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B.T. COPY

Rpt. C.11.

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(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

23347

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

sheer deck with freeboard

Port of Survey

Newport. Mon

Date of Survey

8th August 1934

Name of Surveyor

M. J. A. J. J.

Particulars of Classification

100 A.I.

Ship's Name

BURYHILL

(Type of Superstructures.)

Nationality and Port of Registry

British London

Official Number

139622

Gross Tonnage

5815

Date of Build

1917-10

Moulded Dimensions: Length 399.7 Breadth 51.75 Depth M.O. 27.0

Moulded displacement at moulded draught = 85 per cent. of moulded depth 10740 tons

Coefficient of fineness for use with Tables .792

Depth for Freeboard (D)

Moulded depth ... M.O. 27.0

Stringer plate ...

Sheathing on exposed deck

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

Depth for Freeboard (D) = 27.04

Depth correction

(a) Where D is greater than Table depth (D-Table depth) R =

$(27.04 - 26.65) \times 3 = + 1.17$

(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)

Standard Round of Beam = $\frac{B \times 12}{50} = 12.42$

Ship's Round of Beam = $\frac{51.75 \times 12}{50} = 12.42$

Difference = M.O. 13 1/2

Restricted to 1.08

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.08}{4} \times 0.054 = \text{Nil.}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	31.4	31.33	8.0		31.33
" overhang ...	33				
R.Q.D. enclosed ...					
" overhang ...	364.16	364.16	8.0		364.16
Bridge enclosed ...	344.11				
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...	21				
Tonnage opening aft ...	4.2 1/2	2.10	8.0		2.10
" forward ...					
Total ...	399.70	397.59			397.59

Standard Height of Superstructure 7.497

" " R.Q.D.

Deduction for complete superstructure 41.98

Percentage covered $\frac{S}{L} = 100.00$

" $\frac{S_1}{L} = 99.46$

" $\frac{E}{L} = 99.46$

Percentage from Table, Line A. 99.33

(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 = $41.98 \times 99.33 = - 41.70$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	49.97	1		49.97	5.5	71.91	1		71.91
1/2 L from A.P. ...	22.235	4		88.94	2.3 3/4	32.00	4		128.00
3/4 L " ...	5.495	2		10.99	0.7	7.91	2		15.82
Amidships ...	-	4		-	X	-	4		-
3/4 L from F.P. ...	10.99	2		21.98	1.13	14.07	2		28.14
1/2 L " ...	44.47	4		177.88	4.5 3/4	56.92	4		227.68
F.P. ...	99.94	1		99.94	10.1	127.91	1		127.91
Total ...				449.70					599.46

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{149.76 \times .25}{18} = - 2.08$

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 = 27.04

Summer freeboard = 2.89

Moulded draught (d) = 24.15

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.03 1/2

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 11400$

Tons per inch immersion at summer load water line

T = 41.97

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

= 6.79

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{.792 + .68}{1.36} = \frac{1.472}{1.36}$

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc. ...

Summer Freeboard = 34.69

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

Tropical Fresh Water Line above Centre of Disc ...	12 3/4
Fresh Water Line " " ...	6 3/4
Tropical Line " " ...	6
Winter Line below " " ...	6
Winter North Atlantic Line " " ...	

Tropical Fresh Water Freeboard ...	1' 10 3/4"
Fresh Water " " ...	2' 4"
Tropical " " ...	2' 4 3/4"
Winter " " ...	3' 4 3/4"
Winter North Atlantic " " ...	

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MARKING FORM

RECEIVED 16 AUG 1934

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Free Deck					Superstructure Decks					
Description of Hatchway	1.	2.	3.	4.	5.	1.	2.	3.	4.	5.
Dimensions of Hatchway	29'9"	29'9"	25'6"	29'9"	34'0"	29'9"	29'9"	25'6"	29'9"	34'0"
Height above Deck	9'	9'	9'	9'	9'	30'	30'	30'	30'	30'
COAMINGS										
Thickness	1/2"	1/2"	1/2"	1/2"	1/2"	7/16"	7/16"	7/16"	7/16"	7/16"
Sides	ruled	ruled	ruled	ruled	ruled	ruled	ruled	ruled	ruled	ruled
Stiffeners	ruled	ruled	ruled	ruled	ruled	ruled	ruled	ruled	ruled	ruled
Brackets, Stays	ruled	ruled	ruled	ruled	ruled	ruled	ruled	ruled	ruled	ruled
HATCH BEAMS										
Number	5	5	5	5	5	5	5	5	5	5
Spacing	4'11 1/2"	4'11 1/2"	4'3"	4'11 1/2"	5'8"	4'11 1/2"	4'11 1/2"	4'3"	4'11 1/2"	5'8"
Scantling and Sketch	2 1/2" x 16 1/2"	2 1/2" x 16 1/2"	1 3/4" x 16 1/2"	2 1/2" x 16 1/2"	2 1/2" x 19"	2 1/2" x 21"	2 1/2" x 21"	2 1/2" x 18 1/2"	2 1/2" x 21"	2 1/2" x 25"
Bearing Surface	3'	3'	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.	W.P.	W.P.
Thickness	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
How fitted	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.
Bearing Surface	3'4 1/2"	3'4 1/2"	3'4 1/2"	3'4 1/2"	3'4 1/2"	3'4 1/2"	3'4 1/2"	3'4 1/2"	3'4 1/2"	3'4 1/2"
Spacing of Cleats	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"
Number of Tarpaulins	2	2	2	2	2	2	2	2	2	2

*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?

Particulars of fiddle, funnel and ventilator coamings:

storehold gratings covered by strong hinged door. Sidley, funnel, ventilator coamings in efficient condition. Engine room skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:

Nil.

Particulars of Companionways:

one Companionway on Poop, 6'4" x 3'0" x 6'7" high, of steel strongly constructed, with 1 1/2" teak doors & fastenings operated from either side.

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

12 vents 21" dia. Craning 30' high x 40 16 Holds
 4 " 10' " 30 " x 35 " Bunkin. Bunkin space
 2 " 6' " 30 " x 30 " 16. Afterspace
 4 " 6' " 13' " x 30 "

all vents fitted with Plug & Cover

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

1 C.I. Air Pipe 4" bore, 27-30 high 16 F.P.T.
 2 " 2 1/2 " 6-11 " 16 A.P.T.
 4 " 2 1/2 " 6-11 " 16 D.B. Tank
 4 " 2 " 7-12 " " "

all fitted with wood plugs

Particulars of Gangway Cargo and Coaling Ports:

Nil.

Particulars of Scuppers and Sanitary Discharge Pipes:

all scuppers & soil pipes fitted with G.M. storm valves at vessel's sides.

Particulars of Side Scuttles:

Side scuttles fitted with dead lights.

Particulars of Guard Rails:

Rails 3'4" high with 3 rods, stanchions 4'7" apart. Balwarks amidships efficient. Constructed with 2 lining Pnbs each side, 3'0" x 19' x 11' at bow deck.

Particulars of Gangways, Lifelines, etc.:

None

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Forward Well	4'2 1/2"	8'0"	2'0" x 1'6"	1	3 1/4	✓
After Well						
Forward Well						
State position of each freeing port ... After Well:— (F. and A. position and height above deck edge) 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.						

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	✓	.375	4 1/2" flanged	2'9"	ruled	ruled	✓	8'0"
Raised Quarter Deck Bulkhead	✓							
Bridge, After Bulkhead	✓	.30	4 1/2" flanged	2'9"	✓	4'0" x 3'0"	23'	8'0"
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	✓	.375	4 x 3 x .34	2'9"	✓	✓	✓	8'0"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓							
Exposed Machinery Casings on Superstructure Decks	✓	.375	4 x 3 x .40	2'10"	✓	4'6" x 2'0"	19'	7'10"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	.375	4 x 3 x .40	2'10"	✓	4'6" x 2'0"	19'	8'0"
Deckhouses on Flush Deck Ships								

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

Poop Bulkhead	✓	No openings
Raised Quarter Deck Bulkhead	✓	
Bridge, After Bulkhead	✓	Stove boards fitted for full height of opening in riveted (channels)
Bridge, Forward Bulkhead	✓	
Forecastle Bulkhead	✓	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	
Exposed Machinery Casings on Superstructure Decks	✓	steel hinged doors operated from either side.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	steel hinged doors operated from either side.
Deckhouses on Flush Deck Ships		

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