

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Sailing Ship, Tug~~
having *Flush Deck with Lounge opening*

Port of Survey *New York*

Date of Survey *April 14th 1932*

Name of Surveyor *M. Bennett*

Particulars of Classification *+ 100 A1. with freeboard*

(Type of Superstructures.) *BD.L. 17.134.*

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<i>M/S. "TAYBANK"</i>	<i>British Belfast</i>	<i>161866</i>	<i>5627 5626</i>	<i>1910-8</i>

Moulded Dimensions: Length *425.0* Breadth *57.0* Depth *29' 9 1/4"* *12860* tons

Moulded displacement at moulded draught = 85 per cent. of moulded depth *(See page 4)*

Coefficient of fineness for use with Tables *734*

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... <i>29.77</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(29.81 - 28.33) 3 = + 4.44</i>	Moulded Breadth (B) <i>57</i>
Stringer plate <i>42"</i> ... <i>04</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 13.68$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <i>13 1/2</i>
Depth for Freeboard (D) = <i>29.81</i>		Difference <i>18</i>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{18}{4} \times 0.007 = 0.007$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>24.54</i>	<i>24.54</i>	<i>8.75</i>		<i>24.54</i>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	<i>394.46</i>	<i>394.46</i>	<i>8.75</i>		<i>394.46</i>
" overhang ...					
Forecastle enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...	<i>6.00</i>	<i>3.00</i>	<i>8.75</i>		<i>3.00</i>
Tonnage opening aft ...					
" forward ...					
Total ...	<i>425.00</i>	<i>422.00</i>			<i>422.00</i>

Standard Height of Superstructure *7.5*

" " R.Q.D. *42*

Deduction for complete superstructure *42*

Percentage covered $\frac{S}{L} = 100\%$

" " $\frac{S_1}{L} = 99.30\%$

" " $\frac{E}{L} = 99.30\%$

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. *99.14*
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) *C.S.S.*

Deduction = *42 \times 99.14 = -41.64*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>52.5</i>	<i>1</i>	<i>52.50</i>	<i>64.00</i>	<i>64.00</i>	<i>79</i>	<i>1</i>	<i>79.00</i>	
1/4 L from A.P. ...	<i>23.36</i>	<i>4</i>	<i>93.44</i>	<i>26.45</i>	<i>26.86</i>	<i>3516</i>	<i>4</i>	<i>140.64</i>	
2/4 L " ...	<i>5.78</i>	<i>2</i>	<i>11.56</i>	<i>6.75</i>	<i>6.71</i>	<i>8.69</i>	<i>2</i>	<i>17.38</i>	
Amidships ...	<i>0</i>	<i>4</i>	<i>0</i>				<i>4</i>		
3/4 L from F.P. ...	<i>11.56</i>	<i>2</i>	<i>23.12</i>	<i>11.00</i>	<i>11.06</i>	<i>13.53</i>	<i>2</i>	<i>27.06</i>	
1/4 L " ...	<i>46.72</i>	<i>4</i>	<i>186.88</i>	<i>44.25</i>	<i>44.24</i>	<i>54.74</i>	<i>4</i>	<i>218.96</i>	
F.P. ...	<i>105.00</i>	<i>1</i>	<i>105.00</i>	<i>108.00</i>	<i>108.00</i>	<i>123</i>	<i>1</i>	<i>123.00</i>	
Total ...	<i>472.50</i>		<i>472.50</i>			<i>415</i>		<i>606.04</i>	

Mean actual sheer aft = *Excess*

Mean standard sheer aft = *Excess*

Mean actual sheer forward = *Excess*

Mean standard sheer forward = *Excess*

Length of enclosed superstructure forward of amidships = *50%*

" " aft of " = *18.5%*

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{133.54 \times 25}{18} = -1.855$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient <i>734+68</i> <i>1.36</i>
Depth to Freeboard Deck = <i>29.81</i>	$\Delta = 13450$	Depth Correction ... <i>4.44</i>
Summer freeboard = <i>3.63</i>	Tons per inch immersion at summer load water line	Deduction for superstructures ... <i>41.64</i>
Moulded draught (d) = <i>26.18</i>	T = <i>48</i>	Sheer correction ... <i>1.86</i>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>6 1/2</i>	Deduction = $\frac{\Delta}{40T}$ inches = <i>7"</i>	Round of Beam correction ...
Addition for Winter North Atlantic Freeboard (if required) =		Correction for Thickness of Deck amidships ...
		Other corrections, scantlings, etc. ...
		Summer Freeboard = <i>43.45</i>

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

Tropical Fresh Water Line above Centre of Disc	...	<i>1-1/2</i>
Fresh Water Line	"	<i>7</i>
Tropical Line	"	<i>6 1/2</i>
Winter Line	below	<i>6 1/2</i>
Winter North Atlantic Line	"	"

Tropical Fresh Water Freeboard	...	<i>2-6</i>
Fresh Water	"	<i>3-0 1/2</i>
Tropical	"	<i>3-1</i>
Winter	"	<i>4-2</i>

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

✓ In addition to these, there are 12th & 10th lot
on 1st deck, 9' x 8' 6" also: Two 17' tables 3' x 1', with
12th coverings.

Yes. Strong & water proofed.
Yes. King holds a license.

well covered, and
framed with
wood covers and
canvas for
emergency use.

None.

Particulars of Companionways:— Access to lower hatches, forward lower deck, is through a strong steel companionway. This has two steel hinged doors (4'-2" x 2'-0" each) 18" sill, doors secured by bolts, and access provided from either side.

Particulars of Ventilators in exposed positions on ~~board~~ and superstructure deck.

Two to Refrig. space	12" dia	- 7' 10' casing	x 1/8"
Two " to 2 Hold	24" "	- 7' 6" "	x "
Two " Deep Tank	12" "	- 7' 0" "	x "
Two " to 2 Hold	24" "	- 7' 6" "	x "
Two Change Pump Low Pos to Deep Tank			x 1/2"
One to Refrig. space	6" dia	- 3' 6" "	x 1/4"
Two " " "	12" "	- 6' 9" "	x 5/16"
Light to No. 1 & 2 Hold	24" "	- 7' 0" "	x 1/8"
Light - Spare Reser. aft	12" x 4	- 1' 6" "	x 1/16"
One - Tunnel	18" dia	- 2' 6" "	x 1/8"

Knees in the flange 1 to 1 1/2' apart.
 dead lower and lower provided for all vents.

supported

Particulars of Air Pipes in exposed positions on ~~deck~~, raised quarter, or superstructure.

all Vents over 42" in height efficiently supported.

all fitted
with good
plugs.

~~Particulars of Gangway Cargo and Coaling Ports:—~~ 24" ~~6~~ outlet

to Langman, cargo or booking

Taybank

Particulars of Scuppers and Sanitary Discharge Pipes — *Four scuppers, each side from shelter beam. Deck space discharges about 18" below 2nd deck. Outer ends are fitted with automatic valves of brass steel. All sanitary discharge pipes discharge above the 2nd deck. Some come from spaces below the shelter deck, and storm valves of C. steel are fitted on all discharges.*

Particulars of Side Scuttles: *C. steel deadlights are fitted to portlights in Green deck spaces aft and lower spaces forward. None situated below the 2nd deck.*

Particulars of Guard Rails: — *Closed bulwark forward, midships and aft (see sketch) with open rails between. Bulwarks and open rails both 42" high, latter has four rails.*

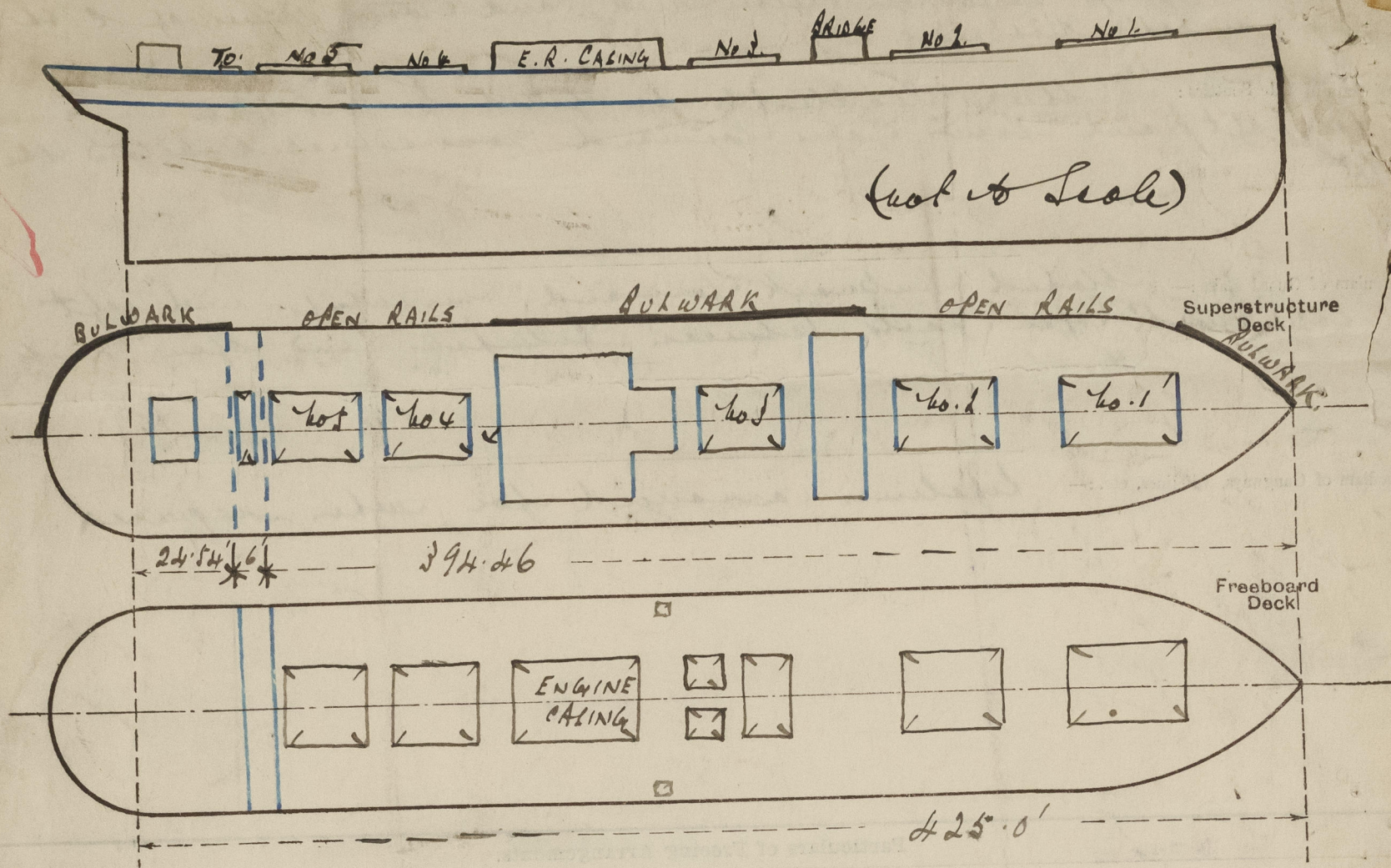
Particulars of Gangways, Lifelines, etc.: — *Lifelines arranged for, when required.*

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
<i>Tonnage</i> Star Well	6'	<i>closed</i>	24" x 18"	1 P. 1 S.	2.5 sq ft	✓
Port Well	✓	✓	✓	✓	✓	✓
State position of each freeing port <i>Tonnage</i> (F. and A. position and height above deck edge) { After Well: — <i>In tonnage well aft. 12" above deck.</i> Forward Well: — State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — <i>Channel locking bar fitted.</i> 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	✓	5/16	3 x 3 x 1/4	33"	none	none	✓	8' 9"
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	✓	5/16	3 x 3 x 1/4	33	none	1 P. each 1 S. 15" x 15" x 4"	15"	8' 9"
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	✓							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks (<i>not exposed</i>)	3/1	5/16	3 x 2 1/2 x 5/16	36	none	5' 2" x 2' 1"	15"	8' 9"
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	<i>No opening.</i>
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	<i>Storm boards, full height, in riveted channels.</i>
Forecastle Bulkhead	✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Super-structure Decks	<i>Strong hinged teak door (2" thick)</i>
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships ...	✓

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:



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

Full & at full draft of 26 ft in salt water	13,225 tons.	Taken from owner's capacity plan.
" " " " " 25 " " " "	12,651 "	
" " " " " 24 " " " "	12,080 "	
Y.H.O. " " " " 25.16 " " " "	44.81 "	
" " " " " 24.16 " " " "	44.58 "	
" " " " " 23.16 " " " "	44.25 "	

This vessel may, in my opinion, be assigned International Convention tonnage, without any further alteration.

Builder's name and yard number. Workman Clark (1918) Ltd.

Names of sister ships (as stated) "Lassiebank", "Luedebank", "Driebank".

Owners. Bank Line Ltd. London.

Fee \$80.00. Received by me.

Charged at New York.



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