

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

21 DEC 1934

Index. No. **34588**  
(For London Office only.)

11/1/35 *Sheet 459*

Computation of Freeboard for *Motor Vessel*  
having *Poop and Forecastle* (Type of Superstructures.)

Port of Survey *Hull*

Date of Survey *White building*

Name of Surveyor *W. Malcolm*

Particulars of Classification *+ 100 A1 (Contingent)*  
(See note on last page)

Ship's Name <i>River Trent</i>	Nationality and Port of Registry <i>British Hull</i>	Official Number <i>163960</i>	Gross Tonnage <i>245.77</i>	Date of Build <i>1935</i>
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Moulded Dimensions: Length *116'-0"* Breadth *23'-0"* Depth *9'-0"*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *409* tons

Coefficient of fineness for use with Tables *701*

<p><b>Depth for Freeboard (D)</b></p> <p>Moulded depth ... <i>9'-0"</i></p> <p>Stringer plate ... <i>30"</i></p> <p>Sheathing on exposed deck <math>T \left( \frac{L-S}{L} \right) =</math> <i>none</i></p> <p>Depth for Freeboard (D) = <i>9.02</i></p>	<p><b>Depth correction</b></p> <p>(a) Where D is greater than Table depth (D - Table depth) R = <math>(9.02 - 7.73) \cdot 892</math> <i>1.29 = + 1.15"</i></p> <p>(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>✓</i></p> <p>If restricted by superstructures <i>✓</i></p>	<p><b>Round of Beam correction</b></p> <p>Moulded Breadth (B) <i>23.00</i></p> <p>Standard Round of Beam = <math>\frac{B \times 12}{50} =</math> <i>5.52"</i></p> <p>Ship's Round of Beam = <i>6"</i></p> <p>Difference <i>5.00 = .48</i></p> <p>Restricted to</p> <p>Correction = <math>\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) =</math> <math>\frac{.48}{4} \times .5593 = -.07"</math></p>
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## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>35-0</i>	<i>35.00</i>	<i>6'-8"</i>	<i>✓</i>	<i>35.00</i>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	<i>16-0</i>	<i>16.00</i>	<i>3'-0"</i>	<i>3.00</i>	<i>8.00</i>
" overhang ...	<i>3"</i>	<i>.12</i>			<i>.06</i>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	<i>51.25</i>	<i>51.12</i>			<i>43.06</i>

Standard Height of Superstructure *6.00'*

" " R.Q.D. *✓*

Deduction for complete superstructure *17.60"*

Percentage covered  $\frac{S}{L} =$  *44.19%*

" "  $\frac{S_1}{L} =$  *44.07%*

" "  $\frac{E}{L} =$  *37.13%*

Percentage from Table, Line A. *21.06%*  
(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 =  $17.60 \times .2106 = - 3.71"$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>21.60</i>	<i>1</i>	<i>✓</i>	<i>21.60</i>	<i>21.6</i>	<i>21.60</i>	<i>1</i>	<i>✓</i>	<i>21.60</i>
$\frac{1}{4}$ L from A.P. ...	<i>9.61</i>	<i>4</i>	<i>✓</i>	<i>38.44</i>	<i>9.6</i>	<i>9.60</i>	<i>4</i>	<i>✓</i>	<i>38.40</i>
$\frac{2}{4}$ L " ...	<i>2.38</i>	<i>2</i>	<i>✓</i>	<i>4.76</i>	<i>2.25</i>	<i>2.25</i>	<i>2</i>	<i>✓</i>	<i>4.50</i>
Amidships ...	<i>✓</i>	<i>4</i>	<i>✓</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>✓</i>	<i>0</i>
$\frac{3}{4}$ L from F.P. ...	<i>4.75</i>	<i>2</i>	<i>✓</i>	<i>9.50</i>	<i>5.0</i>	<i>5.00</i>	<i>2</i>	<i>✓</i>	<i>10.00</i>
$\frac{1}{4}$ L " ...	<i>19.22</i>	<i>4</i>	<i>✓</i>	<i>76.88</i>	<i>19.6</i>	<i>19.60</i>	<i>4</i>	<i>✓</i>	<i>78.40</i>
F.P. ...	<i>43.20</i>	<i>1</i>	<i>✓</i>	<i>43.20</i>	<i>43.4</i>	<i>43.40</i>	<i>1</i>	<i>✓</i>	<i>43.40</i>
Total ...	<i>194.4</i>			<i>194.38</i>					<i>196.30</i>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{1.92}{18} (.75 - .2209) = -.06"$

If limited on account of midship superstructure.

*✓* *Nul.*

Mean actual sheer aft = *Deficient* > 75% standard

Mean standard sheer aft

Mean actual sheer forward = *Excess*

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = *Nul.*

" " aft of " = *Nul.*

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = *9.02*

Summer freeboard = *.77*

Moulded draught (d) = *8.25*

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches =  $\frac{8.25}{4} = 2.06 = 2"$

Addition for Winter North Atlantic Freeboard (if required) =  $2" + 2" = 4"$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$  *450 tons*

Tons per inch immersion at summer load water line

$T =$  *5.3*

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

$= \frac{450}{40 \times 5.3} = 2.12" = 2"$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	<i>1.15</i>	<i>-</i>
Deduction for superstructures ...	<i>-</i>	<i>3.71</i>
Sheer correction ...	<i>-</i>	<i>-</i>
Round of Beam correction ...	<i>-</i>	<i>.07</i>
Correction for Thickness of Deck amidships ...	<i>-</i>	<i>-</i>
Other corrections, scantlings, etc. ...	<i>-</i>	<i>-</i>
	<i>1.15</i>	<i>3.78</i>

Summer Freeboard = *9.25.15*

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

Tropical Fresh Water Line above Centre of Disc ...	<i>4"</i>
Fresh Water Line " " ...	<i>2"</i>
Tropical Line " " ...	<i>2"</i>
Winter Line below " " ...	<i>2"</i>
Winter North Atlantic Line " " ...	<i>4"</i>

Tropical Fresh Water Freeboard ...	<i>0'-9 1/4"</i>
Fresh Water " " ...	<i>0'-5 1/4"</i>
Tropical " " ...	<i>0'-7 1/4"</i>
Winter " " ...	<i>0'-11 1/4"</i>
Winter North Atlantic " " ...	<i>1'-1 1/4"</i>

28 DEC 1934



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	...	...	...	NO1	For.	NO2			
Dimensions of Hatchway	...	...	...	19-3 x 14-0		31-6 x 14-0			
COAMINGS	Height above Deck	...	...	33"					
	Thickness	Sides	...	.38					
	Stiffeners	Ends	...	7 x 3 x .36 L		as NO1			
	Brackets, Stays	...	...	6 x .30 L					
HATCH BEAMS	Number	...	...	3-4		3-7			
	Spacing	...	...	3-10 1/4		3-11 1/4			
	Scantling and Sketch	...	...	3 x 3 x .42		as NO1			
	Bearing Surface	...	...	3"		3			
FORE AND AFTERS	Number	...	...						
	Spacing	...	...						
	Unsupported Lengths	...	...						
	Scantling* and Sketch	...	...						
HATCH COVERS	Material	...	...	WW					
	Thickness	...	...	2 1/2"		as NO1			
	How fitted	...	...	f.a.					
	Bearing Surface	...	...	3					
Spacing of Cleats	...	...	...	24		as NO1			
Number of Tarpaulins	...	...	...	2					
*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/> Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/> Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/> Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/> <i>yes, and for special lashings</i>									

Particulars of fiddle, funnel and ventilator coamings:— Fiddle, funnel & ventilators in good condition.  
Casing top openings closed by steel hinged flaps.

Particulars of Flush Bunker Scuttles:— one, on poop deck, to galley bunker in poop tween decks,  
Substantially constructed.  
To be permanently secured by chain.

Particulars of Companionways:— Companionways at after end of engine room casing on poop deck,  
leading to crew accommodation and to Engine Room. Of steel, strongly  
constructed and stiffened 5'-9" high x 5'-3" x 5'-0" wide; openings 4' x 2'; sills 18" high.  
Openings closed by hard wood hinged doors with spring locks.  
Companion on poop deck to crew space alongside of casing, 3'-6" long x 3'-0" high x 2'-6" wide  
teak sliding top, teak doors, 18" sill.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—  
Well: 12" dia, 36" high x .40 to hold.  
Poop: Mushroom Vents to accommodation.  
1, 3" G.N. 18" high to galley store.

Efficient means of closing provided } ~~wood plugs and~~  
Canvas covers to be provided.

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

Poop deck: 3" dia G.N. 18" high to A.P. Tank + to F.W. tank.  
F'dle deck: 3" - G.N. " - F.P. Tank.  
No air pipes in well.

Efficient means of closing provided } ~~wood plugs to be~~  
provided.

Particulars of Gangway Cargo and Coaling Ports:—

none



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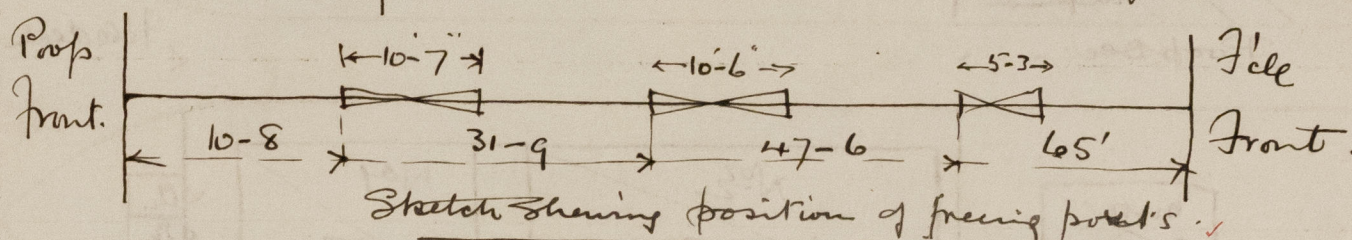


Particulars of Scuppers and Sanitary Discharge Pipes :- Scuppers in well of gunwale bar type.  
 Sanitary pipes lead to shell below upper deck, from poop space, with storm valves at ship's side controlled from upper deck.  
 Pipe scupper from upper deck in poop lead to shell with storm valve at ship's side and screws plug with chain at inboard end.

Particulars of Side Scuttles :- In poop space, substantially constructed and fitted with hinged deadlights.

Particulars of Guard Rails :- In well :- 3'-0" high bulwarks of steel, substantially constructed & stayed.  
 Ice & poop dles: 3'-0" high, 2nd, stanchions spaced 4' 6" apart.

Particulars of Gangways, Lifelines, etc. :- Life line to be provided over hatchways in well.



Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Well ...	65'-0"	3'-0"	10'-7" x 6 1/2" 10'-6" x 6 1/2" 5'-3" x 6 1/2"	1 1 1	14.25 sq ft	13.00 sq ft
Forward Well ...						

State position of each freeing port (F. and A. position and height above deck edge) { After Well :- 7" above deck.  
 Forward Well :-

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :- formed by flanged bulwark plating.

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 ...	.25	.25	3 x 2 1/2 x 30	30	lugs	none	-	6'-8"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...								
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...	.30	.30	3 1/2 x 3 x 34	24	bkts	(2) 2'-0" x 1'-6"	12"	3'-0"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks ...	.26	.26	3 x 2 1/2 x 3	30	bkts, top	none	✓	3'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	"	"	"	"	none	none	✓	6'-8"
Deckhouses on Flush Deck Ships ...								

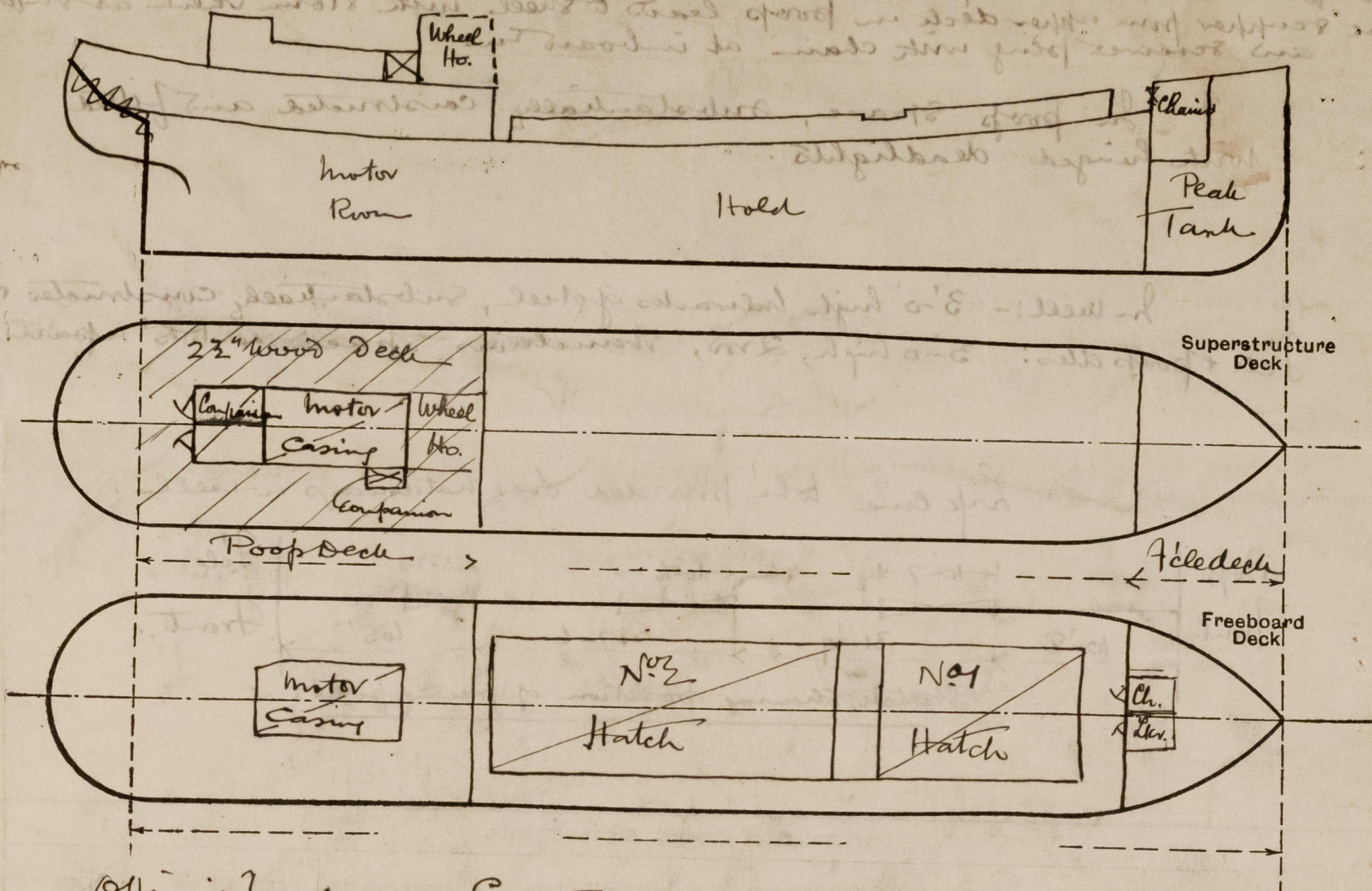
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead ...	no openings
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	
Bridge, Forward Bulkhead ...	
Forecastle Bulkhead ...	to chain locker; 2 openings each 2' x 1'-6", sill 12", closes by hinged steel doors & clips.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	
Exposed Machinery Casings on Super-structure Decks ...	no openings.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	no openings.
Deckhouses on Flush Deck Ships ...	



# River Trent

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:—



~~Official Number and Gross Tonnage figures are not yet available.~~  
~~It is proposed to report on the hatch bottoms, wedges, tarpaulins etc when~~  
~~these are seen completed and in place on the vessel.~~

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

The intended class, full or restricted, of this vessel has not yet been decided upon between Owner and Builders on account of the question of the engine spares to be supplied. (vide London Letters E 11/6/34; 5/7/34; 18/7/34.)

The builders have asked for separate assignment for the class 100 A1 and 100 A1 "Coasting Great Britain and Ireland, and Continent West to Hamburg".

Builder's name and yard number Goslee S.B. & R. Co. Ltd. No 306

Names of sister ships

Owners Richard Henry Hunt.

Fee £

(To be charged with first entry.)

Received by me

*[Signature]*



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