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No. 89165

SECTION

No. 460

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Index. No. 32982
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

Having Poop - Bridge & Forecastle

Port of Survey Newcastle

(Type of Superstructures.)

Date of Survey 7th Sept. 1932

Ship's Name
MAR TERSO
RAJAHSTAN

Nationality and Port of Registry
British
Newcastle
Official Number
161541
Gross Tonnage
6391
Date of Build
1929.11

Name of Surveyor P. H. Brondace

Moulded Dimensions: Length 425' 0" Breadth 56' 9" Depth 33' 4"
Moulded displacement at moulded draught = 85 per cent. of moulded depth 15290 tons
Coefficient of fineness for use with Tables 783 ✓

Particulars of Classification +100A1

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... 33.33	(a) Where D is greater than Table depth (D - Table depth) R = (33.37 - 28.33) 3 = 15.12	Moulded Breadth (B) 56.75 Standard Round of Beam = $\frac{B \times 12}{50} = 13.62$ Ship's Round of Beam = 13.2
Stringer plate 50 ... 04	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Difference <i>deficit</i> 12
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{12}{4} \times \frac{5295}{5295} = +0.2$
Depth for Freeboard (D) = 33.37 ✓		

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	34.75 ✓	34.75 ✓	8' 0"		34.75 ✓	Standard Height of Superstructure 7.5
" overhang ...	✓					R.Q.D.
R.Q.D. enclosed ...	✓					Deduction for complete superstructure 42
" overhang ...	✓					Percentage covered $\frac{S}{L} = 47.35$
Bridge enclosed ...	127.50 ✓	127.50 ✓	8' 0"		127.50 ✓	" $\frac{S_1}{L} = 47.05$
" overhang aft ...	SEE SKETCH					" $\frac{E}{L} = 47.05$
" overhang forward ...	+ 2.50 ✓	1.25 ✓			1.25 ✓	Percentage from Table, Line A. (corrected for absence of forecastle (if required))
Fore enclosed ...	36.50 ✓	36.50 ✓	8' 0"		36.50 ✓	Percentage from Table, Line B. (corrected for absence of forecastle (if required)) 33.49
" overhang ...	✓					Interpolation for bridge less than 2L (if required)
Trunk aft ...	✓					Deduction = 42 × 33.49 = 14.06
" forward ...	✓					
Tonnage opening aft ...	✓					
" forward ...	✓					
Total ...	201.25	200.00			200.00	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	52.5	1		52.50	81' 81	81.0	1		81.00	Mean actual sheer aft = Excess Mean standard sheer aft
1/4 L from A.P. ...	23.36	4		93.44	36.3 36.73	36.73	4		146.92	Mean actual sheer forward = Excess Mean standard sheer forward
3/4 L " ...	5.78	2		11.56	9 9.18	9.18	2		18.36	
Amidships ...		4					4			Length of enclosed superstructure forward of amidships = 7.12 ✓
3/4 L from F.P. ...	11.56	2		23.12	12.2 12.44	12.44	2		24.88	" aft of " = 7.12 ✓
1/4 L " ...	46.72	4		186.88	49.3 49.77	49.77	4		199.08	
F.P. ...	105.0	1		105.00	115 115	115.00	1		115.00	
Total ...				472.50					585.24	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - S}{2L} \right) = \frac{112.74}{18} \left(\frac{75 - 23.67}{2} \right) = -3.21$

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 = 33.37
Summer freeboard = 6.94
Moulded draught (d) = 26.43

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ = 14290

Tons per inch immersion at summer load water line

T = 484

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

= 7.38

7 1/2

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{783 + 68}{1.36}$

Depth Correction ... 15.12
Deduction for superstructures ... 14.06
Sheer correction ... 3.21
Round of Beam correction ... 0.2
Correction for Thickness of Deck amidships ...
Other corrections, scantlings, etc. ...

	+	-
Depth Correction	15.12	
Deduction for superstructures		14.06
Sheer correction		3.21
Round of Beam correction	0.2	
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	15.14	17.27
Summer Freeboard	83.23	

79.35

85.36

12. Sept. 32

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

Tropical Fresh Water Line above Centre of Disc ... 14..
Fresh Water Line " " ... 7 1/2
Tropical Line " " ... 6 1/2
Winter Line below " " ... 6 1/2
Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ... 6-11 1/4
Fresh Water " " ... 5-9 1/4
Tropical " " ... 6-3 3/4
Winter " " ... 6-4 3/4
Winter North Atlantic " " ... 7-5 3/4

13 SEP 1932

5m. 3.32.

MARKING FORM
17 APR 1934
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MARKING FORM
12 DEC 1932
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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS													
← Upper Deck →							← Bridge →						
Description of Hatchway	...	...	...	...	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	...	...	...	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...	...	...	...	...
	Stiffeners	...	...	...	...	...	...	...	...	...	...	...	...
	Brackets, Stays	...	...	...	...	...	...	...	...	...	...	...	...

HATCH BEAMS	Number	...	...	...	...	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...	...	...	...	...

FORE AND AFTERS	Number	...	...	...	...	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...	...	...	...	...
	Unsupported Lengths	...	...	...	...	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...	...	...	...	...
HATCH COVERS	Material	...	...	...	...	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...	...	...	...	...
	How fitted	...	...	...	...	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...	...	...	...	...

Spacing of Cleats	...	...	...	...	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...	...	...	...	...

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle gratings are fitted with hinged steel covers ✓
 E.R. skylight is steel.
 Fiddle & funnel vents good ✓

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

Poof: entrance to crews quarters in steel house with hinged steel doors ✓
 in way-operating both sides. Sill 13" ✓

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

Fore deck: 2 @ 21" dia. to hold. Coamings 36" x 40" ✓
 1 @ 6" " " fore peak " 9" x 28"
 Fore well: 2 @ 21" " " hold " 36" x 40"
 Bridge: 4 @ 21" " " " " 36" x 40"
 Poof: 2 @ 21" " " " " 30" x 40"
 1 @ 13" " " tunnel " 30" x 36"

The ventilators are in accordance with Rule requirements.

Closing-wood plugs & canvas covers. ✓

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

Fore deck: 1 @ 4 1/2" x 11" to fore peak 1 @ 5" x 9" to P.B. tanks ✓
 Wells: 4 @ 4 1/2" x 11" " P.B. tanks 1 @ 3" x 36" " " " ✓
 Bridge: 9 @ 5" x 10" " aft peak.
 Poof: 1 @ 5" x 8" " aft peak.

Closing- canvas covers.

Particulars of Gangway Cargo and Coaling Ports:—

None.



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Particulars of Scuppers and Sanitary Discharge Pipes:—

Particulars of Scuppers and Sanitary Discharge Pipes :-
all W.C. discharges are above freeboard decks & are fitted with storm valves
One scupper from bridge space overboard P.O.S. Storm valve fitted.
" " fore " " " " ✓

Particulars of Side Scuttles:—

Particulars of Side Scuttles:—
No. of face spaces. hinged dead-lights fitted. ✓

Particulars of Guard Rails :—

Particulars of Guard Rails :-

Poof. bridge & fochle :-	3 tier rails	3' 3" high.	Stems.	spaced 4' 6" apart.
Bridge :-	bulwarks	3' 5" high.	Stems.	6" x 3 1/2" x 48" sh. 5' 2" apart.
Wells	"	3' 6"	"	5' 6" "

Particulars of Gangways, Lifelines, etc. :—

Wire life line set up with screw fitted on P.O. sides of both wells.

Particulars of Freeing Arrangements.

State position of each freeing port ... } After Well:— 4'4"-24'0"-49'0"-70'0" & 93'0" from bridge end.
 F. and A. position and height above deck edge) Forward Well:— 42'0"-57'0"-72'0" & 89'6" from fore end. } 15" above
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— } decks.

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.

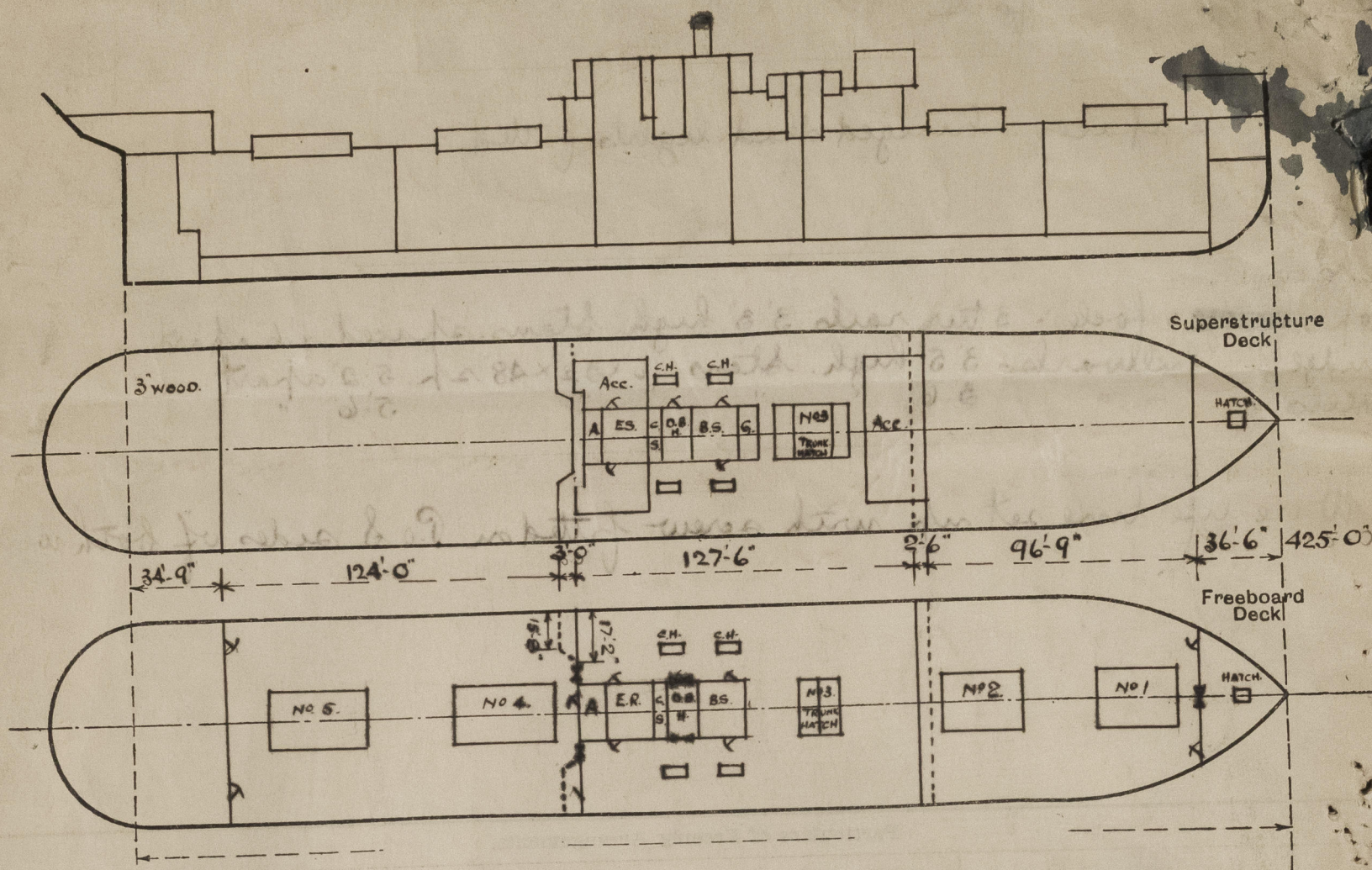
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	40"	36"	7" x 3" x 42"	30"	Plats.	2) 4'-6" x 24"	18"	
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	-	36"	4" x 3" x 30"	31'-48"	-	2) 4'-6" x 39" 2) 4'-6" x 24"	18"	
Bridge, Forward Bulkhead	48"	40"	9" x 3 1/2" x 46" HB	30"	Plats.	None	-	
Forecastle Bulkhead	-	38"	4" x 3" x 40"	36"-60"	None.	2) 4'-6" x 24" 1) 5'-0" x 48"	18" 16"	
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super- structure Decks	40"	36"	4 1/2" x 3" x 36"	30"-45"	Part plats.	5) 4'-6" x 24" 4) 4'-6" x 24"	21" 21"	7'-6"
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	42"	30"	4 1/2" x 3" x 36"	30"-45"	-	2) 4'-9" x 114"	18"	
Deckhouses on Flush Deck Ships ...	✓							

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

Poop Bulkhead	✓	hinged steel doors - operating both sides. ✓
Raised Quarter Deck Bulkhead ...	✓	
Bridge, After Bulkhead		2 steel plates with hook bolts (not thro' bulkhead). 2 hinged steel doors - ✓
Bridge, Forward Bulkhead	✓	no openings. (operating both sides)
Forecastle Bulkhead		1 steel plate with hook bolts (not thro' bulkhead) 2 hinged steel doors. operat. ✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	✓	(both sides)
Exposed Machinery Casings on Superstructure Decks		5 hinged steel doors - operating both sides. ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances		4 hinged steel doors - operating both sides. ✓
Deckhouses on Flush Deck Ships ...		2 horizontal sliding steel doors ✓

Rapistan

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:—



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

No Timber Assignment required.

Vessel examined afloat.

<i>L. Dft.</i>	<i>L. Disb.</i>	<i>T. P. V.</i>
26' 0"	13940	48.3
27' 0"	14530	48.5

OMT

Builder's name and yard number

Bartram & Sons, Ltd.

Names of sister ships

Owners

Bindustan S. S. Co. Ltd.

Fee £

14 : 9 : 0

Received by me



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