

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

24 FEB 1933

Computation of Freeboard for Steamer, ~~Sailing Ship~~, Tanker
Having COMPLETE SHELTER DECK WITH TONNAGE
OPENING
(Type of Superstructures.) *see 29/12/34*

Ship's Name BRONTE BENEDICT	Nationality and Port of Registry BRITISH LIVERPOOL	Official Number 161147	Gross Tonnage 4949 4920 ✓	Date of Build 1930 -3mo.
Moulded Dimensions: Length 405 ✓ Breadth 53.5 ✓ Depth 28.5 ✓				
Moulded displacement at moulded draught = 85 per cent. of moulded depth 25.0 11,295 11,295 11,295 tons				
Coefficient of fineness for use with Tables .753				

Port of Survey New York
Date of Survey 8 Feb 1933
Name of Surveyor W. H. RUNHAM & John S. Heck
Particulars of Classification +100 A1
Shelter dk with freeboard.

Depth for Freeboard (D) Moulded depth ... 28.5 ✓ Stringer plate04 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 28.54	Depth correction (a) Where D is greater than Table depth (D-Table depth) R = $(28.54-27.00) 3.00$ $1.54 \times 3 = 4.62$ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures	Round of Beam correction Moulded Breadth (B) 53.5 Standard Round of Beam = $\frac{B \times 12}{50} = 12.84$ Ship's Round of Beam = 13 Difference .16 Restricted to Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.16}{4} \times \left(1 - \frac{.0072}{.008} \right) = .04$ NIL
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	29.25	29.25	8-0		29.25	Standard Height of Superstructure <u>7.50</u>
" overhang ...						" " R.Q.D.
R.Q.D. enclosed ...						Deduction for complete superstructure <u>42.00</u>
" overhang ...						Percentage covered $\frac{S}{L} = 100$
Bridge enclosed ...	368.0	368.00	8-0		368.00	" " $\frac{S_1}{L} = 99.28$
" overhang aft ...	2.5	1.37	8-0		1.87	" " $\frac{E}{L} = 99.28$
" overhang forward ...						Percentage from Table, Line A. (corrected for absence of forecastle (if required))
Fore enclosed ...						Percentage from Table, Line B. <u>99.12</u> (corrected for absence of forecastle (if required))
" overhang ...						Interpolation for bridge less than 2L (if required)
Trunk aft ...						Deduction = <u>41.63</u>
Tonnage opening aft ...	5.25	2.94	8-0		2.94	
" " forward ...						
Total ...	405	402.06			402.06	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	50.50	1		50.50	48	54.00	1		54.00	Mean actual sheer aft = <u>Excess</u>
1/4 L from A.P. ...	22.47	4		89.88	21.33	24.03	4		96.12	Mean standard sheer aft = <u>Excess</u>
1/2 L " ...	5.55	2		11.10	5.33	5.94	2		11.88	Mean actual sheer forward = <u>Excess</u>
Amidships ...		4					4			Mean standard sheer forward = <u>Excess</u>
3/4 L from F.P. ...	11.11	2		22.22	11.26	11.88	2		23.76	Length of enclosed superstructure forward of amidships = <u>022</u>
1/4 L " ...	44.94	4		179.76	45.03	48.06	4		192.24	" " aft of " =
F.P. ...	101.00	1		101.00	102	108.00	1		108.00	
Total ...				454.46	46				486.00	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{454.46 - 486.00}{18} \left(.75 - \frac{.25}{2} \right) = \frac{31.54}{18} \times .25 = .44$
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. Depth to Freeboard Deck = 28.54 Summer freeboard = 3.29 Moulded draught (d) = 25.25 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.31 = 6 1/4 Addition for Winter North Atlantic Freeboard (if required) =	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 11,877$ Tons per inch immersion at summer load water line $T = 5766.43.14$ Deduction = $\frac{\Delta}{40T}$ inches 6.87 = 6 3/4	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.753 + .68}{1.36} - \frac{1.433}{1.36}$ Depth Correction ... 4.62 Deduction for superstructures ... 41.63 Sheer correction44 Round of Beam correction ... Correction for Thickness of Deck amidships ... Other corrections, scantlings, etc. ... 4.62 42.07 37.45 Summer Freeboard = 39.57	73.05 76.97 87.8 78.2.33
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Water~~, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ...	13	Tropical Fresh Water Freeboard ...	3-3 1/2
Fresh Water Line " " ...	6 3/4	Fresh Water " " ...	2-2 1/2
Tropical Line " " ...	6 1/4	Tropical " " ...	2-8 3/4
Winter Line " " below " " ...	6 1/4	Winter " " ...	2-9 1/4
Winter North Atlantic Line " " ...	6 1/4	Winter North Atlantic " " ...	3-9 3/4

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
← SHELTER DK							→ UPPER DK			
Description of Hatchway	N°1	N°2	N°3	N°4	N°5	N°6	TONNAGE OPENING	N°1	N°2	N°3
Dimensions of Hatchway	27'-0"x18'-0"	36'-9"x18'	18'-4 1/2"x18'	15'-9"x18'	28'-10 1/2"x18'	23'-7 1/2"x18'	5'-5"x18'-0"	27'-0"x18'	36'-9"x18'	18'-4 1/2"x18'
COAMINGS	Height above Deck	32	32	32	32	32	10'	9" Ba	9" Ba	9"
	Thickness	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4	4 1/4
	Stiffeners	7" Ba	7" Ba	7" Ba	7" Ba	7" Ba	7" Ba	7" Ba	7" Ba	7" Ba
	Brackets, Stays	3x3x 3/8 a	3x3x 3/8 a	3x3x 3/8 a	3x3x 3/8 a	3x3x 3/8 a	3x3x 3/8 a	3x3x 3/8 a	3x3x 3/8 a	3x3x 3/8 a
HATCH BEAMS	Number	5	7	3	3	5	4	5	7	3
	Spacing	4'-6"	4'-9"	4'-6"	4'-0"	5'-0"	5'-0"	4'-6"	4'-9"	4'-6"
	Scantling and Sketch	4x3x 3/8	4x3x 3/8	4x3x 3/8	4x3x 3/8	4x3x 3/8	4x3x 3/8	4x3x 3/8	4x3x 3/8	4x3x 3/8
	Bearing Surface	7" Ba	7" Ba	7" Ba	7" Ba	7" Ba	7" Ba	7" Ba	7" Ba	7" Ba
FORE AND AFTERS	Number	NOTE								
	Spacing	N°s 4, 5+6 HATCHES ON UPPER DECK								
	Unsupported Lengths	EXACTLY SIMILAR TO THOSE ON SHELTER DECK								
	Scantling* and Sketch	EXCEPT THAT COAMINGS ARE ONLY 9" HIGH.								
HATCH COVERS	Material	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD
	Thickness	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4
	How fitted	3"	3"	3"	3"	3"	3"	3"	3"	3"
	Bearing Surface	3"	3"	3"	3"	3"	3"	3"	3"	3"
Spacing of Cleats	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	NONE	2'-0"	2'-0"	2'-0"
Number of Tarpaulins	3	3	3	3	3	3	NONE	2	2	2

*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? ☒

YES
 YES
 YES

Particulars of fiddle, funnel and ventilator coamings:— FIDLEY FUNNEL & VENTILATOR COAMINGS ARE FITTED ON TOP OF STRONG STEEL DECKHOUSE 7'-9" ABOVE SHELTER DECK. FIDLEY L+A OPENINGS & ENGINE ROOM SKYLIGHTS ARE PROVIDED WITH STEEL COVERS PERMANENTLY ATTACHED. FUNNEL & ENG ROOM VENTILATORS ARE STRONG & WELL STAYED.

Particulars of Flush Bunker Scuttles:— 2-24" DIA P.S ON SHELTER DECK. FITTED WITH GRIDS & SUBSTANTIAL CAST IRON COVERS WITH BAYONET JOINTS FOR SECURING

Particulars of Companionways:—

NONE

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
 AFT 2 SAMPSON POSTS
 4-12" DIA COAMING 3'-0" HIGH x 1/4" PLATE
 2-22" " " 3'-0" " x 3/8"
 2-20" " " 3'-0" " x 3/8"
 4-22" " " 3'-0" " x 3/8"
 2-12" " AT CREWS HOUSE AFT HIGH & WELL BRACED.
 FOR 2-20" DIA AT FORECASTLE HIGH AND WELL BRACED
 2-20" " " FORE MAST " " "
 2-22" " 3'-0" COAMING x 3/8 PLATING
 2-18" " 3'-0" " x 3/8"
 2 SAMPSON POSTS.
 WOOD PLUGS & CANVAS COVERS ARE PROVIDED FOR ALL VENTILATORS

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

ALL FITTED WITH STRONG GOOSE NECKS 28" HIGH
 WOOD PLUGS PROVIDED FOR CLOSING WHEN REQUIRED

Particulars of Gangway Cargo and Coaling Ports:—

NONE



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