

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having none

(Type of Superstructures.)

Ship's Name "BIDSTON" Nationality and Port of Registry British, Liverpool Official Number 162375 Gross Tonnage 486.99 Date of Build 1933

Moulded Dimensions: Length 150'-0" Breadth 40'-11" Depth 11'-9" 82"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 1140 tons

Coefficient of fineness for use with Tables 647 68 lowest allowed

Port of Survey Birkenhead

Date of Survey While building

Name of Surveyor E.H. Dean with freeboard

Particulars of Classification 100A.1. Ferry Service River Mersey.

Depth for Freeboard (D)

Moulded depth measured at ship 11'-9" 82"

Plating plate 40"

Sheathing on exposed deck

$T \left(\frac{L-S}{L} \right) = \frac{(96 \times 365) + (54 \times 25)}{150} = 32$

Depth for Freeboard (D) = 12'-14"

Depth correction

(a) Where D is greater than Table depth (D-Table depth) R = $(12.14 - 10.00) 1.154 = 2.47$

(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) 40'-11"

Standard Round of Beam = $\frac{B \times 12}{50} = 9.82$

Ship's Round of Beam = 10"

Difference 18

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{18}{4} = 4.5$

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 ...					
" overhang aft ...					
" overhang forward ...					
Forecastle enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...					

have flush deck

Standard Height of Superstructure

" " R.Q.D.

Deduction for complete superstructure

Percentage covered $\frac{S}{L} =$ " $\frac{S_1}{L} =$ " $\frac{E}{L} =$

Percentage from Table, Line A.

(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 =

NIL

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	25.00	1		25.00	12 3/8	12.37	1		12.37
1/4 L from A.P. ...	11.12	4		44.48	5 3/8	5.37	4		21.48
2/4 L " ...	2.75	2		5.50	1"	1.00	2		2.00
Amidships ...		4					4		
3/4 L from F.P. ...	5.50	2		11.00	4 3/8	4.37	2		8.74
1/4 L " ...	22.25	4		89.00	14"	14.00	4		56.00
F.P. ...	50.00	1		50.00	32"	32.00	1		32.00
Total ...				224.98					132.59

Mean actual sheer aft = DeficientMean actual sheer forward = DeficientLength of enclosed superstructure forward of amidships = Sheer deficient

" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{92.39}{18} \times 75 = +3.85$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

15.50

+ 2.25

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.

Depth to Freeboard Deck = 12.18Summer freeboard = 4.94Moulded draught (d) = 7.24

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 1.81

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 = $\frac{\Delta}{40T}$ inches= 1 3/4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	2.47	-
Deduction for superstructures ...	-	-
Sheer correction ...	3.85	-
Round of Beam correction ...	-	0.04
Correction for Thickness of Deck amidships ...	53	-
Other corrections, scantlings, etc. to correct to approved summer mould draught 7'-3"	34.69	-
	41.54	0.04
Summer Freeboard =	59.25	

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel Deck: 4'-11 1/4"

Tropical Fresh Water Line above Centre of Disc

Fresh Water Line " " 1 3/4Tropical Line " " NILWinter Line below " " NILWinter North Atlantic Line " " ✓

Tropical Fresh Water Freeboard

Fresh Water " " 4'-9 1/2"Tropical " " 4'-11 1/4"Winter " " 4'-11 1/4"Winter North Atlantic " " ✓

15 FEB 1933

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.									
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	...	...	...	...	...	...	...	...
	Unsupp'd Lengths	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...
HATCH COVERS	Material	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	How fitted	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...

*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:— The fiddle plating is covered by steel hinged cover. The fiddle - Engine Room Ventilator and funnel are good. No Engine Room skylight.

Particulars of Flush Banker Scuttles:— 8 - To fore peak, bunks etc. 19" dia. - Cast steel. no attachment

Particulars of Companionways:— Ino - forward to crew's space. 3'0" x 4'6" - 3'0" high - hinged wood door 2'1" x 2'5" - 6" side - hinged wood flap at top. Companionways strongly constructed of wood. Doors 1 1/2" thick manipulated both sides. Ino - aft as above to Engine Room.

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

17 - Ventilators on freeboard deck to accommodation, stowage space, & Engine & Boiler rooms. 17 - 7 1/2" x 4 1/2" - 30 thick - steel trunk riveted to bulwark - no coamings - & no closing appliances to be supplied.

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

- none -

Particulars of Gangway Gargoyle and Cooling Ports:—

2 - each side in bulwarks - sliding - 10'0" long x 3'3" wide.

Particulars of Scuppers and Sanitary Discharge Pipes:—

Sanitary discharges are fitted with G. M. stem valves at ship's side. 6 - Scuppers from freeboard deck, each side, 4" dia. open pipe - discharge 2'0" below deck line.

Particulars of Side Scuttles:—

- none -

Particulars of Guard Rails:—

Steel bulwarks all fore and aft round freeboard deck - 3'9" x 3'6" high. Satisfactorily supported. Main frames run up alternately to Promenade deck and support bulwarks. Frames 4 1/2" x 3 1/2" x 34" alt. spacing 4'0".

Particulars of Gangways, Lifelines, etc.:—

- none -

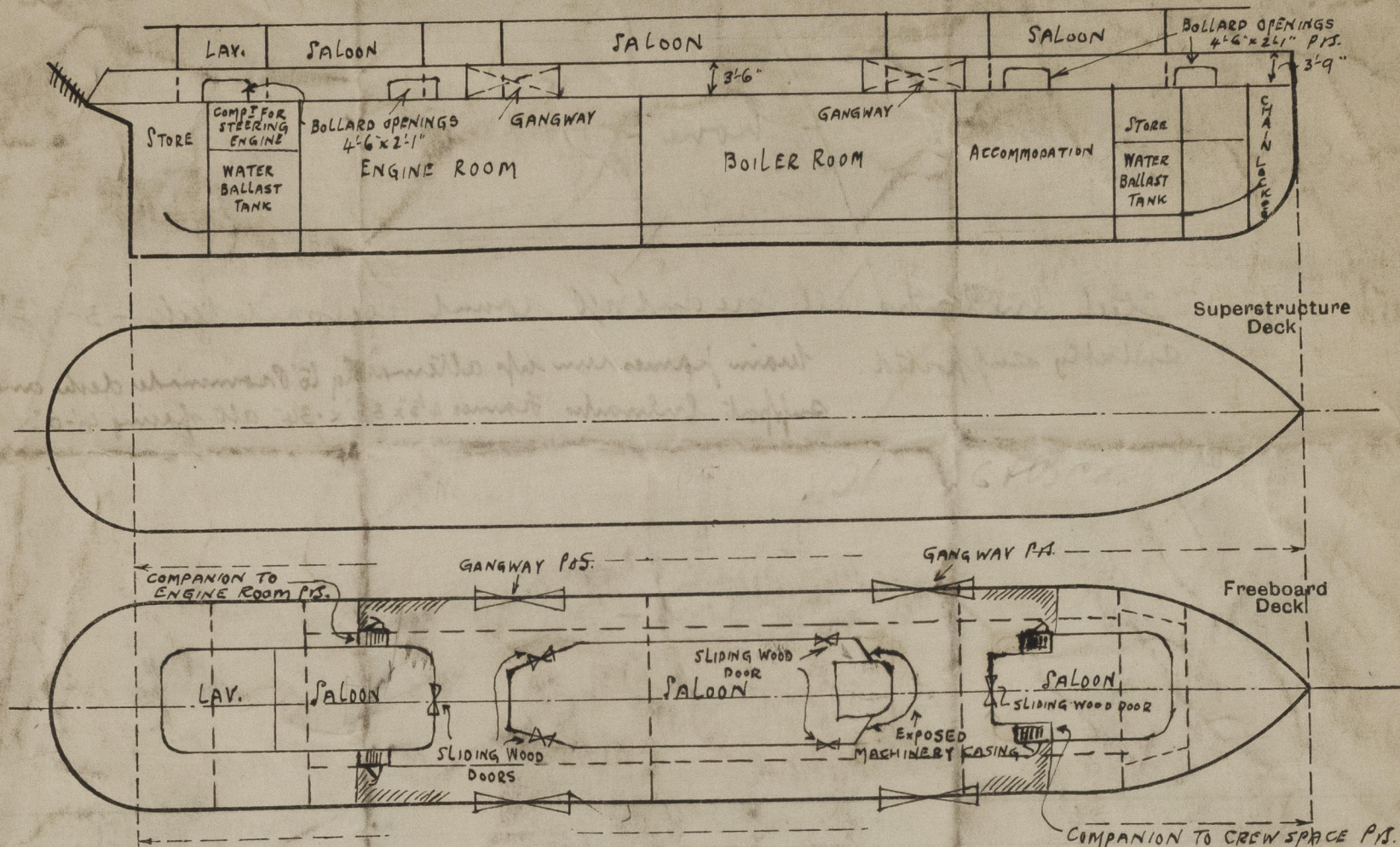
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	4 - Lolland openings - 4'6" x 2'1" each side	...	...	...
Forward Well	2 - 1st & 2nd aft - see sketch	...	...	...
State position of each freeing port (P. and A. position and height above deck edge) After Well:— 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
Raised Quarter Deck Bulkhead
Bridge, After Bulkhead
Bridge, Forward Bulkhead
Forecastle Bulkhead
Trunk, Aft
Trunk, Forward
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	24	24	8" x 3" x 30"	36"	none	none	none	7'8"
Exposed Machinery Casings on Superstructure Decks
Machinery Casings within Superstructures not fitted with Class I Closing Appliances
Deckhouses on Flush Deck Ships	6'3" x 30" angle coaming	...	...	...	...	sliding wood doors 5'6" x 4'0" wide	3"	7'8"

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

Poop Bulkhead	...	...	...
Raised Quarter Deck Bulkhead	...	...	...
Bridge, After Bulkhead	...	...	...
Bridge, Forward Bulkhead	...	...	...
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	...	...	sliding wood doors manipulated from both sides

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:—



FREEBOARD DECK 5'x3" TEAK SHEATHED WITH 10'x1 3/8" TEAK WITHIN SHADED PORTION 96 ft. amidships.
SUBDIVISION LINE CORRESPONDS TO A 7'-3" DRAFT.

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

Vessel constructed for Ferry Purposes River Mersey.
Plans of Midship Section, Longitudinal & Decks are forwarded for reference.

Builder's name and yard number

Messrs Cammell Laird & Co. Ltd. No. 988.

Names of sister ships

S.S. "Hinderton", S.S. "Thurston", S.S. "Cloughton".

Owners

Municipal Corporation of Birkenhead.

Fee £ 6 : 0 : 0

Received by me