

24 AUG 1932

B.T. COPY

Index. No. **21948**
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Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

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

having poop, bridge and fore

"**ATLANTA**" (Type of Superstructures.)

Ship's Name SHAHRISTAN ex IRINI

Nationality and Port of Registry British London

Official Number 120929 Gross Tonnage 4552 Date of Build 1911-11m.

Moulded Dimensions: Length 373.0' Breadth 49.79' Depth 30.0'

Moulded displacement at moulded draught = 85 per cent. of moulded depth 10712 tons

Coefficient of fineness for use with Tables 792

Port of Survey Liverpool

Date of Survey August 1932

Name of Surveyor A.W. Jackson

Particulars of Classification 100A1

S.S. Hpl no. 3 - 8,21

S.S. Hpl no. 2 - 30

Depth for Freeboard (D)

Moulded depth ... 30.0'

Stringer plate04

Sheathing on exposed deck

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

Depth for Freeboard (D) = 30.04

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R = $(30.04 - 24.87) \times 2.869 = +14.83$

(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) 49.79'

Standard Round of Beam = $\frac{B \times 12}{50} = 11.95$

Ship's Round of Beam = 12.2

Difference less .55

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.55}{4} \left(1 - \frac{.4997}{.5003} \right) = -.07$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>25.33</u>	<u>25.33</u>	<u>7'-6"</u>		<u>25.33</u>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed...	<u>119.50</u>	<u>119.50</u>	<u>7'-6"</u>		<u>119.50</u>
" overhang aft ...					
" overhang forward	<u>2.13</u>	<u>1.06</u>			<u>1.06</u>
F'cle enclosed <u>equivalent</u> ...	<u>40.71</u>	<u>40.71</u>	<u>7'-6"</u>		<u>40.71</u>
" overhang ...			<u>3"</u>		
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward					
Total ...	<u>187.67</u>	<u>186.60</u>			<u>186.60</u>

Standard Height of Superstructure	<u>7.23</u>
" " R.Q.D.	
Deduction for complete superstructure	<u>40.20</u>
Percentage covered $\frac{S}{L} =$	<u>50.31</u>
" " $\frac{S_1}{L} =$	<u>50.03</u>
" " $\frac{E}{L} =$	<u>50.03</u>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	<u>36.03</u>
Interpolation for bridge less than 2L (if required)	
Deduction = $40.20 \times .3603 =$	<u>-14.48</u>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>47.30</u>	1		<u>47.30</u>	<u>51.0</u>	<u>51.00</u>	1		<u>51.00</u>
$\frac{1}{2}$ L from A.P. ...	<u>21.05</u>	4		<u>84.20</u>	<u>18.75</u>	<u>22.12</u>	4		<u>88.48</u>
$\frac{3}{8}$ L " ...	<u>5.21</u>	2		<u>10.42</u>	<u>3.25</u>	<u>5.53</u>	2		<u>11.06</u>
Amidships ...		4					4		
$\frac{3}{8}$ L from F.P. ...	<u>10.40</u>	2		<u>20.80</u>	<u>7.5</u>	<u>12.39</u>	2		<u>24.78</u>
$\frac{1}{2}$ L " ...	<u>42.10</u>	4		<u>168.40</u>	<u>44.0</u>	<u>49.56</u>	4		<u>198.24</u>
F.P. ...	<u>94.60</u>	1		<u>94.60</u>	<u>114.0</u>	<u>114.00</u>	1		<u>114.00</u>
Total ...				<u>425.72</u>					<u>487.56</u>

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

If limited on account of midship superstructure.

$$\frac{425.72 - 487.56}{18} = \frac{-61.84}{18} = (-.75 - .2515) = 1.71$$

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck =	<u>30.04</u>
Summer freeboard =	<u>5.58</u>
Moulded draught (d) =	<u>24.46</u>

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.11 = 6"

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$$\Delta = 10291$$

Tons per inch immersion at summer load water line

$$T = 38.25$$

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

$$= \frac{10291}{40 \times 38.25} = 6.73 = 6\frac{3}{4}"$$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$$\frac{.792 + .68}{1.36} = \frac{1.472}{1.36}$$

Depth Correction ...	<u>14.83</u>	-
Deduction for superstructures ...	-	<u>14.48</u>
Sheer correction ...	-	<u>1.71</u>
Round of Beam correction ...	-	<u>.07</u>
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-
	<u>14.83</u>	<u>16.26</u>
		<u>-1.43</u>
		<u>Summer Freeboard = 67.09</u>

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

Tropical Fresh Water Line above Centre of Disc ...	<u>12.34</u>	<u>322.3</u>
Fresh Water Line " " ...	<u>6.34</u>	<u>171</u>
Tropical Line " " ...	<u>6</u>	<u>152</u>
Winter Line below " " ...	<u>6</u>	<u>102</u>
Winter North Atlantic Line " " ...		

Tropical Fresh Water Freeboard ...	<u>137.8</u>	<u>4'-6 1/4"</u>
Fresh Water " " ...	<u>153.1</u>	<u>5'-0 1/4"</u>
Tropical " " ...	<u>155.0</u>	<u>5'-1 1/4"</u>
Winter " " ...	<u>185.4</u>	<u>6'-1 1/4"</u>
Winter North Atlantic " " ...		

5m, 3, 32.

002825-002829-0067 1/2

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MARKING FORM
24 MAY 1932

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15 SEP 1932

Lloyd's Register
Foundation

~~Malabar~~ Equator. 4 AUG 1932

Particulars of fiddle, funnel and ventilator coverings:— Stakehold gratings covered by strong steel hinged covers.
Fiddle and funnel ventilators in efficient condition.
Engine skylight of steel strongly constructed.

None fitted

None fitted.

Particulars of Ventilators in exposed positions on treeshoot and superstructure decks -

1 Vent on Fiddle OK 17" diam, coaming 31"x40", led to hold spaces.	All vent coamings closed by wooden plugs and canvas covers.
2 " " in fore Well 17 " " " 36"x40 " " "	
3 My Samson Parts in Fore Well stayed at Br. OK. 20" diam x 50", led to hold spaces.	
4 Vents in After Well 17" diam coamings 38"x40", led to hold spaces.	
2 H.V. Samson Parts in After Well stayed at Pop OK. 20" diam x 50", led to hold spaces.	
1 Vent in After Well 10" diam, coaming 38"x32", led to tunnel.	

Particulars of Air Pipes in exposed positions on treeboard, ~~main deck~~, or superstructure deck.

Nº 1.	G.N.	Airpipes	8" diam,	5' 6"	above H.P.K.	In forward well from Nº 1 D.B.Tank!
"	"	"	3 " "	3' 6"	"	" Nª 2 " "
"	C.S."	"	2½ " "	4 "	Bv.DK.	" Nª S.E.W. D.B." — Efficient means of closing provided.
"	M.I.	"	3 " "	4' 6"	H.P.O.K.	" after well " Nª 4 " "
"	"	"	3 " "	8' 2"	"	" " " Nª 5 " "
"	C.S.	"	3 " "	3 "	n prop. NK	air and filling pipe A.P. Tanks.

x airpipes stayed. Air pipes to Nº 1. 2. 4 + 5 D.B. Tanks fitted with gauge wire, as oil fuel carried in D.B.

Particulars of Gangway Cargo and Cooling Ports :—

None fitted.

Particulars of Side Scuttles:— All side scuttles below freeboard deck fitted with hinged deadlights.
Side scuttles to cover spaces in fore and poop and in bridge tween decks fitted with hinged deadlights.
All scuttles of substantial construction.

Particulars of Guard Rails:—

Fisle	3'0" high,	3 rods,	stanchions	4'8" apart.
Bridge	3'6" "	5 rods,	"	5'0" "
Pool	3'0" "	3 rods,	"	4'3" "

~~None fitted.~~
Suitable provision made for rigging lifelines
which are available for use on any part
of the ship which might have to be used by
the crew in the regular working of the ship.

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	106 ^{5.0} 3"	4'2"	2'6" x 1'3" 3-9 + 1-12	4 2	12.5 5 21	21.25 5
Forward Well	84'7"	4'2"	2'6" x 1'3" 3-9 x 1-0 ¹ / ₂	3 2	9.375 5 17.0	16.9 5

State position of each freeing port } After Well: — 14'5" x 2'6" 15'10" x 2'6" 15'0" x 2'6" 7'6" x 1'6" Ford.
(P. and A. position and height above deck edge) } Forward Well: — 14'1" x 2'6" 14'10" x 2'6" 16'6" x 2'6" Ford.
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — Steel shutters hinged at top, one horizontal bar. Lower edge of freeing port 14" above deck. i.e. top of sheerstrake.

Additional area where sheer is less than standard.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ⁽⁹⁾	"44"	"40"	$\frac{1}{2} \times 3\frac{1}{2} \times 56BA.$	30"	BKs. top & bottom.	2'-6" x 4'-6"	24"	7'-6"
Raised Quarter Deck Bulkhead ...	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead	✓	"25"	5' x 3' x 400L	30"	Nil	2@ 2'-0" x 5'-0"	24"	7'-6"
Bridge, Forward Bulkhead	"44"	"40"	8' x 3 $\frac{1}{2}$ ' x 56BA.	29"	BKs. top & bottom.	2'-7" x 4'-6"	24"	7'-6"
Forecastle Bulkhead	"38"	"32"	3' x 3' x 38"	Dir. BKs. and 32"	Nil	2'-0" x 4'-6"	19"	7'-6"
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	"38"	"32"	$3\frac{1}{2}' \times 3\frac{1}{2}' \times 34"$	25 $\frac{1}{2}"$	Nil	BC 2'-0" x 4'-6"	16"	7'-6" ab m.c.
Exposed Machinery Casings on Super- structure Decks								
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	"44"	"32"	$3\frac{1}{2}' \times 3\frac{1}{2}' \times 34"$	25 $\frac{1}{2}"$	To beams at top.	E.C.I's 2'-0" x 4'-6" BC 2'-0" x 4'-1"	19"	7'-6"
Deckhouses on Flush Deck Ships ...	✓	✓	✓	✓	✓	✓	✓	✓

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

Poop Bulkhead	...	...	...	3" weather boards full height in riveted channels.
Raised Quarter Deck Bulkhead	...	✓		
Bridge, After Bulkhead	...	...	...	3" weather boards full height in riveted channels.
Bridge, Forward Bulkhead	...	...	...	Steel hinged weathertight doors, clips worked from well side only.
Forecastle Bulkhead	...	...	...	Steel doors capable of being manipulated from both sides.
Exposed Machinery Casings on Free-board or Raised Quarter Decks	...	✓		
Exposed Machinery Casings on Superstructure Decks	...	...	...	Steel doors capable of being manipulated from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	...	" " " " " " " " " "
Deckhouses on Flush Deck Ships	...	✓		

