

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **32587**
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having **Port. Bridge & Forecastle**

(Type of Superstructures.) **10683** **10613** **10595** **10594** **10592**

Ship's Name **STAFFORDSHIRE** Nationality and Port of Registry **British** Official Number **161082** Date of Build **1929/1**

Moulded Dimensions: Length **482.0** Breadth **62.0** Depth **36.5**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **19,766** tons

Coefficient of fineness for use with Tables **.746**

Port of Survey **Liverpool**

Date of Survey **May 1932**

Name of Surveyor **A. W. Jackson**

Particulars of Classification **+100A1**

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... 36.5	(a) Where D is greater than Table depth (D-Table depth) R = (36.59-32.13)3 = 13.38	Moulded Breadth (B) 62.0
Stringer plate ... .04	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 14.88$
Sheathing on exposed deck 3" P.P. $T \left(\frac{L-S}{L} \right) = .25 \times \frac{87.75}{482} = .05$	If restricted by superstructures	Ship's Round of Beam = 9.0
Depth for Freeboard (D) = 36.59		Difference 5.88
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{5.88}{4} (.1821) = .27$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	51.25	51.25	7'-9"		51.25	Standard Height of Superstructure 7.5
" overhang ...						" " R.Q.D.
R.Q.D. enclosed ...						Deduction for complete superstructure 42.00
" overhang ...						Percentage covered $\frac{S}{L} = 81.79$
Bridge enclosed ...	265.00	265.00	8'-6"		265.00	" " $\frac{S_i}{L} = 81.79$
" overhang aft ...						" " $\frac{E}{L} = 81.79$
" overhang forward ...						Percentage from Table, Line A.
Fore enclosed ...	78.00	78.00	7'-9"		78.00	(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, Line B. 77.52
Trunk aft ...						(corrected for absence of forecastle (if required))
" forward ...						Interpolation for bridge less than .2L (if required)
Tonnage opening aft ...						Deduction = 32.56
" forward ...						
Total ...	394.25	394.25			394.25	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	58.20	1		58.20	36.00	36.0	1		36.00	Mean actual sheer aft = Deficient
1/4 L from A.P. ...	25.90	4		103.60	15.80	15.8	4		63.20	Mean actual sheer forward = Deficient
1/2 L " ...	6.40	2		12.80	3.95	3.95	2		7.90	Mean standard sheer forward
Amidships ...	✓	4		✓	✓	✓	4		✓	Length of enclosed superstructure forward of amidships =
3/4 L from F.P. ...	12.80	2		25.60	10.86	10.86	2		21.72	" " aft of " =
1/4 L " ...	51.80	4		207.20	43.45	43.45	4		173.80	
F.P. ...	116.40	1		116.40	96.00	96.00	1		96.00	
Total ...				523.80					398.62	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{523.80 - 398.62}{18} \left(.75 - \frac{409}{914} \right) = \frac{125.18}{18} (.75 - .447) = 2.37$

If limited on account of midship superstructure.

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.

2 1/2" Wood on
Depth to Freeboard Deck = **36.73**

Summer freeboard = **7.73**

Moulded draught (d) = **29.50**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **7.375**

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 18,745$

Tons per inch immersion at summer load water line

T = **60.65**

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

7.71

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	13.38	
Deduction for superstructures ...		32.56
Sheer correction ...	2.37	
Round of Beam correction ...	.27	
Correction for Thickness of Deck amidships ...	1.65	
Other corrections, scantlings, etc. ...		
	17.67	32.56

Summer Freeboard = **86.71**

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

Tropical Fresh Water Line above Centre of Disc ...	15
Fresh Water Line " " ...	7 3/4
Tropical Line " " ...	7 1/4
Winter Line below " " ...	7 1/4
Winter North Atlantic Line " " ...	21 1/4

Tropical Fresh Water Freeboard ...	5' 8" - 11 3/4"	7' - 2 3/4"
Fresh Water " " ...	6' - 7"	5' - 11 3/4"
Tropical " " ...	6' - 7 1/2"	6' - 7"
Winter " " ...	7' - 10"	6' - 7 1/2"
Winter North Atlantic " " ...		7' - 10"

13 JUN 1932

a passenger line to be marked 6" below the centre of disc

MARKING FORM

MARKING FORM

Lloyd's Register Foundation

25 JAN 1938

RECEIVED 6 JAN 1934

003244-00546900405

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway									
Dimensions of Hatchway									
COAMINGS	{	Height above Deck ...							
		Thickness { Sides ...							
		{ Ends ...							
		Stiffeners							
		Brackets, Stays							
HATCH BEAMS	{	Number							
		Spacing							
		Scantling and Sketch ...							
		Bearing Surface							
FORE AND AFTERS	{	Number							
		Spacing							
		Unsupported Lengths ...							
		Scantling* and Sketch ...							
		Bearing Surface							
HATCH COVERS	{	Material							
		Thickness							
		How fitted							
		Bearing Surface							
Spacing of Cleats									
Number of Tarpaulins									

*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 :—

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways :—

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

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

Particulars of Gangway Cargo and Coaling Ports:—

Particulars of Scuppers and Sanitary Discharge Pipes :—

Particulars of Side Scuttles :—

Particulars of Guard Rails :—

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						
Forward Well						

State position of each freeing port } After Well :—
(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 :—

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								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead								
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								
Machinery Casings within Superstruc- tures 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	...	...	...
Raised Quarter Deck Bulkhead	...		
Bridge, After Bulkhead	...	...
Bridge, Forward Bulkhead	...	...
Forecastle Bulkhead	...	...
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...		
Exposed Machinery Casings on Superstructure Decks	...	...
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	...
Deckhouses on Flush Deck Ships	...		