

# WRECK B.T. COPY

## Lloyd's Register of Shipping.

### SURVEYS FOR FREEBOARD.

1 JUL 1935

Index No. 30677  
(For London Office only.)

No. 5673.

528

Computation of Freeboard for Steamer, ~~Sailing Ship~~, Tugboat

having Complete superstructure without tonnage opening

(Type of Superstructures.)

Ship's Name COLLEGIAN  
(ex ROYAL PRINCE)

Nationality and Port of Official Registry BRITISH LIVERPOOL

Official Number 146693

Gross Tonnage 7886

Date of Build 1923-9

Port of Survey BIRKENHEAD

Date of Survey 14 June 1935

Name of Surveyor Alfred Skap

Moulded Dimensions: Length 450.0' Breadth 57.75' Depth 31.0' to upper DECK  
41.0' to SHELTER DECK

Moulded displacement at moulded draught = 85 per cent. of moulded depth 19552 tons

Coefficient of fineness for use with Tables .756

Particulars of Classification + 100A1  
Shelter Deck  
with freeboard

Depth for Freeboard (D)

Moulded depth ... 41.0

Stringer plate ... 60 ... 60

Sheathing on exposed deck (NONE) ✓

$T \left( \frac{L-S}{L} \right) =$

Depth for Freeboard (D) = 41.04

Depth correction 11.04

(a) Where D is greater than Table depth  
(D - Table depth) R =  $(41.04 - 30.00) 3.00$   
= + 33.12 ✓

(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) 57.75

Standard Round of Beam =  $\frac{B \times 12}{50} = 13.87$

Ship's Round of Beam = 14.00

Difference Excess 13"

Restricted to

Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L_1} \right) = \frac{13}{4} \times .7067 = 2.30$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	✓					
" overhang ...	✓					
R.Q.D. enclosed ...	✓					
" overhang ...	✓					
Bridge enclosed ...	✓					
" overhang aft ...	✓					
" overhang forward ...	✓					
Forecastle enclosed ...	<u>42.00</u>	<u>42.00</u>	<u>8-3" (mean)</u>	✓	<u>42.00</u>	
" overhang ...	✓					
Trunk aft ...	✓					
" forward ...	✓					
Tonnage opening aft ...	✓					
" forward ...	✓					
Total ...	<u>42.00</u>	<u>42.00</u>			<u>42.00</u>	

Standard Height of Superstructure 7.50'

" " R.Q.D. ✓

Deduction for complete superstructure 42.00"

Percentage covered  $\frac{S}{L} = 9.33\%$  ✓

" "  $\frac{S_1}{L} = 9.33\%$  ✓

" "  $\frac{E}{L} = 9.33\%$  ✓

Percentage from Table, Line A.  
(corrected for absence of forecastle (if required)) 4.67% ✓

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

Interpolation for bridge less than 2L (if required)

Deduction = 42.00 x .0467 = -1.96" ✓

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<u>55.00</u>	1		<u>55.00</u>	<u>9.0"</u>	<u>9.00</u>	1		<u>9.00</u>	Mean actual sheer aft = Deficient
1/4 L from A.P. ...	<u>24.47</u>	4		<u>97.88</u>	<u>1.19"</u>	<u>0</u>	4		<u>0</u>	Mean actual sheer forward = Deficient
1/2 L " ...	<u>6.05</u>	2		<u>12.10</u>	<u>.30"</u>	<u>0</u>	2		<u>0</u>	Mean standard sheer forward
Amidships ...	✓	4		✓	✓	✓	4		✓	Length of enclosed superstructure forward of amidships = } Deficient
3/4 L from F.P. ...	<u>12.10</u>	2		<u>24.20</u>	<u>1.28"</u>	<u>1.00</u>	2		<u>2.00</u>	" " aft of " = } Deficient
1/4 L " ...	<u>48.95</u>	4		<u>195.80</u>	<u>5.14"</u>	<u>5.00</u>	4		<u>20.00</u>	
F.P. ...	<u>110.00</u>	1		<u>110.00</u>	<u>14.0"</u>	<u>14.00</u>	1		<u>14.00</u>	
Total ...				<u>494.98</u>					<u>45.00</u>	

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{449.98}{18} \left( .75 - .0466 \right) = +17.58"$  ✓

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 =	<u>41.04</u>
Summer freeboard =	<u>11.10</u>
Moulded draught (d) =	<u>29.94</u>

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches =

Addition for Winter North Atlantic Freeboard (if required) =

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

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

## TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	<u>33.12</u>	✓
Deduction for superstructures ...	<u>1.96</u>	
Sheer correction ...	<u>17.58</u>	
Round of Beam correction ...	<u>.03</u>	
Correction for Thickness of Deck amidships ...		
Other corrections, scantlings, etc. ...		
	<u>50.70</u>	<u>1.79</u> +
Summer Freeboard =		

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

Existing freeboard as measured from the foremast to the winter line	Tropical Fresh Water Line above Centre of Disc ...	<u>15.2"</u>	Tropical Fresh Water Freeboard ...	<u>11' 1 1/4"</u>
	Fresh Water Line " " ...	<u>8"</u>	Fresh Water " " ...	<u>9' 9 3/4"</u>
	Tropical Line " " ...	<u>7 1/2"</u>	Tropical " " ...	<u>10' 5 1/4"</u>
	Winter Line below " " ...	<u>7 1/2"</u>	Winter " " ...	<u>10' 5 1/4"</u>
	Winter North Atlantic Line " " ...	✓	Winter North Atlantic " " ...	✓



PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
ON FREEBOARD DECK									
Description of Hatchway	No 1	No 2 & 5	No 3 & 4	No 6	No 7	HATCH IN STEEL TRUNK IN FORECASTLE TO FORE PEAK STORE	DITTO TO CHAM LOCKER	2 HATCHES IN STEERING GEAR HOUSE	HATCH ON FORECASTLE DECK
Dimensions of Hatchway	27' x 16'	36' x 20'	15' x 20'	27' x 20'	12' x 20'	27' x 20'	27' x 20'	1-9' x 1-7 1/2'	3-3' x 2-8'
COAMINGS	Height above Deck	2-7"	2-7"	2-7"	2-7"	2-7"	2-7"	18" COAMING	9 x 3 1/2 BA
	Thickness	.50	.50	.50	.50	.44	.44	6 COAMING	
	Sides	.44	.44	.44	.44	.44	.44		
	Stiffeners	9 x 3 1/2 BA	9 x 3 1/2 BA	10 x 3 1/2 BA	9 x 3 1/2 BA	7 x 3 1/2 BA			
	Beams, Stays	2	3	1	2	1			
HATCH BEAMS	Number	5	7	2	5	2			
	Spacing	4'-6"	4'-6"	5'-0"	4'-6"	4'-0"			
	Scantling and Sketch	PLATE 13 x 32	PLATE 16 x 36	PLATE 18 x 36	PLATE 16 x 36	PLATE 15 x 36			
		ANGLES 3 1/2 x 3 x 4 1/2	ANGLES 4 x 3 x 4 1/2	ANGLES 4 x 3 x 4 1/2	ANGLES 4 x 3 x 4 1/2	ANGLES 4 x 3 x 4 1/2			
	Bearing Surface	3"	3"	3"	3"	3"			
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling and Sketch								
	Bearing Surface								
HATCH COVERS	Material	W. PINE				W. PINE	W. PINE	W. PINE	W. PINE
	Thickness	3"				3"	3"	3"	3"
	How fitted	F. & A.				ATHW-SHIP	ATHW-SHIP	ATHW-SHIP	ATHW-SHIP
	Bearing Surface	3"				2 1/2"	2 1/2"	2 1/2"	2 1/2"
Spacing of Cleats		2'-0"						LOCKING BAR	2'-0"
Number of Tarpaulins		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? ☒

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle, funnel and ventilator coamings in good order  
 Engine room skylight of steel efficiently constructed.  
 Fiddle openings fitted with strong hinged steel covers.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

Escape from Tunnel — Steel companion on freeboard deck 6'-6" high x 2'-4" x 2'-6" x .35" hinged steel door at after end, operated both sides. — 18" coaming

Ventilators in exposed positions on freeboard and superstructure decks:—

Atte deck:—	2 @ 33" coaming x 24" dia x .40
	1 @ 30" " x 18" " x .40
	1 @ 32" " x 12" " x .34
DECK:—	15 @ 36" " x 20" " x .40
	4 @ 36" " x 24" " x .40
	2 @ 36" " x 26" " x .40
	4 @ 30" " x 10 1/2" " x .32
	3 @ 30" " x 12" " x .34
	2 @ 36" " x 10" " x .32

1 @ 33" coaming x 18" dia x .40  
 1 @ 36" " x 32" " x .40

all ventilators constructed in accordance with the Rules and closed with wood plugs and canvas covers

Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks

DECK. 1 @ 24" HIGH x 3" DIA.  
 2 @ 19" " x 4" "

DECK. 23 @ 20 to 24" HIGH 3" to 7" DIA. (no wood plugs or canvas covers).  
 7 @ 17" HIGH x 3" DIA (fitted with screw plug-brass).  
 4 @ 18" " x 2" " bolted plate at top.  
 2 @ 18" " x 4" " wood plug.  
 2 @ 12" " x 2" "

Efficient means of closing provided

to oil fuel tanks fitted with 1" Gyros valves.

of Gangway Cargo and Coaling Ports:—

Cargo doors P+S in shelter tween decks fwd. 2'-0" x 4'-6" efficiently constructed & secured  
 " " " " " " " " aft 3'-0" x 5'-0" " " " "

Hinges removed and doors welded up.



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Lloyd's Register Foundation



Collinson type scuppers fitted in way of bulwarks.

All 'both and sanitary discharge pipes fitted with storm valves at ship's side and efficient traps at inner end.

all side scuttles of substantial construction fitted with hinged deadlights. ✓

Side scuttles below foreboard deck now removed and holes plated over. ✓

FORECASTLE DECK :- 3'-6" high (3 rods) stanchions spaced 4'-0" apart.

DECK. — open rails fitted between steel bulwarks. ✓

84'-0" open rail P. & S. aft. of midship house

79-0 " " " fewd " "

Rails 3'-6" to 4'-0" HIGH (3 rods) slanchions spaced 4'-0" apart  
 substantially constructed and stowed 2 1/2' to 3' high

Bulwarks substantially constructed and stayed 3'-6" to 4'-0" high

Particulars of Gangways, Lifelines, etc.:—

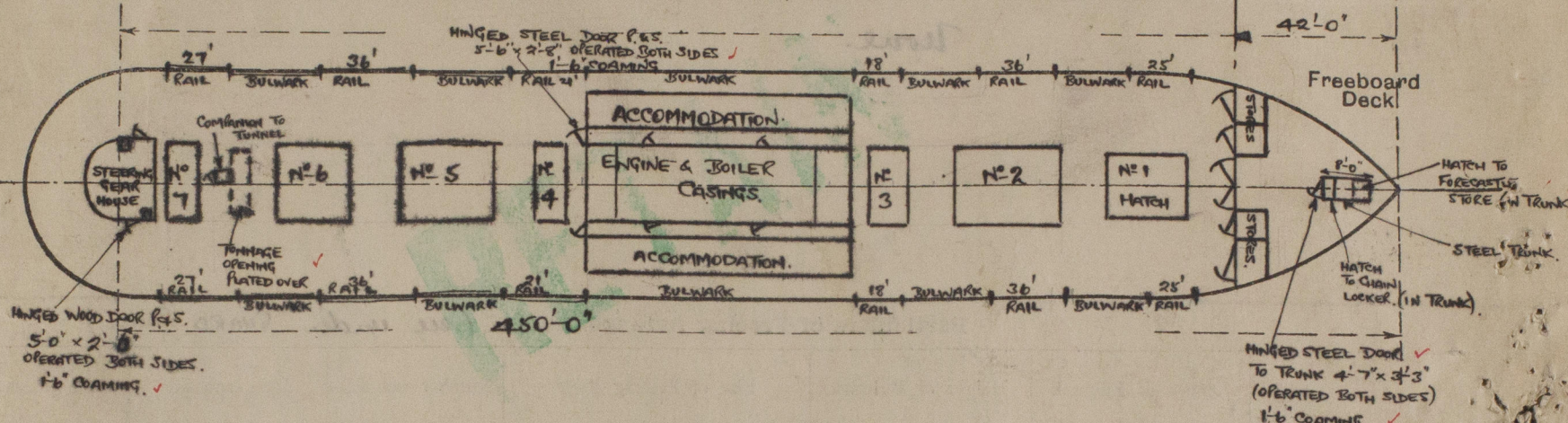
~~None.~~

Suitable provision made for lifelines  
in accordance with the regulations

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 ... ..	40 /	.32 /	3x3x.30	2 <sup>L</sup> 4" to 2 <sup>L</sup> 8"	NONE	10 5'-0" x 4'-0" 40 5'-0" x 2'-3"	18" /	8'-3" MEAN
Trunk, Aft ... ..	✓							
Trunk, Forward ... ..	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	40 /	.32 /	4x3x.36 /	3'-0"	BRKTS. ALTERNATELY 2 P. 25. AT TOP OF CASING /	4'-9" x 2'-0"	18" /	7'-6"
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	...	...	...	Hinged steel doors operated both sides. ✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks	...			Hinged steel doors operated both sides. ✓
Exposed Machinery Casings on Super-structure Decks	...	...	...	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	...	
Decks houses on Flush Deck Ships	...			





Survey carried out while vessel in dry dock and afloat.  
1<sup>st</sup> special survey N<sup>o</sup> 23 is being completed at this time. ✓

Names of sister ships

Fee £ 18 : 0 : 0

Received by me