

WRECK SECTION NO. 562

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. **30406**
(For London Office only.)

W1029-0022 1/2

-3 OCT 1932

P.M. 914

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having **POOP, BRIDGE & FORECASTLE.**Port of Survey **CALCUTTA.**Date of Survey **6.9.32.**Name of Surveyor **D. Smith.**Particulars of Classification **+100 A.I.
with freeboard.**
**Cal
J.S. No 231**

(Type of Superstructures.)

Ship's Name **"B.S. TALMA"** Nationality and Port of Registry **BRITISH - GLASGOW.** Official Number **147875.** Gross Tonnage **10,000.** Date of Build **1923-9**

Moulded Dimensions: Length **449.25** Breadth **59.25** Depth **31.5** To upper deck - **40.0** **20300** tons
Moulded displacement at moulded draught = 85 per cent. of moulded depth
Coefficient of fineness for use with Tables **.485**

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	40.0	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	59.25
Stringer plate	.04	(40.11 - 29.95) 3 = + 30.48		Standard Round of Beam = $\frac{B \times 12}{50}$	14.22
Sheathing on exposed deck	.07	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	6
$T \left(\frac{L-S}{L} \right) =$				Difference	8.22
Depth for Freeboard (D) =	40.11	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{8.22^2}{4} \times \frac{47.6}{44.7} = +.97$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	48.25	48.25	7.9		48.25	Standard Height of Superstructure 7.50
" overhang ...						" " R.Q.D.
R.Q.D. enclosed						Deduction for complete superstructure 42.00
" overhang	24.50	18.37	7.9		18.37	Percentage covered $\frac{S}{L} = 64.32$
Bridge enclosed...	106.17	95.55	7.9		95.55	" " $\frac{S_1}{L} = 52.94$
" overhang aft		106.17			106.17	" " $\frac{E}{L} = 52.94$
" overhang forward	67.50	33.75	7.9		33.75	Percentage from Table, Line A.
Fore enclosed ...	42.50	41.91	7.9		41.91	(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required)) 38.94
" forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = $42.00 \times \frac{38.94}{41.30} = - 16.35$
" forward						
Total	288.92	237.83			237.83	

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product	
A.P. ...	54.92	1	54.92	54.5	54.0	1	54.00	Mean actual sheer aft = Deficient
1/2 L from A.P. ...	24.44	4	97.76	24.0	24.09	4	96.36	Mean standard sheer aft = Deficient
2/2 L " ...	6.04	2	12.08	6.0	6.02	2	12.04	
Amidships ...		4		0.0		4		Length of enclosed superstructure forward of amidships = Deficient sheer
3/2 L from F.P. ...	12.08	2	24.16	12.0	12.05	2	24.10	
1/2 L " ...	48.89	4	195.56	48.0	48.19	4	192.76	
F.P. ...	109.85	1	109.85	108.0	108.0	1	108.00	
Total	494.32		494.33				487.26	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - S}{2L} \right) = \frac{7.07}{18} \left(\frac{75 - 3216}{4284} \right) = +.17$

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 = 40.25

Summer freeboard = 13.35

Moulded draught (d) = 26.90

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.72 = 6 3/4

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 15628$

Tons per inch immersion at summer load water line

T = 53.42

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

= 4.24

= 4 1/4

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	30.48	
Deduction for superstructures		16.35
Sheer correction	.17	17.35
Round of Beam correction	.92	
Correction for Thickness of Deck amidships	.47	
Other corrections, scantlings, etc.	1.66	
	50.80	
	44.45	
	83.03	16.35
	84.03	17.35
Summer Freeboard =	160.25	

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

Tropical Fresh Water Line above Centre of Disc	14	Tropical Fresh Water Freeboard	13' 4 1/4"
Fresh Water Line	7 1/4	Fresh Water	12' 2 1/4"
Tropical Line	6 3/4	Tropical	12' 9 1/2"
Winter Line below	6 3/4	Winter	13' 11"
Winter North Atlantic Line		Winter North Atlantic	

A summer line 5 1/4" above the centre of disc

MARKING FORM

18 MAR 1935

MARKING FORM

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PARTICULARS OF PROTECTION, TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway			No. 1.	No. 2.	No. 3.	No. 4.	No. 5.			
Dimensions of Hatchway			15'-9" x 16'-0"	25'-2 1/2" x 18'-0"	13'-9" x 13'-10"	16'-0 1/2" x 18'-0"	16'-0 1/2" x 18'-0"			
COAMINGS	{	Height above Deck	32 1/2"	- do -	- do -	- do -	- do -			
		Thickness { Sides	44	- do -	- do -	- do -	- do -			
		Stiffeners { Ends	44	- do -	- do -	- do -	- do -			
		Brackets, Stays	4 x 3 1/2 x 2" B.A.							
HATCH BEAMS	{	Number	2.	4.	2.	2.	2.			
		Spacing	5'-3"	5'-0"	4'-8"	5'-5"	5'-5"			
		Scantling and Sketch	3 1/2 x 3 x 34 angles	4 x 3 x 44 angles	3 x 3 x 42 angles	4 x 3 x 44 angles	4 x 3 x 44 angles			
		Bearing Surface	15" x 34 plate	16" x 38 plate	11" x 30 plate	17" x 36 plate	17" x 36 plate			
FORE AND AFTERS	{	Number								
		Spacing								
		Unsupported Lengths								
		Scantling* and Sketch								
Bearing Surface			3"	3"	3"	3"	3"			
HATCH COVERS	{	Material	PINE	- do -	- do -	- do -	- do -			
		Thickness	3	- do -	- do -	- do -	- do -			
		How fitted	F & A	- do -	- do -	- do -	- do -			
		Bearing Surface	3 1/2"	4"	3"	4"	4"			
Spacing of Cleats			21"	- do -	- do -	- do -	- do -			
Number of Tarpaulins			3.	- do -	- do -	- do -	- do -			

No. 3 Hatch in Bridge houses has a 7 1/2 B.A. coaming, otherwise particulars as given -

Nil

*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?

Yes
 Yes
 Yes

Particulars of fiddley, funnel and ventilator

No. 3 Hatch in Bridge towers
has a $7\frac{1}{2}$ B.R. coaming,
otherwise particulars are
given -

Particulars of fiddley, funnel and ventilator coamings:—

Donkey funnel casing - funnel casing 8'-0" high on boat deck fitted with gratings & hinged steel storm covers - hinged steel entrance doors to funnel in bridge space.

4 - 3'-0" diameter ventilators to stokehold - casings 5'-0" high -

4 - 3'-0" " " " " " " 3'-0"

Particulars of Flush Bunker Scuttles:—

N.L.

Particulars of Companionways:—

Particulars of Companionways :-

1. Companionway under fore-castle head to tween-decks - opening in deck 3'-0" x 5'-5" closed by hatch boards cleats & tarpaulins
2. Companionway in steel deck house between Nos 1 & 2 hatches fitted with T.N. doors on each side 3'-0" x 5'-5"
3. Companionways in bridge space (1-8'-0" x 15'-6" 2-6'-0" x 8'-0" 2-7'-3" x 7'-0" & 2-7'-3" x 3'-6" - the companionways are protected by stainless chains and closed by hatchboards, cleats & tarpaulins -
4. Companionways in steel deck house between Nos 1 & 5 hatches fitted with double T.N. doors 5'-0" x 5'-6".
5. Companionway in steel house on poop to crew quarters fitted with double teakwood doors 2'-3" x 5'-6".

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

19" dia. 1" ...

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

18" & 24" inch diameter ventilators to hold - coamings 2'-6" - all coamings above this height are efficiently secured to deck sections. ✓
wooden plugs & canvas covers supplied for closing purposes.

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

3 1/2" & 4 1/2" inch diameter Swan-neck C.I. pipes fitted in way of Linkwarks.
Wooden plugs supplied for closing purposes.

particulars of Gangway Cargo and Coaling Ports:—

No	Location	Material	Dimensions	Remarks
1	Quarway	timber	5'-10" x 3'-9"	secured by strongbacks
4	Cargo	upper timbers	3'-0" x 3'-0"	"
5	"	lower timbers	3'-0" x 3'-0"	"
6	Coaling	upper timbers	2'-6" x 2'-6"	"

Talma

Particulars of Scuppers and Sanitary Discharge Pipes:—

Scuppers nil - All sanitary discharges fitted with skin valves -

Particulars of Side Scuttles:—

13" inch diameter side scuttles fitted with lugged C.I. covers -

Particulars of Guard Rails:—

4 bar Guard rails on poop. bridge - Forecastle - 3'-9" high -

Particulars of Gangways, Lifelines, etc.:—

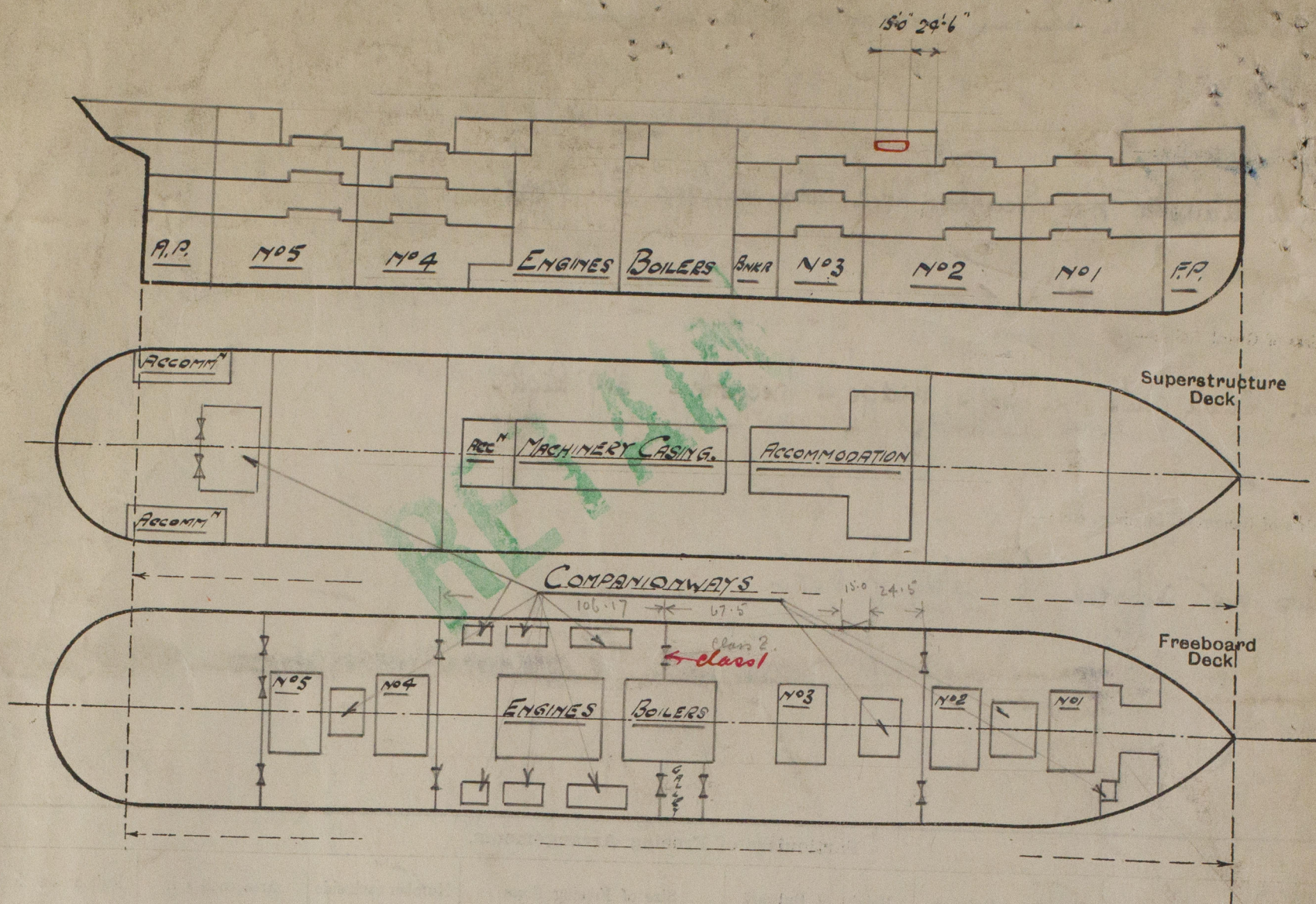
Lifelines are supplied for safety of crew -

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	69'	4'-0"	3'-9" x 1'-9"	4.	22.	14. 6.9
Foreward Well	44'	4'-0"	3'-9" x 1'-9"	4.	22.	15. 7.7
State position of each freeing port (P. and A. position and height above deck edge) { After Well: BRIDGE 8' 18' 12' 12' 19' 20' 11' 22' 13' BOOP BRIDGE.						
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. Single bar with flap - 12" inches above deck.						

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	4'-0" x 3/8"	1/4"	7 x 3 1/2 x 3/8"	24"	NIL	2'-5" x 5'-5"	12"	7'-9"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead	4'-0" x 5/16"	1/4"	3" x 3" x 3/8"	30"	NIL	4'-9" x 4'-6"	NIL	7'-9"
Bridge, Forward Bulkhead	3'-6" x 7/16"	3/8"	10 x 3 1/2 x 2 B.H.	30"	✓	5'-9" x 3'-6"	6"	7'-9"
Forecastle Bulkhead	4'-0" x 1/4"	1/4"	3" x 3" x 3/8"	42"	NIL	open.	✓	7'-9"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks	12 x 3/8	3/8	4 x 3 x 3/8	4'-6"	-	none	✓	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	12" x 5/16"	5/16"	4 x 3 x 3/8"	4'-6"	✓	5'-0" x 2'-0"	14"	7'-9"
Deckhouses on Flush Deck Ships ...								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	Seakwood entrance doors to crew quarters secured by handspikes & bolts
Raised Quarter Deck Bulkhead	Hinged fire proof steel door
Bridge, After Bulkhead	Stow boards in channels full height -
Bridge, Forward Bulkhead	Hinged steel doors fitted with double cleats operated from both sides - open - no closing appliances.
Forecastle Bulkhead	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships ...	2.R. casing enclosed in accommodation - hinged steel entrance doors to 2.R. in bridge space secured by handspikes & bolts. Steel skylight hand operated -

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 shewn on the following sketches:—



Freeboard deck is sheathed.

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

Particulars taken when vessel was in dock for Condition Survey—

Builder's name and yard number.....

Names of sister ships.....

Owners British India Steam Co

Fee £ Rs. 160/-

Received by me

[Signature]
O. Frost



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