 ✓	.40 ✓	
	Stiffeners ... 9" BA	5 x F.E. ✓	5 ✓	5 x F.E. ✓	5 x F.E. ✓	5 ✓	5 ✓	5 ✓	5 ✓	5 ✓	
	Brackets, Stays	15. 1FE ✓	25 ✓	15. 1FE ✓	15. 1FE ✓	✓	✓	✓	✓	✓	
HATCH BEAMS	Number	3	4	3	2	2	7	5	3		
	Spacing	5'-0" ✓	6'-0" ✓	5'-0" ✓	5'-4" ✓	4'-8" ✓	5'-1" ✓	4'-1 1/2" ✓	4'-1 1/2" ✓		
	Scantling and Sketch	3 1/2" x 3 x .42 ✓ 14 x .34 ✓ 3 1/2" x 3 x .42 ✓	3 1/2" x 3 x .42 ✓ 12 x .32 ✓ 3 1/2" x 3 x .42 ✓	3 1/2" x 3 x .42 ✓ 12 x .32 ✓ 3 1/2" x 3 x .42 ✓	3 1/2" x 3 x .42 ✓ 12 x .32 ✓ 3 1/2" x 3 x .42 ✓	3 1/2" x 3 x .42 ✓ 7 1/4" x .30 ✓ 3 1/2" x 3 x .42 ✓	3 1/2" x 3 x .42 ✓ 14 x .34 ✓ 3 1/2" x 3 x .42 ✓	3 1/2" x 3 x .42 ✓ 13 x .32 ✓ 3 1/2" x 3 x .42 ✓	3 1/2" x 3 x .42 ✓ 13 x .32 ✓ 3 1/2" x 3 x .42 ✓		
	Bearing Surface	3 ✓	3 ✓	3 ✓	3 ✓	3 ✓	3 ✓	3 ✓	3 ✓		
FORE AND AFTERS	Number	/	/	/	/	/	/	/	/		
	Spacing	/	/	/	/	/	/	/	/		
	Unsupported Lengths	/	/	/	/	/	/	/	/		
	Scantling* and Sketch	/	/	/	/	/	/	/	/		
	Bearing Surface	/	/	/	/	/	/	/	/		
HATCH COVERS	Material	W.P. ✓	W.P. ✓	W.P. ✓	W.P. ✓	W.P. ✓	W.P. ✓	W.P. ✓	W.P. ✓		
	Thickness	2 3/4 ✓	2 3/4 ✓	2 3/4 ✓	2 3/4 ✓	2 3/4 ✓	2 3/4 ✓	2 3/4 ✓	2 3/4 ✓		
	How fitted	F.E.A. ✓	F.E.A. ✓	F.E.A. ✓	F.E.A. ✓	F.E.A. ✓	F.E.A. ✓	F.E.A. ✓	F.E.A. ✓		
	Bearing Surface	3 ✓	3 ✓	3 ✓	3 ✓	3 ✓	3 ✓	3 ✓	3 ✓		
Spacing of Cleats	24" ✓	24" ✓	24" ✓	24" ✓	✓	24" ✓	24" ✓	24" ✓	24" ✓		
Number of Tarpaulins	2 ✓	2 ✓	2 ✓	2 ✓	✓	2 ✓	2 ✓	2 ✓	2 ✓		
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>Yes ✓</i></p> <p>Are battens and wedges efficient and in good condition? <i>Yes ✓</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>Tarpaulins & cleats to be placed in order. ✓</i></p> <p>Are lashings provided in accordance with rule requirements? <i>Yes ✓</i></p>											

Particulars of fiddley, funnel and ventilator coamings:—

Of substantial construction and efficient condition. ✓
Fiddley openings fitted with steel gratings & hinged steel covers. Boiler casing stands 16" above Bridge Deck. Engine skylights of steel with steel flaps. ✓
Bunker hatch 11'0" x 4'0" Coamings 25" x .40. 2 3/4" wood covers & battening arrangements. ✓

Particulars of Flush Bunker Scuttles:—

Nil. ✓

Particulars of Companionways:—

Nil. ✓

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

SHELTER DECK:— 6" to 14" dia Coamings 30" to 36" high x .30 to .36 ✓
2 @ 12" dia Coamings 9'0" x .36 stayed to Bridge front. ✓
Covers & canvas hoods provided. ✓

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

SHELTER DECK:— 2 1/2" to 4" dia S.N. 17" to 30" high x .30 ✓
1 @ 3" dia S.N. 7" high to Forward Insulated bilges. ✓
2 @ 4" dia S.N. 46" high protected by Bulwarks & Bridge front. ✓
Satisfactory temporary closing appliances fitted. ✓

Particulars of Gangway Cargo and Coaling Ports:—

Nil. ✓



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"Merel."

Particulars of Scuppers and Sanitary Discharge Pipes:—

one scupper each side of the tonnage well replaced by series down now return valve
Four
Two foredeck scuppers p.s. discharging below upper deck
fitted with storm valves. ✓ permanently closed.
Sanitary discharges from shelter deck discharging below upper deck
fitted with storm valves. ✓

Particulars of Side Scuttles:—

At fore & aft ends of shelter foredeck — of substantial
construction & fitted with hinged deadlights. ✓

Particulars of Guard Rails:—

Shelter deck:— Bulwark plating .28 with stiffening angles and 6" S.P.
stays spaced 6'0" apart. ✓
Bridge deck:— 3'6" high with 3 rails, stanchions spaced 4'0" apart. ✓

Particulars of Gangways, Lifelines, etc.:—

Nil ✓

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	82'0	3'6	36" x 20"	4	20.0 sq' ✓	
Forward Well	99'0	3'6	36" x 20"	4	20.0 sq' ✓	

State position of each freeing port

After Well:—

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.

All open ports with 2 rails except 3 forward ports which
have balanced hinged doors

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 ... ..	.26 ✓	.26 ✓	3" x 3" fl. ✓	31 1/2" ✓	Nil ✓	Nil ✓	- ✓	7'6" ✓
Raised Quarter Deck Bulkhead ...	-	-	-	-	-	-	-	-
Bridge, After Bulkhead ... ..	.26 ✓	.26 ✓	3 x 3 x .30 ✓	30" ✓	Nil ✓	4'0" x 3'0" ✓	17 1/2" ✓	7'6" ✓
Bridge, Forward Bulkhead	-	-	-	-	-	-	-	-
Forecastle Bulkhead ... ..	.26 ✓	.26 ✓	3 1/2 x 3 x .30 ✓	30" ✓	pl. B.H. lip ✓	6'0" x 4'0" ✓	8" ✓	9'5" ✓
Trunk, Aft	-	-	-	-	-	-	-	-
Trunk, Forward	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Super- structure Decks ... ..	.30 ✓	.28 ✓	3 x 2 1/2 x .30 ✓	22"-28" ✓	pl. B.H. lip ✓	5'5" x 2'0" ✓	12" ✓	7'9" ✓
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ... ..	.34 ✓	.32 ✓	4 x 3 x .36 ✓	24" ✓	B.H. lip ✓	-	-	6'6" x 7'6" ✓
Deckhouses on Flush Deck Ships ...	-	-	-	-	-	-	-	-

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

Poop Bulkhead	Nil ✓
Raised Quarter Deck Bulkhead ...	-
Bridge, After Bulkhead	3" Storm boards in full length riveted channels. ✓
Bridge, Forward Bulkhead	-
Forecastle Bulkhead	Steel sliding door secured by lock (Stowage Room) ✓
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	-
Exposed Machinery Casings on Super- structure Decks	Steel hinged doors operated both sides (Locks to overhead) ✓
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	Nil ✓
Deckhouses on Flush Deck Ships ...	✓

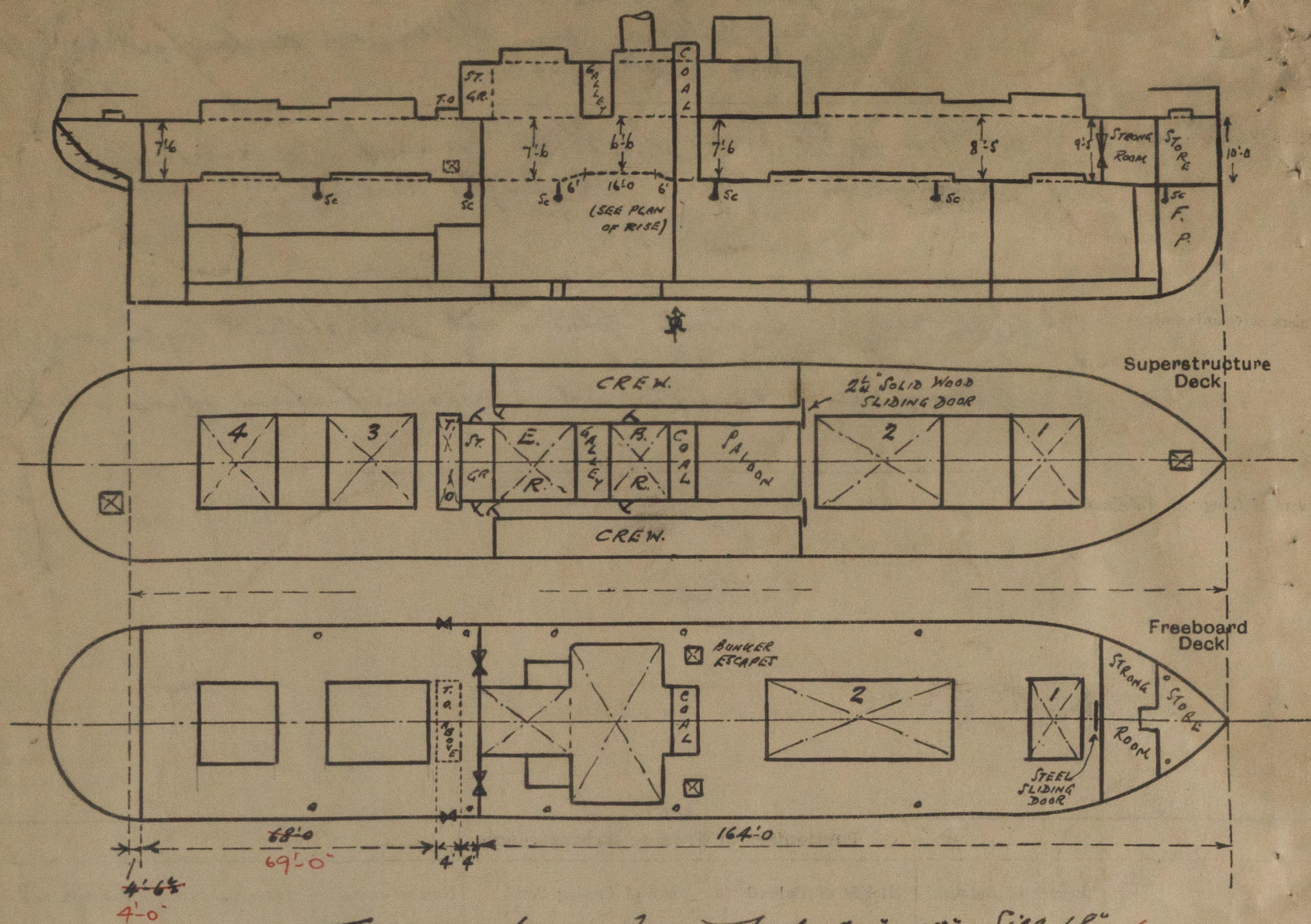


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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the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



Tonnage opening freeing port 74" x 15" Sill 18" *permanently closed*

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

Small Hatches

Shellin Aft Store Hatch 40" x 27" Coaming 18 x 40. 2 3/4" wood covers, 2 1/2" bearing Cleats 16" apart 2 Tarps. ✓
 For' store Hatch 40 x 27" Coaming 24 x 40 3" wood covers, 2 1/2" bearing Cleats 19" apart 2 Tarps. ✓

Upper Deck: Bunker escapes 2'0 x 2'0 Coaming 9" BA fitted with steel w.t. cover. ✓

U. Deck raised amidships.

Freeboard Survey held afloat, vessel discharging.

Quint

Builder's name and yard number *Ayrshire Dockyard Co. Ltd. N: 497*

Names of sister ships *SIMILAR TO S.S. "ROCK"*

Owners *General Steam Navigation Co. Ltd.*

Fee £ *8 : 10 : 0*

Received by me

21 SEP 1932



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