

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

18 APR 1932
W 124

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having POOP & FORECASTLE

(Type of Superstructures.)

Ship's Name "TOTNES"	Nationality and Port of Registry BRITISH LONDON	Official Number 143345	Gross Tonnage 283	Date of Build 1918
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Moulded Dimensions: Length 125' Breadth 21' 33" Depth 10' 8 3/8"
Moulded displacement at moulded draught = 85 per cent. of moulded depth 5335 tons
Coefficient of fineness for use with Tables 77

Port of Survey BLYN
Date of Survey 12th 13th April 1932
Name of Surveyor H. M. Curwick
Particulars of Classification 100 A1.

<p>Depth for Freeboard (D)</p> <p>Moulded depth <u>10.70'</u></p> <p>Stringer plate <u>04'</u></p> <p>Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <u>✓</u></p> <p>Depth for Freeboard (D) = <u>10.74'</u></p>	<p>Depth correction</p> <p>(a) Where D is greater than Table depth (D - Table depth) R = <u>(10.74 - 8.33) × .961 = +2.32</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>Round of Beam correction</p> <p>Moulded Breadth (B) <u>21.33</u></p> <p>Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>5.12</u></p> <p>Ship's Round of Beam = <u>5 1/4"</u></p> <p>Difference <u>.13</u></p> <p>Restricted to</p> <p>Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.13}{4} \left(1 - \frac{.513}{1.487} \right) = -.01$</p>
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poep enclosed ...	<u>44.42</u>	<u>44.42</u>	<u>7'-0"</u>	✓	<u>44.42</u>
" overhang ...	<u>170' 1.83</u>	<u>91'</u>			<u>.91</u>
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed...					
" overhang aft ...					
" overhang forward	<u>18.50</u>	<u>18.50</u>	<u>7'-0"</u>	✓	<u>18.50</u>
F'cle enclosed ...	<u>19.08</u>	<u>29'</u>			<u>.29</u>
" overhang ...	<u>7' 58"</u>				
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	<u>65.33</u>	<u>64.12</u>			<u>64.12</u>

Standard Height of Superstructure 6'-0"

" " R.Q.D. ✓

Deduction for complete superstructure 18.50

Percentage covered $\frac{S}{L} = 52.26\%$

" " $\frac{S_1}{L} = 51.30\%$

" " $\frac{E}{L} = 51.30\%$

Percentage from Table, Line A. 33.82
(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) NO BRIDGE.

Deduction = 18.50 × .3382 = -6.26

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>22.50</u>	1		<u>22.50</u>	<u>16' 16"</u>	<u>16.00</u>	1		<u>16.00</u>
1/4 L from A.P. ...	<u>10.01</u>	4		<u>40.04</u>	<u>6' 6.91</u>	<u>6.91</u>	4		<u>27.64</u>
2/4 L " ...	<u>2.47</u>	2		<u>4.94</u>	<u>1' 1.73</u>	<u>1.73</u>	2		<u>3.46</u>
Amidships ...	-	4		-	-	-	4		-
3/4 L from F.P. ...	<u>4.95</u>	2		<u>9.90</u>	<u>6' 6.12</u>	<u>5.88</u>	2		<u>11.76</u>
1/4 L " ...	<u>20.02</u>	4		<u>80.08</u>	<u>24' 24.48</u>	<u>23.58</u>	4		<u>94.32</u>
F.P. ...	<u>45.00</u>	1		<u>45.00</u>	<u>51' 51"</u>	<u>49.79</u>	1		<u>49.79</u>
Total ...				<u>202.46</u>					<u>202.97</u>

Mean actual sheer aft = DEFICIENT = 69.95%
Mean standard sheer aft

Mean actual sheer forward = EXCESS.
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = } NO BRIDGE.
" " aft of " = }

Aft Sheer
22.50 16.00 22.50 16.00
10.01 6.91 10.01 6.91
2.47 1.73 2.47 1.73
4.95 5.88 4.95 5.88
20.02 23.58 20.02 23.58
45.00 49.79 45.00 49.79
60.94 42.52

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{.51}{18} \left(.75 - \frac{.2613}{1.487} \right) = -.01$ (NO BRIDGE) = NIL.
If limited on account of midship superstructure. NO BRIDGE. If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 10.74
Summer freeboard = 7.9
Moulded draught (d) = 9.95

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 2.49 = 2 1/2

Addition for Winter North Atlantic Freeboard (if required) = 2

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

=

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{77+68}{1.36} \frac{1.45}{1.36}$

Depth Correction 2.32
Deduction for superstructures -6.26
Sheer correction -
Round of Beam correction01
Correction for Thickness of Deck amidships -
Other corrections, scantlings, etc. -

Summer Freeboard = 9.38

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

Tropical Fresh Water Line above Centre of Disc
Fresh Water Line " "
Tropical Line " "
Winter Line below " "
Winter North Atlantic Line " "

Tropical Fresh Water Freeboard
Fresh Water " "
Tropical " "
Winter " "
Winter North Atlantic " "

9 1/2" FREEBOARDS
ASSIGNED
UNDER 1906
REGULATIONS.

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		Nº 1	Nº 2	POOP BUNKER HATCHES	MAIN DECK BUNKER OPENING	POOP STORE HATCH			
Dimensions of Hatchway		18'6" x 11'0"	22'0" x 11'2"	5'6" x 2'	5'6" x 2'	3'4" x 2'			
COAMINGS	Height above Deck	2'6"	2'6"	2'0"	3' x 3"	2'0"			
	Thickness	4 1/2"	4"	3 1/2"	✓	3 1/2"			
	Sides	4 1/2"	4"	3 1/2"	✓	3 1/2"			
	Ends	4 1/2"	4"	3 1/2"	✓	3 1/2"			
Stiffeners		7 x 3 x 7/16	7 x 3 x 7/16	✓	✓	✓			
Brackets, Stays		1 x 6 x 1/2	2 x 6 x 1/2	✓	✓	✓			
HATCH BEAMS	Number	3	4						
	Spacing	4'-7"	4'-7"						
	Scantling and Sketch								
	Bearing Surface	3"	3"						
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths	✓	✓						
	Scantling* and Sketch								
Bearing Surface									
HATCH COVERS	Material	W. P.	W. P.	W. P.	NONE	W. P.			
	Thickness	2 1/2"	2 1/2"	2 1/4"	✓	2 1/4"			
	How fitted	F. A.	F. A.	F. A.	✓	T			
	Bearing Surface	3"	3"	2 1/4"					
Spacing of Cleats		2'	2'	19"		Satisfactory			
Number of Tarpaulins		2	2						

*Are wood fore and afters steel shod at all bearing surfaces? **YES**

Are battens and wedges efficient and in good condition? **YES**

Are tarpaulins in good condition and in accordance with rule requirements? **YES**

Are lashings provided in accordance with rule requirements? **YES**

Particulars of fiddley, funnel and ventilator coamings:—

Boiler top grating covered by strong steel hinged cover ✓
Fiddle, funnel & ventilator coamings in good order ✓
Engine skylight or steel strongly constructed ✓

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways:—

STEEL COMPANIONWAY TO ENGINE ROOM (ON POOP) 4'-2" LONG, 2'-7" WIDE, 5'-6" HIGH, SILL 1 1/2" THICK. ✓
 FITTED WITH SOLID WOOD HINGED DOOR 1 1/2" THICK. ✓
 TWO DOORS MARKED A+B ON PLAN LEAD TO POOP SPACE, 3'-3" HIGH, 2'-0" WIDE CONSTRUCTED
 OF WOOD PANELS 3/4" THICK. SILLS 16" HIGH. ✓

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

Ventilators in exposed positions on fireboard and superstructure decks :-
 FILE 2 @ 12" DIA x 3/16" x 2 1/2" TO HOLD 2 @ 8" DIA x 3/16" x 2 1/2" TO CROWN ACCOMMODATION } WOOD PLUGS FITTED ✓
 FORE DECK 1 @ 12" " x 3/16" x 2 1/2" TO HOLD ✓
 POOL 2 MUSHROOM VENTS @ 8 1/2" DIA. 3 @ 5" DIA TO ACCOMMODATION
 " 2 GROUND DECK " TO BUNKERS 3" DIA 3" HIGH
 " 1 " " TO STORE 3" 5"

Efficient means of
 provided for all

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

FLEG. 2" DIA. 4" TO UNDERBOS OF GOOSENECK, TO F.P.
 BRE DEK 2 @ 2" DIA x 3' 5" HIGH IN GOOSENECK. } No WERT PLUGS FITTED.
 " " 1 @ 2" " 4' 6" " " " } Efficient means
 POOP 1 @ 2" " 18" " " " " " }

Particulars of Gangway Cargo and Coaling Ports:—

Particulars of Scuppers and Sanitary Discharge Pipes

OFFICERS LAV. DISCHARGE ABOVE FREEBOARD OK. C.B. STORM VALVE FITTED ✓
 " WASH. " " " " No " " " ✓
 CREWS LAV. " BELOW " " GS. " " " ✓

Angulars of Side Scuttles:

FORCASTLE & POOP SIDE SCUTTLES ALL FITTED WITH DEADLIGHTS ✓

iculars of Guard Rails :—

FORECASTLE RAILS: STANCHIONS 3' PITCH 3'-3" HIGH 3 RAIL ✓
POOP " " 3'-6" " 3'-3" " 3 " ✓

culars of Gangways, Lifelines, etc. :—

~~None Fitted.~~ Gangway & Lifeline provided in well for protection of crew

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
er Well	✓	✓	✓	✓	✓	
ward Well	62'-8" ✓	3'-8" ✓	30 1/2" x 21" ✓	3 ✓	131 sq. ft. ✓	12.8 13.59 sq. ft.

to position of each freeing port { After Well:— ✓
and A. position and height above deck edge) { Forward Well:— *1st 2'-8" FROM FUS. TO CENTRE, 2ND 4'-9" FROM FUS. 3RD 5'-0" FROM FUS.*
to whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— *1 FOR 2 WITH SHUTTER, OTHERS WITH BAR,*
ditional area where sheer is less than standard. *HEIGHT ABOVE DECK 7 1/2"*

Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Bulkhead	34" ✓	32" ✓	3" x 5" x 9/16" ✓	33" ✓	BRAKET ✓	5 SMALL SCUTTLES ✓	✓	7'-0"
Quarter Deck Bulkhead ...	✓							
After Bulkhead	✓							
Forward Bulkhead	✓							
Castle Bulkhead	34" ✓	20" ✓	3" x 3" x 9/16" ✓	36" ✓	BRAKET ✓	2' x 5' ✓	13" ✓	7'-0"
Deck, Aft	✓							
Deck, Forward	✓							
Lower Machinery Casings on Forward or Raised Quarter Decks ...	✓							
Lower Machinery Casings on Superstructure Decks	✓							
Lower Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Lower Houses on Flush Deck Ships ...	✓							

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

Bulkhead	✓	Insert bulkhead. Ports no dead light fitter ✓
Quarter Deck Bulkhead ...	✓	
After Bulkhead	✓	
Forward Bulkhead	✓	
Castle Bulkhead	✓	Ordinary steel hinged door, operated both sides. ✓
Machinery Casings on Forward or Raised Quarter Decks ...	✓	
Machinery Casings on Superstructure Decks		
Machinery Casings within Superstructures not fitted with Class I Closing appliances		
Houses on Flush Deck Ships ...	✓	

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