

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~  
having POOP - BRIDGE - FORECASTLE.

Port of Survey HONGKONG.

Date of Survey 22<sup>nd</sup> - 23<sup>rd</sup> APRIL 1932.

Name of Surveyor J. Morrison

Particulars of Classification +100 A1

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>CAPE ST. ANDREW.</u>	<u>BRITISH.</u> <u>LONDON.</u>	<u>160385.</u>	<u>5094.</u>	<u>1928.</u>

Moulded Dimensions: Length 404.75' Breadth 53.30' Depth 29.00'

Moulded displacement at moulded draught = 85 per cent. of moulded depth 11990 tons

Coefficient of fineness for use with Tables .789

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth ...	<u>29.00</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(29.03 - 26.98) × 3.00 = + 6.15</u>		Moulded Breadth (B)	<u>53.3</u>
Stringer plate ...	<u>11 1/2" / 20.34</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	<u>12.79</u>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$				Ship's Round of Beam	<u>13.50</u>
Depth for Freeboard (D) =	<u>29.03</u>	If restricted by superstructures		Difference	<u>1.71</u>
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$	<u>-.04</u>

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Roop enclosed ...	<u>36.75</u>	<u>36.12</u>	<u>7.50</u>		<u>36.12</u>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	<u>241.25</u>	<u>241.25</u>	<u>7.50</u>		<u>241.25</u>
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	<u>33.50</u>	<u>33.50</u>	<u>7.50</u>		<u>33.50</u>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<u>311.50</u>	<u>310.87</u>			<u>310.87</u>

Standard Height of Superstructure 7.5

" " R.Q.D. ✓

Deduction for complete superstructure 42.00

Percentage covered  $\frac{S}{L} = \frac{76.96}{100} = 76.96\%$

" "  $\frac{S_1}{L} = \frac{76.80}{100} = 76.80\%$

" "  $\frac{E}{L} = \frac{76.80}{100} = 76.80\%$

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

Percentage from Table, Line B. 71.36  
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction =  $42.00 \times .7136 = 29.97$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>50.47</u>	1		<u>50.47</u>	<u>63.00</u>	<u>63.00</u>	1		<u>63.00</u>
1/4 L from A.P. ...	<u>22.46</u>	4		<u>89.84</u>	<u>21.50</u>	<u>27.65</u>	4		<u>110.60</u>
1/2 L " ...	<u>5.55</u>	2		<u>11.10</u>	<u>2.75</u>	<u>6.91</u>	2		<u>13.82</u>
Amidships ...	<u>0</u>	4		<u>0</u>	<u>-</u>	<u>-</u>	4		<u>0</u>
3/4 L from F.P. ...	<u>11.11</u>	2		<u>22.22</u>	<u>16</u>	<u>13.72</u>	2		<u>27.44</u>
3/4 L " ...	<u>44.92</u>	4		<u>179.68</u>	<u>49.25</u>	<u>54.90</u>	4		<u>219.60</u>
F.P. ...	<u>100.95</u>	1		<u>100.95</u>	<u>125.00</u>	<u>125.00</u>	1		<u>125.00</u>
Total ...				<u>454.26</u>					<u>559.46</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{105.20}{18} \left( .75 - \frac{384.8}{559.46} \right) = - 2.14$

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 = 29.03 Ft.  
Summer freeboard = 4.40  
Moulded draught (d) = 24.63

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches =  $\frac{24.63}{4} = 6.15 = 6 1/4$   
Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 12030$

Tons per inch immersion at summer load water line

$T = 43.50$

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

=  $\frac{12030}{40 \times 43.50} = 6.92$   
= 7"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{.789 + .68}{1.36} = \frac{1.468}{1.36}$

	+	-
Depth Correction ...	<u>6.15</u>	<u>-</u>
Deduction for superstructures ...	<u>-</u>	<u>29.97</u>
Sheer correction ...	<u>-</u>	<u>2.14</u>
Round of Beam correction ...	<u>-</u>	<u>.04</u>
Correction for Thickness of Deck amidships ...	<u>-</u>	<u>-</u>
Other corrections, scantlings, etc. ...	<u>-</u>	<u>-</u>
	<u>6.15</u>	<u>32.15</u>

Summer Freeboard = 52.82

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

Tropical Fresh Water Line above Centre of Disc ...	<u>13 1/4"</u>
Fresh Water Line " " ...	<u>7 1/4"</u>
Tropical Line " " ...	<u>6 1/4"</u>
Winter Line below " " ...	<u>6 1/4"</u>
Winter North Atlantic Line " " ...	<u>✓</u>

Tropical Fresh Water Freeboard ...	<u>4' 4 3/4"</u>
Fresh Water " " ...	<u>3' 3 1/2"</u>
Tropical " " ...	<u>3' 9 3/4"</u>
Winter " " ...	<u>3' 10 1/2"</u>
Winter North Atlantic " " ...	<u>4' 11"</u>

8 JUN 1932

W368-0094 1/2

RECEIVED

RECEIVED 1 AUG 1932



PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
BRIDGE DECK.										
Description of Hatchway	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.	No. 10.
Dimensions of Hatchway	27'0" x 19'0"	30'0" x 19'0"	25'0" x 19'0"	32'6" x 19'0"	32'6" x 19'0"					
COAMINGS	Height above Deck	30"	30"	30"	30"	30"				
	Thickness	8/20, 9/20	8/20, 9/20	8/20, 9/20	8/20, 9/20	8/20, 9/20				
	Stiffeners	7" x 3" x 1/20 BA	8" x 3" x 1/20 BA	7" x 3" x 1/20 BA	8" x 3" x 1/20 BA	9" x 3" x 1/20 BA				
	Brackets, Stays	2 1/2" DIA.	2 1/2" DIA.	2 1/2" DIA.	2 1/2" DIA.	2 1/2" DIA.				
HATCH BEAMS	Number	5	4	4	5	5				
	Spacing	4'6"	6'0"	5'0"	5'6"	5'6"				
	Scantling and Sketch	PLATE 7/20, 4 x 3 x 8/20 A	PLATE 6/20, 4 x 3 x 8/20 A	PLATE 6/20, 4 x 3 x 8/20 A	PLATE 7/20, 4 x 3 x 8/20 A	PLATE 6/20, 4 x 3 x 8/20 A				
	Bearing Surface	3"	3"	3"	3"	3"				
FORE AND AFTERS	Number	NIL	NIL	NIL	NIL	NIL				
	Spacing									
	Unsupported Lengths									
	Scantling* and Sketch									
HATCH COVERS	Material	WOOD	WOOD	WOOD	WOOD	WOOD				
	Thickness	3"	2 1/2"	2 1/2"	2 1/2"	3"				
	How fitted	F. & A.	F. & A.	F. & A.	F. & A.	F. & A.				
	Bearing Surface	3"	3"	3"	3"	3"				
Spacing of Cleats	24"	24"	24"	23"	26"					
Number of Tarpaulins	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 fiddle, funnel and ventilator coamings:— FIDLEY GRATINGS FITTED WITH HINGED STEEL COVERS. FUNNEL & FIDLEY VENTILATORS EFFICIENT. ENGINE ROOM SKYLIGHT OF STEEL STRONGLY CONSTRUCTED.

Hatchways on Fore Deck under Superstructure  
 No. 2. 9 x 3 1/2 x 1/2 Coaming. Cleats 20" pitch. 6 beams 16-6 apart, 1/16 Plate 16" deep with 4 x 4 x 3/8 LS.  
 " 3 - do - - do - 5" - do - - do -  
 " 4 - do - - do - 6" - do - - do -  
 The Hatch beams, covers, tarpaulins & battening down arrangements at all hatchways on freeboard and decks in bridge space in good order and in keeping with Convention requirements.

Particulars of Flush Bunker Scuttles:— NONE.

Particulars of Companionways:— NONE.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— 1 @ 8" DIA. ON FORECASTLE DECK TO FORE PEAK STORE. COAMING 18" x 3/20.  
 2 @ 16" DIA. IN FORE WELL TO HOLDS & TWEEN DXS. COAMING 37" x 7/20. 2 @ 16" DIA. 2 @ 18" DIA. ON BRIDGE DECK TO HOLD & TWEEN DXS. COAMINGS 38" x 1/20.  
 2 DERRICK POST VENTS 18" DIA. TO STROKEHOLD. 2 @ 16" DIA. 4 @ 18" DIA. ON BRIDGE DECK TO HOLD & TWEEN DXS. COAMINGS 30" x 1/20.  
 4 @ 16" DIA. IN AFTER WELL TO HOLDS & TWEEN DXS. COAMINGS 37" x 7/20. TUNNEL ESCAPE ON POOP DECK 30" DIA. COAMING 27" x 3/20.  
 3 @ 12" DIA. ON POOP TO CREWS QRS. COAMINGS 16" x 1/20. 3 @ 6" DIA. 1 @ 4" DIA. ON POOP TO CREWS QRS. COAMINGS 18" x 3/20. 4 @ 4" GOOSENECKS ON POOP 12" HIGH.  
 VENTILATORS HAVE WOOD PLUGS & CANVAS COVERS.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— 1 @ 3" TO AFTER PEAK ON POOP DECK 18" HIGH.  
 3 @ 3" TO DOUBLE BOTTOM IN AFTER WELL. 3'0" HIGH.  
 8 @ 3" " " ON BRIDGE DK. 18" HIGH.  
 1 @ 3" " " ON FOLE. DECK. 18" HIGH.  
 ALL OF GALV. W.I. PIPE. PROVIDED WITH WOOD PLUGS & CANVAS COVERS.

Particulars of Gangway Cargo and Coaling Ports:— NONE.



© 2020

Lloyd's Register Foundation

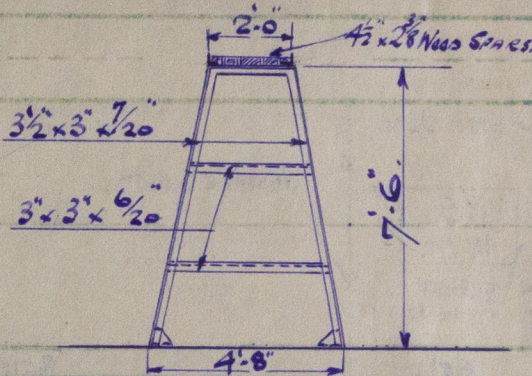


Particulars of Scuppers and Sanitary Discharge Pipes — SCUPPERS FROM WELLS HAVE BRASS STORM VALVES. ✓  
SCUPPERS FROM ACCOMMODATION IN POOP, DISCHARGES FROM BATHROOMS, GALLEY SINK & W.C. SOILS HAVE STORM VALVES FITTED. ✓

Particulars of Side Scuttles: NONE FITTED BELOW FREEBOARD DECK. ✓  
SIDE SCUTTLES TO POOP SPACE HAVE HINGED DEADLIGHTS. ✓  
NO DEADLIGHTS FOR SIDE HOUSES. ✓

Particulars of Guard Rails: — ROUND POOP. 2 RODS; STANCHIONS 3'-3" SPACED ABOUT 4'-6" APART. ✓  
BRIDGE DECK. 3 RODS; " 3'-6" " " 5'-4" " ✓  
FLE. DECK. 2 RODS; " 3'-3" " " 4'-0" " ✓

Particulars of Gangways, Lifelines, etc.: — GANGWAY FROM POOP TO BRIDGE DECK. STANCHIONS 3'-0" HIGH SPACED ABOUT 6'-9" APART HAVING 2 WIRES. ✓  
SUPPORTS AS PER SKETCH: SPACED ABOUT 14'-0" APART. ✓



*new berthed aft.*

#### 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 ... ..	55'-0" /	3'-9"	2'-9" x 1'-6"	3.	12.375 sq. ft.	12.47 ✓
Forward Well ... ..	38'-6" /	3'-10"	3'-6" x 1'-6"	2.	10.5 sq. ft.	10.32 ✓
State position of each freeing port (F. and A. position and height above deck edge) } After Well: — FROM POOP FRONT: 8'-9"; 25'-6"; 42'-9" } MEASURED TO CENTRE OF OPENINGS. State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — ONE 1" DIA. ROD FITTED HORIZONTALLY. ✓ Forward Well: — FROM BRIDGE FRONT: 7'-9"; 32'-0" } ALL 13" ABOVE DECK. ✓						
Additional area where sheer is less than standard.						

#### Particulars of Superstructures, Trunks, Casings, Deckhouses.

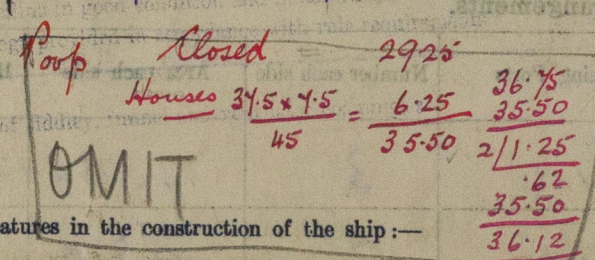
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..	6/20 ✓	5/20 ✓	6" x 3" x 1/20 A	33"	BRACKETS.	5'-0" x 2'-0"	18"	7'-6"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ... ..	—	5/20	PLATING FLANGED 2 1/2"	40"	—	2'-4'-9" x 3'-0"	18"	7'-6"
Bridge, Forward Bulkhead ... ..	8/20 ✓	7/20 ✓	9" x 3" x 1/20 B.A. ✓	30"	BRACKETS.	2'-5'-0" x 3'-3"	18"	7'-6"
Forecastle Bulkhead ... ..	—	4 1/2/20	PLATING FLANGED 2 1/2"	42"	—	4'-10" x 3'-3"	18"	7'-6"
Trunk, Aft ... ..								
Trunk, Forward ... ..								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks ... ..	6/20 ✓	5/20 ✓	3" x 2 1/2" x 1/20	36"	EXTS. AT TOP.	4'-10" x 2'-6"	18"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	30	26	3 1/2" x 3" x 26	30	✓	No opening	✓	
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead ... ..	SEE SKETCH. OPERATED FROM BOTH SIDES. ✓
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ... ..	WEATHER BOARDS FULL HEIGHT. <i>in rounded channels</i>
Bridge, Forward Bulkhead ... ..	BOLTED PLATE COVERS. <i>Steel doors secured by bolts 6" apart</i>
Forecastle Bulkhead ... ..	WEATHER BOARDS FULL HEIGHT. <i>in rounded channels</i>
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks ... ..	STEEL DOORS TO GALLEY & FIDLEY; WOOD DOORS TO ENGINE ROOM. OPERATED FROM BOTH SIDES.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	<i>No openings</i>
Deckhouses on Flush Deck Ships ...	



Cape St Andrew



State any special features in the construction of the ship:—

Builder's name and yard number R. DUNCAN & CO. LTD. P.G.L.

No 381

Names of sister ships CAPE ST. GEORGE.

Owners SUN SHIPPING Co. LTD.

Fee ~~1~~ 365.00

Received by me