

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.N<sup>o</sup> 12743.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Bristol</u>
having <u>Raised Quarter Deck, Bridge, and Forecastle</u>					Date of Survey <u>12<sup>th</sup> July 1932</u>
(Type of Superstructures.)					Name of Surveyor <u>J. Anderson</u>
Ship's Name <b>"SALTOM"</b>	Nationality and Port of Registry <b>BRITISH BRISTOL</b>	Official Number <b>113131</b>	Gross Tonnage <b>274</b>	Date of Build <b>1900-12</b>	Particulars of Classification <u>+100A1.</u> <u>FOR SAND CARRYING PURPOSES.</u> <u>S.S. Bro. 2<sup>nd</sup> No. 3-11, 25 S.S. Bro. Not-30</u>
Moulded Dimensions: Length <u>136.75</u> Breadth <u>22.50</u> Depth <u>10.50</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>518</u> tons					
Coefficient of fineness for use with Tables <u>.660</u>					

Depth for Freeboard (D)				
Moulded depth	...	...	...	10.50
Keel plate	.36	...	...	.03
Nothing on exposed deck				
$\frac{L-S}{L}$				
Depth for Freeboard (D) =				10.53

Depth correction	
(a) Where D is greater than Table depth (D-Table depth) R =	$(10.53 - 9.12) 1.052 = +1.48$
(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)	22.50
Standard Round of Beam = $\frac{B \times 12}{50}$	5.40
Ship's Round of Beam	5.50
Difference	Excess .10
Restricted to	
Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L})$	$\frac{.10}{4} \times .4922 = -.01$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed	42.30	42.30	3.42		42.30
" overhang					
Bridge enclosed <u>AT SIDE</u>	8.80	9.80	6.60		9.80
" overhang aft	10.30				
" overhang forward	9.80				
Fore enclosed <u>Open</u>	23.50	17.33	6.60		17.33
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	75.60	69.43			69.43

Standard Height of Superstructure	6.00
" " R.Q.D.	3.25
Deduction for complete superstructure	19.675
Percentage covered $\frac{S}{L} =$	55.29 %
" " $\frac{S_1}{L} =$	50.78 %
" " $\frac{E}{L} =$	50.78 %
Percentage from Table, Line A.	33.09
(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 =	19.675 x .3309 = 6.51

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	23.67	1		23.67	35.00	23.67	1		23.67
1/2 L from A.P.	10.53	4		42.12	15.01	10.53	4		42.12
"	2.60	2		5.20	3.74	2.60	2		5.20
amidships		4			.00		4		
from F.P.	5.21	2		10.42	4.73	4.73	2		9.46
"	21.07	4		84.28	18.96	18.96	4		75.84
F.P.	47.35	1		47.35	43.50	43.50	1		43.50
Total				213.04					199.79

Mean actual sheer aft	=	Excess
Mean standard sheer aft	=	
Mean actual sheer forward	=	Deficient
Mean standard sheer forward	=	
Length of enclosed superstructure	forward of amidships	= nil
"	aft of	= nil
A	A	S
4.73	5.21	3
18.96	21.07	3
43.50	47.35	1
	114.57	126.19
5 - .2764		
.4736	= + .35	
		$\frac{114.57}{126.19} = .908$
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 =	Ft. 10.53
Summer freeboard =	.75
Moulded draught (d) =	9.78

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 2.44 = 2 1/2

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

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient	Below .68	13.81
		13.81
Depth Correction	...	1.48
Deduction for superstructures	...	6.51
Sheer correction	...	.35
Round of Beam correction	...	.01
Correction for Thickness of Deck amidships	...	
Other corrections, scantlings, etc.	...	
		1.83
		6.52
		- 4.69
Summer Freeboard =		9.12

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

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



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		MAIN HATCH	COAL HATCH	HATCH TO DRAIN TANK	HATCH TO A.P. STORE				
Dimensions of Hatchway		36'3" x 12'3"	3'9" x 12'3"	2'4" x 1'6"	1'6" x 2'6"				
COAMINGS	Height above Deck	36"	36"	23"	15"				
	Thickness	45"	45"	30"	30"				
	Stiffeners	8" x 3" x 44"	8" x 3" x 44"	NONE	NONE				
	Brackets, Stays	6" x 30" B.P.	NONE	NONE	NONE				
HATCH BEAMS	Number	3							
	Spacing	SEE PAGE 4							
	Scantling and Sketch	3" x 3" x 30" 36" x 30" 2 1/2" x 1" CONVEX	NONE	NONE	NONE				
	Bearing Surface	2"							
FORE AND AFTERS	Number	3							
	Spacing	3'1"							
	Unsupported Lengths	SEE PAGE 4							
	Scantling* and Sketch	1 @ 6 1/2" x 6 1/2" 2 @ 6" x 6" P.P.	NONE	NONE	NONE				
	Bearing Surface	2 1/2"							
HATCH COVERS	Material	W.P.	W.P.	W.P.	W.P.				
	Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"				
	How fitted	THWART	F. & A.	F. & A.	F. & A.				
	Bearing Surface	2"	2 1/2"	2"	2"				
Spacing of Cleats		24"	24"	24"	24"				
Number of Tarpaulins		2	2	2	2				
<p>*Are wood fore and afters steel shod at all bearing surfaces? YES.</p> <p>Are battens and wedges efficient and in good condition? YES.</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? YES.</p> <p>Are lashings provided in accordance with rule requirements? YES.</p>									

Particulars of fiddle, funnel and ventilator coamings:—

Stokehold gratings covered with strong steel hinged covers.  
Fiddle and funnel ventilators in efficient condition.  
Engine skylight of wood, strongly constructed.

Particulars of Flush Bunker Scuttles:—

Two scuttles on Raised Quarter Deck of cast iron fitted with bayonet joints.

Particulars of Companionways:—

One steel companion 3'4" x 2'8" x 6'8" high on freeboard deck in forward well leading to space below freeboard deck. Door of steel 4'10" x 1'10" with 12" sill, door operated from both sides.

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

2 ventilators on freeboard deck in forward well 9" dia. Coamings 36" x 26" led to drain tank.  
Both ventilators constructed in accordance with the rules and coamings closed with wood plugs and canvas covers.

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

One C.I. air pipe on freeboard deck 36" high x 2 1/2" dia from fore peak.  
One " " " " R. Q. " 30" " x 2 1/2" " " aft.  
Both air pipes have snifting hole in top of bend and are closed with wood plugs & canvas covers.

Particulars of Gangway Cargo and Coaling Ports:—

NONE.



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Particulars of Scuppers and Sanitary Discharge Pipes —

One sanitary discharge forward below freeboard deck fitted with non return valve on ships side.  
 " " " amidships above " " " " " " " " " " " "

Particulars of Side Scuttles:

Side scuttles to crew space below freeboard deck fitted with hinged deadlights.  
 " " " " " in bridge not fitted with deadlights.

All scuttles of substantial construction.

Particulars of Guard Rails:—

Guard rails on forecastle deck 3'-0" high with 2 rods and stanchions spaced 3'-6" apart.  
 Steel bulwarks in forward well 4'-0" high efficiently constructed & supported.  
 " " on R. Q. deck 3'-3" " " " " " " " " " "  
 Wood " " Bridge " 3'-0" " " " " " " " " "

Particulars of Gangways, Lifelines, etc.:—

Suitable provisions are made for rigging lifelines which will be available for use in any part of the ship which may be used by the crew in the regular working of the ship.

Particulars of Freeing Arrangements.

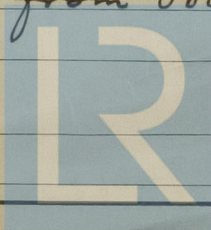
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well ... ..	42'-3 1/2"	3'-3"	2'-0" x 1'-6" 3'-0" x 1'-9"	2 1	11.25 { 6 sq. ft. 5.25	10.73
Forward Well ... ..	64'-9"	4'-0"	2'-7 1/2" x 1'-6"	3	15.75 sq. ft. 8'-4"	12.97
State position of each freeing port ... .. { After Well:— FROM BRIDGE AFT BHD. TO FORE END OF F.P. 4'-0" & 16'-6". HEIGHT ABOVE D.E. 6" (F. and A. position and height above deck edge) { Forward Well:— " " FOR " " AFT " " " 6", 10'-0" & 26'-0". " " " 11". 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. <span style="float: right;">BALANCED PLATE SHUTTERS. —</span>						

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 ... ..	✓							
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead ... ..	26"	26"	3" x 2 1/2" x 30"	30"	NONE	NONE	✓	6'-60"
Bridge, Forward Bulkhead ... ..	32"	26"	3" x 2 1/2" x 30"	30"	NONE	NONE	✓	6'-60"
Forecastle Bulkhead ... ..	✓							
Trunk, Aft ... ..	✓							
Trunk, Forward ... ..	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	32"	26"	2 1/2" x 1 1/4" HALF ROUND	27"	NONE	4'-6" x 1'-11"	18"	6'-75"
Exposed Machinery Casings on Superstructure Decks ... ..	✓							
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	✓							
Deckhouses on Flush Deck Ships ...	✓							

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

Poop Bulkhead ... ..	✓
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ... ..	No openings
Bridge, Forward Bulkhead ... ..	No openings
Forecastle Bulkhead ... ..	Open forecastle
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	Hinged steel doors, operated from both sides.
Exposed Machinery Casings on Superstructure Decks ... ..	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	✓
Deckhouses on Flush Deck Ships ...	✓

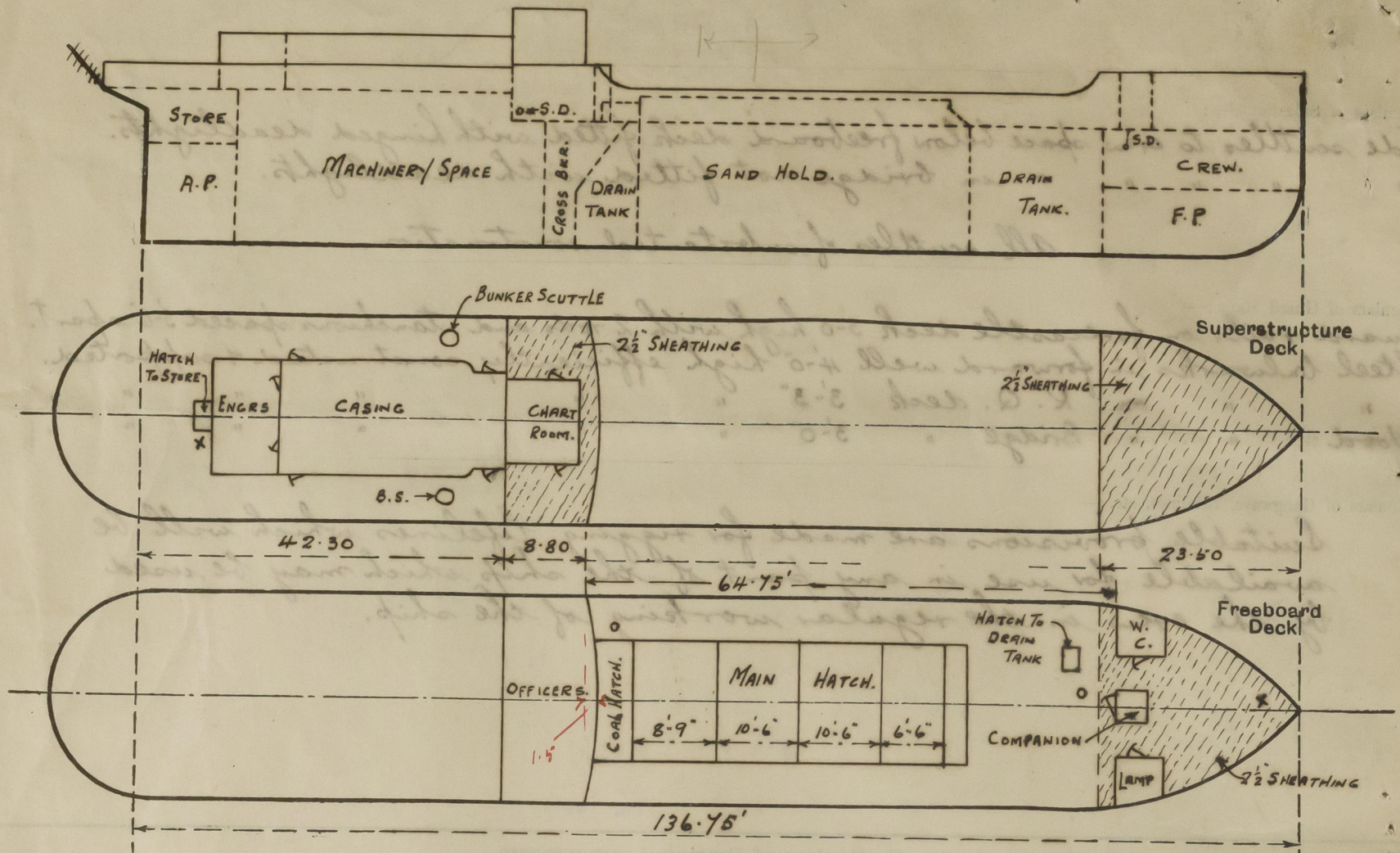


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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the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



$$+ \frac{2}{3} \times 1.5 = \frac{8.80}{9.80} = \text{Equiv length}$$

X AIR PIPES.  
O VENTILATORS.

$$\begin{aligned} & .908 \times 13.675 = 12.42 \\ & \frac{23.50 - 13.675}{2} = 4.91 \\ & 17.33 \end{aligned}$$

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

This survey has been held afloat and is therefore confined to an examination of the means for closing the openings in the decks and sides of the vessel.

J. Anderson

Builder's name and yard number

Ailsa S. B. Co., Ltd

Yard No. 92

Names of sister ships

Owners

Bristol Sand and Gravel Co., Ltd.

Fee £

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Received by me



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