

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index. No. **33917**  
(For London Office only.)No. **100687**

-5 JUL 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having poop, bridge and false

(Type of Superstructures.) Regt. 12/1/25  
14.10.37

Ship's Name <b>"WORCESTERSHIRE"</b>	Nationality and Port of Registry <b>British Liverpool</b>	Official Number <b>162334</b>	Gross Tonnage <b>4376</b> <b>11402</b>	Date of Build <b>1931-2</b>
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Port of Survey Liverpool

Date of Survey June 1932

Name of Surveyor A.W. Jackson

Particulars of Classification 100A1

Moulded Dimensions: Length 482.0' Breadth 64.0' Depth 36.5'

Moulded displacement at moulded draught = 85 per cent. of moulded depth 19690 tons

Coefficient of fineness for use with Tables 120

<p><b>Depth for Freeboard (D)</b></p> <p>Moulded depth ... <u>36.5'</u></p> <p>Stringer plate ... <u>.04'</u></p> <p>Sheathing on exposed deck <math>T \frac{(L-S)}{L} = .25 \times .1821 =</math> <u>.05'</u></p> <p>Depth for Freeboard (D) = <u>36.59'</u></p>	<p><b>Depth correction</b></p> <p>(a) Where D is greater than Table depth (D - Table depth) R = <u>(36.59 - 32.13) \times 3 = 13.38</u></p> <p>(b) Where D is less than Table depth (if allowed) (Table depth - D) R =</p> <p>If restricted by superstructures</p>	<p><b>Round of Beam correction</b></p> <p>Moulded Breadth (B) <u>64.0'</u></p> <p>Standard Round of Beam = <math>\frac{B \times 12}{50} =</math> <u>15.36</u></p> <p>Ship's Round of Beam = <u>9</u></p> <p>Difference <u>deficient 6.36</u></p> <p>Restricted to</p> <p>Correction = <math>\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{6.36}{4} \times .1821 = (+).29</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 ...	<u>51.25</u>	<u>51.25</u>	<u>7'-9"</u>	-	<u>51.25</u>
" overhang ...					
S.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed...	<u>265.0</u>	<u>265.00</u>	<u>8'-6"</u>	-	<u>265.00</u>
" overhang aft ...					
" overhang forward					
Fore enclosed ...	<u>78.0</u>	<u>78.00</u>	<u>7'-9"</u>	-	<u>78.00</u>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	<u>394.25</u>	<u>394.25</u>			<u>394.25</u>

Standard Height of Superstructure 7.5

" " R.Q.D. ✓

Deduction for complete superstructure 42.00

Percentage covered  $\frac{S}{L} =$  81.79 ✓

" "  $\frac{S_1}{L} =$  81.79 ✓

" "  $\frac{E}{L} =$  81.79 ✓

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

Percentage from Table, Line B.  
(corrected for absence of forecastle (if required)) 77.52

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

Deduction = .4752 \times 42 = 32.56 ✓

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate USED	S M	Product
A.P. ...	<u>58.20</u>	1	<u>58.20</u>	<u>36.0</u>	<u>36.00</u>	1	<u>36.00</u>
$\frac{1}{4}$ L from A.P. ...	<u>25.90</u>	4	<u>103.60</u>	<u>16.25</u>	<u>15.40</u>	4	<u>62.80</u>
$\frac{3}{4}$ L " ...	<u>6.40</u>	2	<u>12.80</u>	<u>3.13</u>	<u>3.92</u>	2	<u>7.84</u>
Amidships ...	-	4	-	-	-	4	-
$\frac{3}{4}$ L from F.P. ...	<u>12.80</u>	2	<u>25.60</u>	<u>12.00</u>	<u>10.86</u>	2	<u>21.72</u>
$\frac{1}{4}$ L " ...	<u>51.81</u>	4	<u>207.24</u>	<u>42.87</u>	<u>43.45</u>	4	<u>173.80</u>
F.P. ...	<u>116.40</u>	1	<u>116.40</u>	<u>96.0</u>	<u>96.00</u>	1	<u>96.00</u>
Total ...			<u>523.84</u>				<u>398.16</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{125.68}{18} \left( .75 - \frac{.4089}{2} \right) = (+) 2.38$

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.

AT MARKING Ft.  
Depth to Freeboard Deck = 36.43  
Summer freeboard = 4.08  
Moulded draught (d) = 29.65

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 4.41  $\frac{4\frac{1}{2}}{2}$   
Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line  
 $\Delta =$  18895  
Tons per inch immersion at summer load water line  
T = 63.30  
Deduction =  $\frac{\Delta}{40T}$  inches = 4.46

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.720 + .680}{1.36} = \frac{1.40}{1.36}$ 

	+	-
Depth Correction ...	<u>13.38</u>	
Deduction for superstructures ...		<u>32.56</u>
Sheer correction ...	<u>2.38</u>	
Round of Beam correction ...	<u>.29</u>	
Correction for Thickness of Deck amidships ...	<u>1.65</u>	
Other corrections, scantlings, etc. ...		
	<u>14.40</u>	<u>32.56</u>

Summer Freeboard =

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

Tropical Fresh Water Line above Centre of Disc ...	<u>15</u>
Fresh Water Line " " ...	<u>4\frac{1}{2}</u>
Tropical Line " " ...	<u>4\frac{1}{2}</u>
Winter Line below " " ...	<u>4\frac{1}{2}</u>
" " " " ...	<u>4\frac{1}{2}</u>

Tropical Fresh Water Freeboard  
Fresh WaterTropical  
Water from both sides.

0139 2/2

Lloyd's Register  
Foundation

A passenger line to



## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS												
			Fore	Upper Dk.	Prom. Dk.		Upper Dk.					
Description of Hatchway			Nº 1	Nº 2	Nº 3	Nº 4	Nº 5	Nº 6				
Dimensions of Hatchway			11'3"x12'0"	26'6"x20'	14'3"x20'	11'9"x15'	17'8"x14'	15'0"x14'				
COAMINGS	{	Height above Deck	30"									
		Thickness { Sides	52"	As Nº 1	As Nº 1	As Nº 1	As Nº 1	As Nº 1				
		Ends	44"									
		Stiffeners	7"x3"x52AP.	Sides & ends.	Sides and ends.	Sides and fore end.	Sides & after end.	Sides and ends.				
Brackets, Stays		As P.	Nil	2 sides, 1 at ends.	Nil	Nil	Nil	Nil				
HATCH BEAMS	{	Number	2	6	3	2	3	3				
		Spacing	4'-1"	4'-1½"	3'-7"	4'-0"	4'-4"	3'-9"				
		Scantling and Sketch	Pl. 13½"x30"	18½"x35"		11½"x31"	12½"x30"	14½"x31"				
		Angles	4@ 3"x3"x40"	4@ 4"x3"x44"	As Nº 2	4@ 3"x3"x42"	4@ 3"x3"x42"	4@ 3"x3"x42"				
Bearing Surface		3"	3"	3"	3"	3"	3"					
FORE AND AFTERS	{	Number										
		Spacing										
		Unsupported Lengths										
		Scantling* and Sketch	None fitted.									
Bearing Surface												
HATCH COVERS	{	Material	W.P.									
		Thickness	3"	As Nº 1	As Nº 1	As Nº 1	As Nº 1	As Nº 1				
		How fitted	F & A.									
		Bearing Surface	24"									
Spacing of Cleats			24"	24"	24"	24"	24"	24"				
Number of Tarpaulins			3	3	3	3	3	3				

\*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 fiddley, funnel and ventilator coamings:— Funnel used as exhaust from motor engines.  
Ventilator coamings in an efficient condition.  
Engine skylight of steel, strongly constructed.

Particulars of Flush Bunker Scuttles:—

None fitted.

Particulars of Companionways:— 1-steel companion  $\{ \frac{3}{4} \times 8'0" \times 8'6" \text{ high on Bridge Deck S side amidships}$   
leading to working alleyway, doors of steel  $5'6" \times 5'0"$  with 10" sill above  
composition, doors operated from both sides.  
1-steel companion  $3'9" \times 9'6" \times 7'9" \text{ high on Poop erection leading to native}$   
crew's accommodation and tunnel escape, door of heavy teak, with 10" sill above  
wood deck, capable of being manipulated from both sides.

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

1 Vent on Fore DK. anchor crane post with M.T., led to stores below freeboard dk.  
 1 " " " " 18" diam, coaming 36"x40", led to No 1 Hold.  
 4 M.V.'s " " " " 18" " " " 36"x40", " " No 1 & 2 Holds.  
 2 Vents in forward well, 24" diam. Samson Posts with M.T., led to No 2 Hold.  
 2 M.V.'s on top of contactor house in forward well 18" diam, coamings 36"x40, led to No 3 Hold.  
 1 Vent on Poop DK 15" diam, coaming 36"x40", led to steering gear comp.

Coamings closed -  
wood plugs and can  
covers.

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

7 "Tyros" Valves airpipes on Fore head 4" diam x 36" high from F. and Nos 1+2 O.B. Tanks.  
 18 " " " " " Br. OK. 4" " x 23" " " Nos. 2-3-4-5+6 O.B. Tanks.  
 2 G.N. " " " " " " 3" " x 23" " " Lub. Oil Tank & Cylinder oil Tank. 1P+1S.  
 14 G.N. " " " " " " 3" " x 19" " " Afterdam, Piston Cooling & Nos. 7-8-9+10 O.B. Tanks.  
 3 G.N. " " " " " " " " 3" " x 15" " " No 10 O.B. Tank and A.P. Tank.  
 G.N. Air pipes closed by hood plugs.

of Gangway Cargo and Coaling Ports:—

5 cargo doors P.O.S. between freeboard and second decks in way of Nos. 2-3-4+5 Holds efficiently constructed.

in bridge sides 2'-6" x 3'-3" efficiently constructed.



Particulars of Scuppers and Sanitary Discharge Pipes — Scuppers from wells and bridge deck led straight overboard well above load line, without storm valves at ship's sides.  
Sanitary discharge pipes fitted with G.M. storm valves at ship's sides.

Particulars of Side Scuttles: All side scuttles below freeboard deck fitted with hinged deadlights.  
Side scuttles to crew spaces in fo'c'sle and poop fitted with hinged deadlights.  
Side scuttles in bridge tween deck fitted with portable deadlights.  
All scuttles of substantial construction.

Particulars of Guard Rails:— Guard rails on fo'c'sle 3'6" high with 3 rods and stanchions 4'8" apart.  
" " " bridge " " with 4 rods and teak rail " " 5'0" "  
" " " poop " " " 3 " " 4'9" "

Particulars of Gangways, Lifelines, etc.:— In forward well strong wooden gangway with guard rails and stanchions each side, fitted from bridge dk. to contactor house in well. Steel ladder from front of house to top of No. 2 Hatch and lifeline to accommodation in fo'c'sle.  
Also lifelines per fitted between hatch coamings and bulwarks of substantial construction, adequately supported.  
In after well strong wooden gangway with guard rails and stanchions on each side, fitted from bridge to poop decks.

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 ... ..	20'-0"	4'-9"	3'-0" x 1'-6"	2	9 $\phi$	8.5 $\phi$
Forward Well ... ..	67'-9"	4'-9"	3'-0" x 1'-6"	3	13.5 $\phi$	13.55 $\phi$
State position of each freeing port ... .. } After Well:— $\rightarrow 3'-0" \times 4'-6" \rightarrow 3'-0" \times 4'-6" \rightarrow$ Ford. (F. and A. position and height above deck edge) } Forward Well:— $\rightarrow 3'-0" \times 4'-10" \rightarrow 3'-0" \times 22'-0" \rightarrow 3'-0" \times 10'-4" \rightarrow$ Ford. State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Shutters hinged at top edge, two horizontal bars. Lower edge of shutters at level of top of sheerstrake. 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 ... ..	.38"	.38"	5½" x 3" x 508A.	24"	Lug conn. top and bottom.	Two passages 31" and 33"	Nil	7'-9"
Raised Quarter Deck Bulkhead ...	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead ... ..	✓	.32"	not obtainable	30"	not obtainable.	10 3'-6" x 5'-6"	9" above M.O.	8'-6"
Bridge, Forward Bulkhead ... ..	.50"	.44"	10" x 3½" x 482A.	30"	Lugs top and bottom	Nil	Nil	8'-6"
Forecastle Bulkhead ... ..	.38"	.38"	5" x 3" x 362A.	30"	Nil	Two passages 3'-0" wide	Nil	7'-9"
Trunk, Aft ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Superstructure Decks ... ..	✓	enclosed by deckhouse			✓	✓	✓	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	.50"	.32"	4" x 3" x 40 + 6" x 3" x 362A.	30"	Nil	10 5'-6" x 5'-0"	10" ab. comp.	8'-6"
Deckhouses on Flush Deck Ships ...	✓	✓	✓	✓	✓	✓	✓	✓

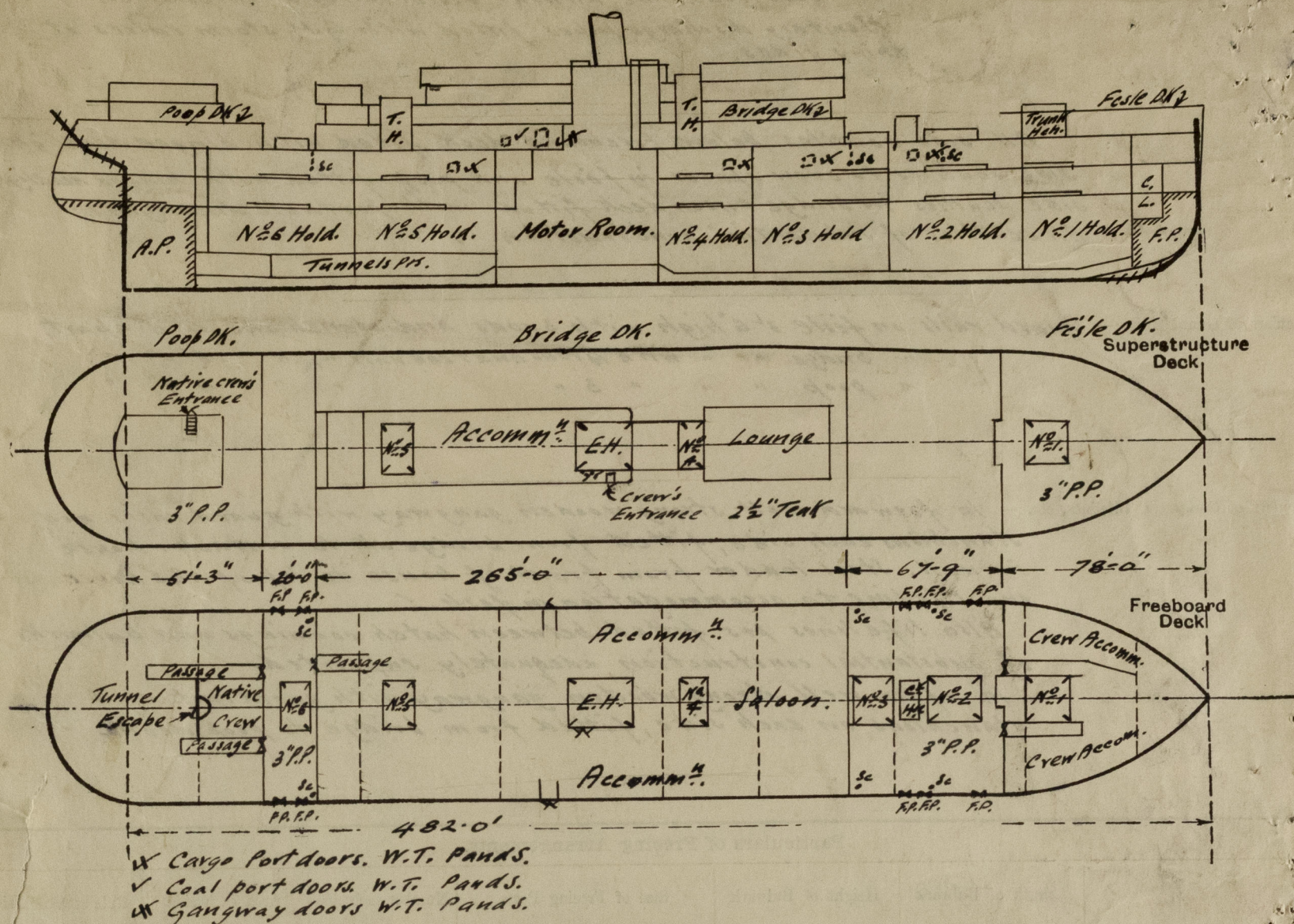
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead ... ..	Passages closed by 2½" weatherboards full height in riveted channels.
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ... ..	Heavy teak doors capable of being manipulated from both sides.
Bridge, Forward Bulkhead ... ..	No openings.
Forecastle Bulkhead ... ..	Passages closed by 2½" weatherboards full height in riveted channels.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Superstructure Decks ... ..	✓ Enclosed by deckhouse
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	Steel doors capable of being manipulated from both sides.
Deckhouses on Flush ... ..	✓



Worcestershire

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 examined in dry dock for freeboard purposes only.

Draft Extreme	Disp. in Tons.
29'-1 1/2"	18419
28'-0"	17560
27'-0"	16830
26'-0"	16130

Builder's name and yard number Fairfield S.B. & E. Co. Ltd. N° 640.

Names of sister ships Similar to "STAFFORDSHIRE" but of increased breadth. (Same Builders N° 630)

Owners Bibby Steamship Co. Ltd.

Fee £ 17 : 0 : 0

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