

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

 Computation of Freeboard for Steamer, Sailing Ship, Tanker  
 having *Top gallant Forecastle & Fluted Deck.*
Port of Survey *Weymouth*Date of Survey *24<sup>th</sup> May 1931*Name of Surveyor *E.A. Dykeman*Particulars of Classification *FI 100A1 with Prudhoe*

(Type of Superstructures.)						
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build		
T.S.S. ST. JAMES	British Weymouth	148585	1943 net <del>33156</del> 1885	1924.6.47 1925.5		
Moulded Dimensions: Length	280. -	Breadth	40. -	Depth	17. -	
Moulded displacement at moulded draught	= 85 per cent. of moulded depth				2585	tons
Coefficient of fineness for use with Tables	. 559					

Depth for Freeboard (D)				
Moulded depth	...	...	...	<i>17.00</i>
Stringer plate	...	...	...	<i>.03</i>
Sheathing on exposed deck				
$T \left( \frac{L-S}{L} \right) = .21 \times .0644$				<i>.01</i>
Depth for Freeboard (D) =	<i>17.04</i>			

Depth correction	
(a) Where D is greater than Table depth (D - Table depth) R =	
(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	<i>(18.67 - 17.04) 2.154 = 1.351</i>
If restricted by superstructures	<i>NIL.</i>

Round of Beam correction	
Moulded Breadth (B)	<i>40.</i>
Standard Round of Beam = $\frac{B \times 12}{50}$	<i>9.60</i>
Ship's Round of Beam	<i>11.</i>
Difference	<i>1.40</i>
Restricted to	
Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right)$	<i>= \frac{1.4}{4} \times .0788 = .03</i>

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poep enclosed ...	<i>62.00</i>	<i>62.00</i>	<i>7.66</i>	<i>✓</i>	<i>62.00</i>
" overhang ...	<i>4.00</i>	<i>2.00</i>	"		<i>2.00</i>
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...	<i>188.00</i>	<i>188.00</i>	<i>7.66</i>	<i>✓</i>	<i>188.00</i>
" overhang ...	<i>8.00</i>	<i>6.00</i>	"		<i>6.00</i>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	<i>262.00</i>	<i>258.00</i>			<i>258.00</i>

Standard Height of Superstructure	<i>6.3</i>
" " R.Q.D.	<i>-</i>
Deduction for complete superstructure	<i>34.</i>
Percentage covered $\frac{S}{L} =$	<i>93.56</i>
" " $\frac{S_1}{L} =$	<i>92.12</i>
" " $\frac{E}{L} =$	<i>92.12</i>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<i>90.30</i>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than .2L (if required)	
Deduction = .903 x 34. =	<i>30.70</i>

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>38.00</i>	1		<i>38.00</i>	<i>2.6</i>	<i>21.50</i>	1		<i>21.50</i>
$\frac{1}{2}$ L from A.P. ...	<i>16.91</i>	4		<i>67.64</i>	<i>9</i>	<i>9.18</i>	4		<i>36.72</i>
$\frac{2}{3}$ L " ...	<i>4.18</i>	2		<i>8.36</i>	<i>2.4</i>	<i>2.29</i>	2		<i>4.58</i>
Amidships ...	<i>-</i>	4		<i>-</i>	<i>-</i>	<i>-</i>	4		<i>-</i>
$\frac{2}{3}$ L from F.P. ...	<i>8.36</i>	2		<i>16.72</i>	<i>6.7</i>	<i>6.88</i>	2		<i>13.76</i>
$\frac{1}{2}$ L " ...	<i>33.82</i>	4		<i>135.28</i>	<i>2.2</i>	<i>24.55</i>	4		<i>110.20</i>
F.P. ...	<i>76.00</i>	1		<i>76.00</i>	<i>5.1</i>	<i>61.00</i>	1		<i>61.00</i>
Total ...				<i>342.00</i>					<i>247.76</i>

 Mean actual sheer aft = *Deficient*  
 Mean standard sheer aft =

 Mean actual sheer forward = *Deficient*  
 Mean standard sheer forward =

 Length of enclosed superstructure forward of amidships = *-*  
 " " aft of " = *-*

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{94.24}{18} \left( .75 - \frac{.4678}{2} \right) = (+) 1.48$$

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 =	<i>17.19</i>
Summer freeboard =	<i>4.00</i>
Moulded draught (d) =	<i>13.19</i>

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = *3.27*Addition for Winter North Atlantic Freeboard (if required) = *3.27*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = 2310$$

Tons per inch immersion at summer load water line

$$T = 18.98$$

$$\text{Deduction} = \frac{\Delta}{40T} \text{ inches} = 3.05$$

$$\frac{d}{4} = 3\frac{1}{4}$$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction		
Deduction for superstructures		<i>30.70</i>
Sheer correction	<i>1.48</i>	
Round of Beam correction		<i>.03</i>
Correction for Thickness of Deck amidships	<i>1.88</i>	
Other corrections, scantlings, etc. AND TO...	<i>36.67</i>	
CORRESPOND TO APPROVED WINTER MOULDED DRAUGHT	<i>40.03</i>	<i>30.73</i>
Summer Freeboard		

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Steel Deck: *4'*

Tropical Fresh Water Line above Centre of Disc	...	<i>6\frac{1}{2}''</i>
Fresh Water Line	"	<i>3\frac{1}{2}''</i>
Tropical Line	"	<i>3\frac{1}{4}''</i>
Winter Line below	"	<i>3\frac{1}{4}''</i>
Winter North Atlantic Line	"	<i>5\frac{1}{4}''</i>

Tropical Fresh Water Freeboard	...	<i>3'</i>
Fresh Water	"	<i>3'-0"</i>
Tropical	"	<i>3'-1"</i>
Winter	"	<i>4'</i>
Winter North Atlantic	"	<i>4'</i>

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# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

## HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Description of Hatchway	...	...	No. 1 Shelter Deck	No. 2 Shelter Deck															
Dimensions of Hatchway	...	...	8 x 8	10 x 10															
COAMINGS	Height above Deck	...	2 1/2	2 1/2															
	Thickness	{ Sides	.34	.34															
		{ Ends	.34	.34															
	Stiffeners	...	7" B.R.	7" B.R.															
	Brackets, Stays	...																	
HATCH BEAMS	Number	...	None	One															
	Spacing	...																	
	Scantling and Sketch	...																	
	Bearing Surface	...																	
		...																	
FORE AND AFTERS	Number	...	One																
	Spacing	...																	
	Unsupported Lengths	...	Amble 2 1/2 x 2 1/2																
	Scantling* and Sketch	...																	
	Bearing Surface	...																	
HATCH COVERS	Material	...	Wood	Wood															
	Thickness	...	2 1/2	2 1/2															
	How fitted	...	Timber	Timber															
	Bearing Surface	...																	
Spacing of Cleats	...	...	2 ft	2 ft															
Number of Tarpaulins	...	...	2	2															
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>Yes</i></p> <p>Are battens and wedges efficient and in good condition? <i>Yes</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>Yes</i></p> <p>Are lashings provided in accordance with rule requirements? <i>Yes</i></p>																			

Particulars of fiddle, funnel and ventilator coamings:—

*Fiddle, Funnel & Ventilator of strong construction. Fiddle closed.  
Engine Room skylight steel, strongly constructed with steel flaps.*

Particulars of Flush Bunker Scuttles:— *None*

Particulars of Companionways:— *Crews quarter on Shelter Deck. Strong steel companion. Tank door 2 ft x 5 1/2 ft x 1 1/2 in. Operated from both sides.*

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

*North Goosneck - 8 x 4, 2 ft to bellmouth  
Shelter Deck*

Pop	2 of 12"	2 ft coaming	3/16
	1 of 16"	8"	3/8
	1 of 10"	2"	3/16
	1 of 9"	7"	3/16

*Wood plugs & canvas covers provided*

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

*Air Pipes 2-6" fitted with wood plugs & canvas covers  
Air Pipes from fuel tanks lead up funnel*

Particulars of Cargo and Coaling Ports:—

*Shelter door below Shelter Deck & Freeboard Deck (1 each side)  
Steel W.T. doors reinforced, hinged, Rafter joints & secured by bolts & strong latches 3 1/2 x 1 1/2*



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Particulars of Scuppers and Sanitary Discharge Pipes

Scupper pipes + Sanitary discharge, Gunmetal on ship's side, non return valves + steel pipes

Particulars of Side Scuttles:

Strong gunmetal with hinged dead lights

Particulars of Guard Rails:—

Fore & Aft rails 3-6' high standards 4' apart & 7" pitch of rail

Particulars of Gangways, Lifelines, etc.:—

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 ... <i>Fore &amp; Aft</i>	30	<i>Side plating to shelter deck</i>	2' 4" x 16"	3	9.28	9.58
Forward Well <i>Shelter Deck</i>	21	3-6	1' 8" x 12"	2	3.92	

State position of each freeing port ... } After Well:— Centre + ends + 5"

(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:— *Shutter + rail*

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 ...	1/4	1/4	2 1/2 x 2 1/2	2-6		<i>Shut down 3-6 x 4-6</i>	13"	<i>Shutter Deck</i>
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	1/4	1/4	<i>Hand rail</i>	2-6		<i>Shut down 2-6 x 2-6</i>	13"	"
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...	<i>open</i>							
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks ...								
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).

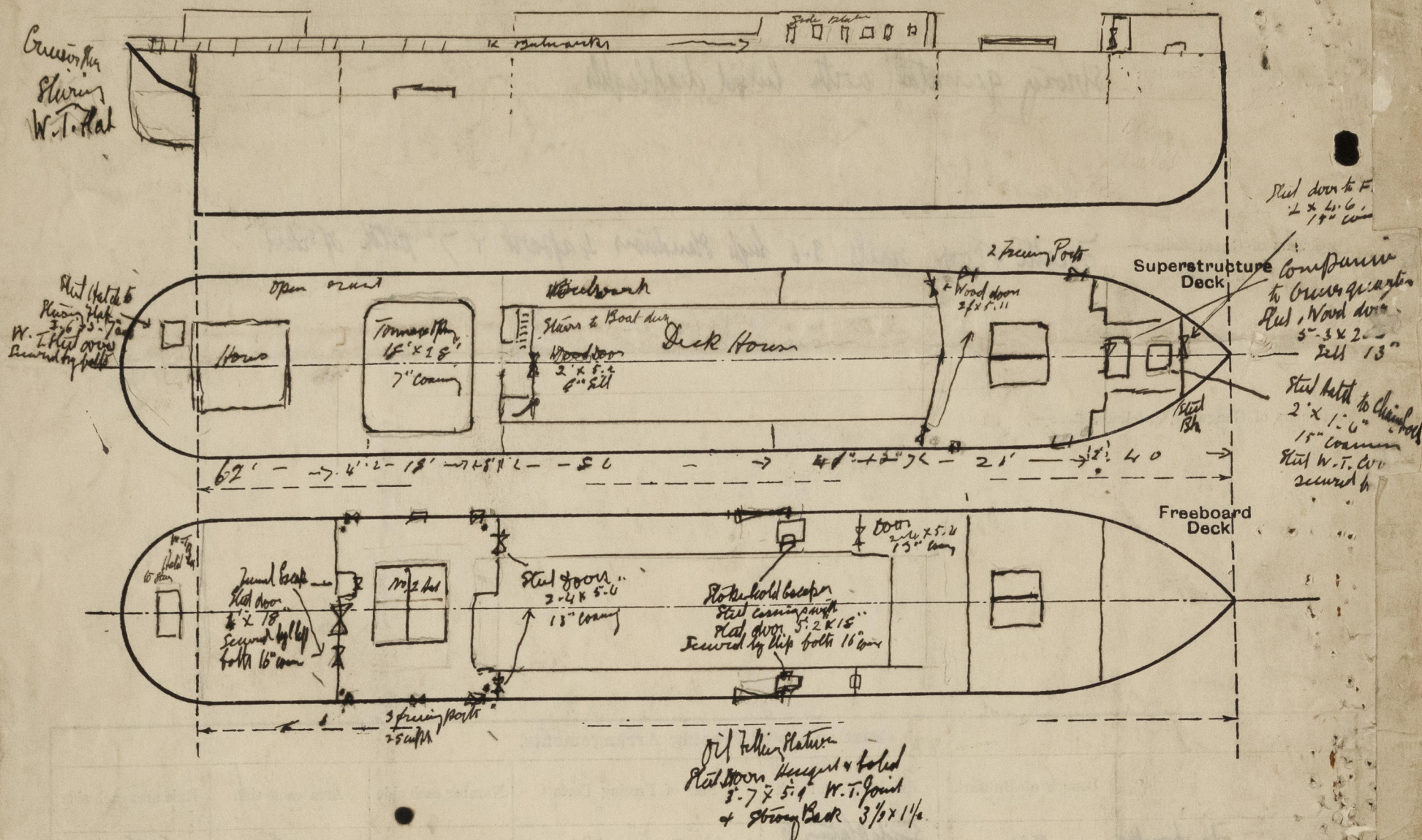
Poop Bulkhead ...	<i>Steel W.T door secured by clip bolts operated from both sides</i>
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	<i>Steel W.T door secured by clip bolts operated from either side</i>
Bridge, Forward Bulkhead ...	
Forecastle Bulkhead ...	<i>Open</i>
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	
Exposed Machinery Casings on Super-structure Decks ...	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	
Deckhouses on Flush Deck Ships ...	



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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:—



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

*Vessel surveyed afloat.*

Builder's name and yard number *J. Brown & Co. Ltd.*

Names of sister ships *St. Helier*

Owners *Great Western Ry. Co.*

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