

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

No 99857

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Ice and Bridge House

Port of Survey

Liverpool

(Type of Superstructures.)

Super 14.1.39

Date of Survey

February 1932

Ship's Name

BOSNIA

Nationality and Port of Registry

British
London

Official Number

160388

Gross Tonnage

2408
2407

Date of Build

1928.3

Name of Surveyor

Geo. R. Ryle

Moulded Dimensions: Length

292.0'

Breadth

44.75'

Depth

22.6'

Moulded displacement at moulded draught = 85 per cent. of moulded depth

Coefficient of fineness for use with Tables

.741

Particulars of Classification

8/100A.1.

Depth for Freeboard (D)

Moulded depth 22.6'

Summer plate 22.53

Shathing on exposed deck

 $T \left(\frac{L-S}{L} \right) =$

Depth for Freeboard (D) = 22.53

Depth correction

(a) Where D is greater than Table depth

(D - Table depth) R =

(22.53 - 19.47) x 2.247 = + 6.88

(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)

44.75'

Standard Round of Beam = $\frac{B \times 12}{50} =$

10.74

Ship's Round of Beam

11.7

Difference

.26

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.26}{4} \times 4.008 = -.03$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	128.62	128.62	7.9'	-	128.62
" overhang aft					
" overhang forward	29.29	29.29	7.9'	-	29.29
Fore enclosed	29.29	29.29	7.9'	-	29.29
" overhang					
Fore aft			7.9'		
" forward					
Tonnage opening aft					
" forward					
Total	157.91	157.91			157.91

Standard Height of Superstructure

6.42

" " R.Q.D.

Deduction for complete superstructure

34.80

Percentage covered $\frac{S}{L} =$

54.08

" " $\frac{S_1}{L} =$

54.08

" " $\frac{E}{L} =$

54.08

Percentage from Table, Line A.

(corrected for absence of forecastle (if required))

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

40.08

Interpolation for bridge less than 2L (if required)

Deduction = $34.8 \times 4.008 = - 13.95$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	39.20	1		39.20	39.1	39.00	1		39.00
$\frac{1}{4}$ L from A.P.	17.44	4		69.76	17.38	17.38	4		69.52
$\frac{1}{2}$ L "	4.34	2		8.62	4.34	4.34	2		8.68
Amidships	-	4		-	-	-	4		-
$\frac{3}{4}$ L from F.P.	8.62	2		17.24	8.69	8.69	2		17.38
$\frac{1}{4}$ L "	34.89	4		139.56	34.76	34.76	4		139.04
F.P.	78.40	1		78.40	78.0	78.00	1		78.00
Total				352.78					351.62

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - \frac{S}{2L}}{.75} \right) = \frac{1.16}{18} \left(\frac{.75 - .2704}{.75} \right) = + .03$

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 = 22.53

Summer freeboard = 3.02

Moulded draught (d) = 19.51

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 4.88 = 5.3

Addition for Winter North Atlantic Freeboard (if required = 2"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 5438 \text{ tons}$

Tons per inch immersion at summer load water line

T = 26.1

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

= 5.21 = 5.4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

741 + 68

1.36

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

6.91

13.98

7.07

Summer Freeboard = 36.27

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

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 " "

5 AUG 1932

RECEIVED 5 AUG 1932

W560-0113 1/2

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	1	2	3	4	5	3.	4	Escape Hatch	Bunker Bunkering Hatch	Bunker Hatch
Dimensions of Hatchway	22'5" x 17'6"	24'6" x 17'6"	14'4" x 24"	14'3 1/2" x 24"	22'6" x 17'6"	16'2" x 20'1"	14'3" x 20'1"	2'11" x 1'6"	2'5 1/2" x 2'5 1/2"	6'0" x 3'7"
COAMINGS	Height above Deck	30	as	as	as	9 x 3 1/2 x 50	as	9 x 3 1/2 x 50	9 x 3 1/2 x 50	9 x 3 1/2 x 50
	Thicknes { Sides	4 1/2	N ^o 1	N ^o 1	N ^o 1	3" A.	4" 3	3" A.	3" A.	3" A.
	Thicknes { Ends	4 1/2	N ^o 1	N ^o 1	N ^o 1	3" A.	4" 3	3" A.	3" A.	3" A.
	Stiffeners ...	7 x 3 x 4 3/4	1	Nil	Nil	✓	✓	✓	✓	✓
HATCH BEAMS	Brackets, Stays	2 x 2" Dia	2 x 2" Dia	Nil	Nil	2 x 2" Dia	✓	✓	✓	✓
	Number ...	4	4	2	2	4	3	2	2	2
	Spacing ...	4' 6"	4' 9"	4' 9"	4' 9"	4' 6"	4' 0 1/2"	4' 8 1/2"	4' 8 1/2"	4' 8 1/2"
	Scantling and Sketch	Pl. 15 x 3 1/4	Pl. 15 x 3 1/4	Pl. 14 1/2 x 3 1/4	Pl. 14 1/2 x 3 1/4	Pl. 18 x 3 1/2	Pl. 18 x 3 1/2	Pl. 18 x 3 1/2	Pl. 18 x 3 1/2	Pl. 18 x 3 1/2
FORE AND AFTERS	Bearing Surface	3	3	3	3	3	3	3	3	3
	Number ...	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Spacing ...	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Unsupported Lengths	✓	✓	✓	✓	✓	✓	✓	✓	✓
HATCH COVERS	Scantling* and Sketch	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Bearing Surface	3	3	3	3	3	3	3	3	3
	Material ...	W.P.	Same as N ^o 1	Same as N ^o 1	Same as N ^o 1	W.P.	W.P.	W.P.	W.P.	W.P.
	Thickness ...	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Spacing of Cleats	How fitted	F & A	Same as N ^o 1	Same as N ^o 1	Same as N ^o 1	F & A	F & A	F & A	F & A	F & A
	Bearing Surface	3	3	3	3	3	3	3	3	3
	Number of Tarpaulins	22 x 23	22 x 23	22 x 23	22 x 23	22 x 23	22 x 23	22 x 23	22 x 23	22 x 23
	Are wood fore and afters steel shod at all bearing surfaces?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are battens and wedges efficient and in good condition?	Are tarpaulins in good condition and in accordance with rule requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Are lashings provided in accordance with rule requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Particulars of fiddle, funnel and ventilator coamings:—

Storehold & Sidley Ventilators covered by strong steel hinged covers
 Sidley & Funnel Ventilators are in efficient condition
 Engine Skylight is of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

Nil.

Particulars of Companionways:—

Nil.

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

All vents are constructed in accordance with rules and coamings closed with wood plugs and canvas covers.

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Wood plugs as closing provided

Particulars of Gangway Cargo and Coaling Ports:—

Nil.



© 2020
 Lloyd's Register Foundation

Particulars of Scuppers and Sanitary Discharge Pipes — *Scuppers and Sanitary ^{pipes} / on list with G.M. Stern Valves*

Paper discharge about 2:00 below deck. ✓

Particulars of Side Scuttles: Side scuttles to crew spaces in L'ds are provided with portable deadlights and are of substantial construction.

Particulars of Guard Rails:— *T'ls and Bridge — 3' 4" high with 3 rods and stanchions spaced 4' 9" apart.*

~~Teil.~~

Portable provision made for saving life
lines in the form of portable stanchions
being fitted in both wells.

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	-	3' 6"	36" x 14"	4	13.9	-
Forward Well	73' 6" ✓	3' 6" -	48" x 16½"	3 ✓	16.5 ✓	14. 30° φ
<p>State position of each freeing port } After Well :— (F. and A. position and height above deck edge) } Forward Well :—</p> <p>State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :—</p> <p>Additional area where sheer is less than standard.</p>						

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	1/4 -	1/8 ✓	7 x 3 x 1/4 BA. = 3 1/2 x 3 x 3/8 ✓	25" x 30"	Bulkhead top + bottom when B.A. transitions	5'0" x 3'0"	19 -	7'9"
Bridge, Forward Bulkhead	1/4 5/8 ✓	3/8 ✓	8 x 3 x 1/4 BA.	29" x 30"	top + bottom	4'7" x 2'8 1/2"	18 -	7'9"
Forecastle Bulkhead	bulkhead	Plating 3/8 ✓	3 x 3 x 3/8	27" x 30"	nil ✓	5'0" x 2'0"	18 -	7'9"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super- structure Decks	3/8 -	3/8 -	3 1/2 x 3 x 3/8 ✓	27" x 30"	Bulkhead top only.	4 1/2 ft. Deep 5' x 2'	18 1/2 -	7'9"
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ... BRIDGE SPACE ...	3/8 -	7/16 -	3 1/2 x 3 x 3/8 ✓	27" x 30"	nil -	✓ -	✓	7'9"
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	2½' Sliding Boards in permanent channels full height ✓
Bridge, Forward Bulkhead	Strong Steel hinged doors with bolt spread 8" to 8½ Closed from forward side only
Forecastle Bulkhead	Steel doors operated from both sides ✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ... ✓	2 Steel doors to ER (protected by DR housing) operated from both sides ✓
Exposed Machinery Casings on Superstructure Decks	2 " " " Slidehold operated from both sides ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances BRIDGE SPACE ...	Tail ✓
Deckhouses on Flush Deck Ships ... ✓	

