

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index No. **21878**  
(For London Office only.)

DEC 1933

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having Poop, Bridge & Forecastle (Type of Superstructures.)

Port of Survey Hull

Ship's Name Stefanos Costomenis Nationality and Port of Registry Greek Pyra Official Number 5409 Date of Build 1911-10 Date of Survey Dec. 1st 1933 Name of Surveyor M. Malcolm

Moulded Dimensions: Length 405.83 Breadth 52.20 Depth 30'-3"  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 12500 tons  
Coefficient of fineness for use with Tables .803

Particulars of Classification +100A1

Depth for Freeboard (D) Moulded depth ... 30'-3"  
Stringer plate ... .04  
Sheathing on exposed deck none  
 $T \left( \frac{L-S}{L} \right) =$  none  
Depth for Freeboard (D) = 30.29

Depth correction  
(a) Where D is greater than Table depth  
(D - Table depth) R =  $(30.29 - 27.66) \times 3 = +9.69$   
(b) Where D is less than Table depth (if allowed)  
(Table depth - D) R = none  
If restricted by superstructures

Round of Beam correction  
Moulded Breadth (B) 52.20  
Standard Round of Beam =  $\frac{B \times 12}{50} = 12.53$   
Ship's Round of Beam = 12.54  
Difference .28  
Restricted to none  
Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S}{L} \right) = \frac{.28}{4} \times .5088 = +.04$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>i</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>36-0</u>	<u>36.00</u>	<u>8'-0"</u>	<u>✓</u>	<u>36.00</u>
" overhang ...	<u>✓</u>				
R.Q.D. enclosed ...	<u>✓</u>				
" overhang ...	<u>✓</u>				
Bridge enclosed ...	<u>120-4</u>	<u>120.33</u>	<u>8'-0"</u>	<u>✓</u>	<u>120.33</u>
" overhang aft ...	<u>✓</u>				
" overhang forward ...	<u>✓</u>				
Forecastle enclosed ...	<u>45'-5"</u>	<u>43.00</u>	<u>8'-0"</u>	<u>✓</u>	<u>43.00</u>
" overhang ...	<u>✓</u>				
Trunk aft ...	<u>✓</u>				
" forward ...	<u>✓</u>				
Tonnage opening aft ...	<u>✓</u>				
" forward ...	<u>✓</u>				
Total ...	<u>201.75</u>	<u>199.33</u>			<u>199.33</u>

Standard Height of Superstructure	<u>7.5'</u>
" " R.Q.D.	<u>✓</u>
Deduction for complete superstructure	<u>42'</u>
Percentage covered $\frac{S}{L} =$	<u>49.72</u>
" " $\frac{S_i}{L} =$	<u>49.12</u>
" " $\frac{E}{L} =$	<u>49.12</u>
Percentage from Table, Line A.	<u>✓</u>
(corrected for absence of forecastle (if required))	
Percentage from Table, Line B.	<u>35.25</u>
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than .2L (if required)	
Deduction =	<u>42 × 35.25 = -14.80</u>

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>50.58</u>	<u>1</u>	<u>✓</u>	<u>50.58</u>	<u>63.00</u>	<u>63.00</u>	<u>1</u>	<u>✓</u>	<u>63.00</u>
$\frac{1}{2}$ L from A.P. ...	<u>22.51</u>	<u>4</u>	<u>✓</u>	<u>90.04</u>	<u>28.5</u>	<u>27.65</u>	<u>4</u>	<u>✓</u>	<u>110.60</u>
$\frac{2}{3}$ L " ...	<u>5.56</u>	<u>2</u>	<u>✓</u>	<u>11.12</u>	<u>7.5</u>	<u>6.91</u>	<u>2</u>	<u>✓</u>	<u>13.82</u>
Amidships ...	<u>-</u>	<u>4</u>	<u>✓</u>	<u>-</u>	<u>0</u>	<u>-</u>	<u>4</u>	<u>✓</u>	<u>-</u>
$\frac{3}{4}$ L from F.P. ...	<u>11.13</u>	<u>2</u>	<u>✓</u>	<u>22.26</u>	<u>14.1</u>	<u>13.63</u>	<u>2</u>	<u>✓</u>	<u>27.26</u>
$\frac{1}{2}$ L " ...	<u>45.02</u>	<u>4</u>	<u>✓</u>	<u>180.08</u>	<u>53.0</u>	<u>54.50</u>	<u>4</u>	<u>✓</u>	<u>218.00</u>
F.P. ...	<u>1</u>	<u>1</u>	<u>✓</u>	<u>101.17</u>	<u>128.0</u>	<u>128.00</u>	<u>1</u>	<u>✓</u>	<u>128.00</u>
Total ...	<u>101.17</u>	<u>✓</u>	<u>✓</u>	<u>455.25</u>					<u>560.68</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{.2L} \right) = \frac{105.43}{18} \left( \frac{.75 - .2486}{.5014} \right) = -2.94$

If limited on account of midship superstructure. ✓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 = 30.29  
Summer freeboard = 6.00  
Moulded draught (d) = 24.29

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = 6.07

## Addition for Winter North Atlantic Freeboard (if required) =

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$  not available

Tons per inch immersion at summer load water line

T =

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

T.P.I. at L.W.L. = approx. 42.66

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

Correction for coefficient  $\frac{803 + .68}{1.36} = \frac{1.483}{1.36}$

	+	-
Depth Correction ...	<u>9.69</u>	<u>-</u>
Deduction for superstructures ...	<u>-</u>	<u>14.80</u>
Sheer correction ...	<u>-</u>	<u>2.94</u>
Round of Beam correction ...	<u>.04</u>	<u>-</u>
Correction for Thickness of Deck amidships ...	<u>-</u>	<u>-</u>
Other corrections, scantlings, etc. ...	<u>-</u>	<u>-</u>
	<u>9.73</u>	<u>17.74</u>

Summer Freeboard = 71.91

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

Tropical Fresh Water Line above Centre of Disc ...

Fresh Water Line " " ...

Tropical Line " " ...

Winter Line below " " ...

Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ...

Fresh Water " " ...

Tropical " " ...

Winter " " ...

Winter North Atlantic " " ...

6'-0"

6'-6"



Particulars of fiddley, funnel and ventilator coverings:—  
 Funnel & ventilator coverings in efficient condition.  
~~Repairs are required to fiddley top plating.~~  
 Fiddley gratings closed by efficient lining of steel storm covers.  
 Engine Room skylight of steel strongly constructed.

\_\_\_\_\_ none \_\_\_\_\_

\_\_\_\_\_ none \_\_\_\_\_

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

<u>File deck</u> :	8" to 16" dia.	coaming	18" high x .3 to .4	tween decks
	22" dia.			bolds.
<u>Wells</u>	16" to 21" dia.	-	30" - .4	" "
<u>Bridge ah</u>	10" + 18" dia.	x	34" - .3	" "tween decks."
<u>Poop dk</u>	7" + 17" dia.	-	30" = .25 to .32	" "sheds."

Ventilator coamings constructed in accordance with Rule requirements. Wood plugs canvas covers supplied. ✓

1. 84: to F.P. Tank 3' dia. 9' N. 22" high  
 " Wells: 3' dia. 9' N. 26" + 30" high to P.P. tanks.  
 Bde decd: 3' dia. 9' N. 18' dia. to P.P. tanks.  
 Pump decd: 23' dia. 9' N. 12" high to A.P. tank.

no means of closing  
 is provided.

\_\_\_\_\_ none \_\_\_\_\_

**Particulars of Scuppers and Sanitary Discharge Pipes :-**

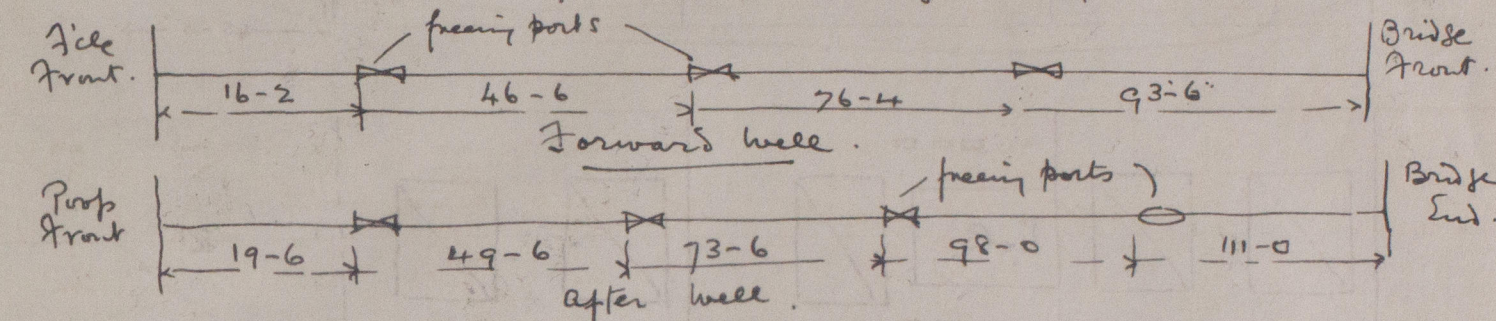
Sanitary discharge pipes lead to shell in tween decks with storm valves at shell.

In Ice. of substantial construction, fitted with hinged deadlights.  
~~Several glasses should be removed.~~

Ice + Prop decks: rails 3'6" high, 2 rod. Stanchions 5'6" apart.  
 Bridge deck: " " " 3 " " " "

In wells: Steel bulwarks 4'-6" high substantially constructed and stayed.

Suitable provision made for lifelines in both walls  
— ~~no permanent arrangements provided~~



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 ... ..	111-0	4'-6"	3'-6" x 22" 2'-7" x 20" (oval)	3 ✓ 1 ✓	19.2 sq ft 3.7 "	22.2 sq ft
Forward Well ... ..	93-6	4'-6"	3'-9" x 22"	<del>4</del> 3 ✓	20.6 sq ft <del>27</del> 45 sq ft	18.7 sq ft

State position of each freeing port ... .. } After Well:— } 14' above deck edge  
 (F. and A. position and heights above deck edge) } Forward Well:— }  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— steel hinged shutters + bars.  
clips for securing shutters are fitted.

Additional area where sheer is less than standard.

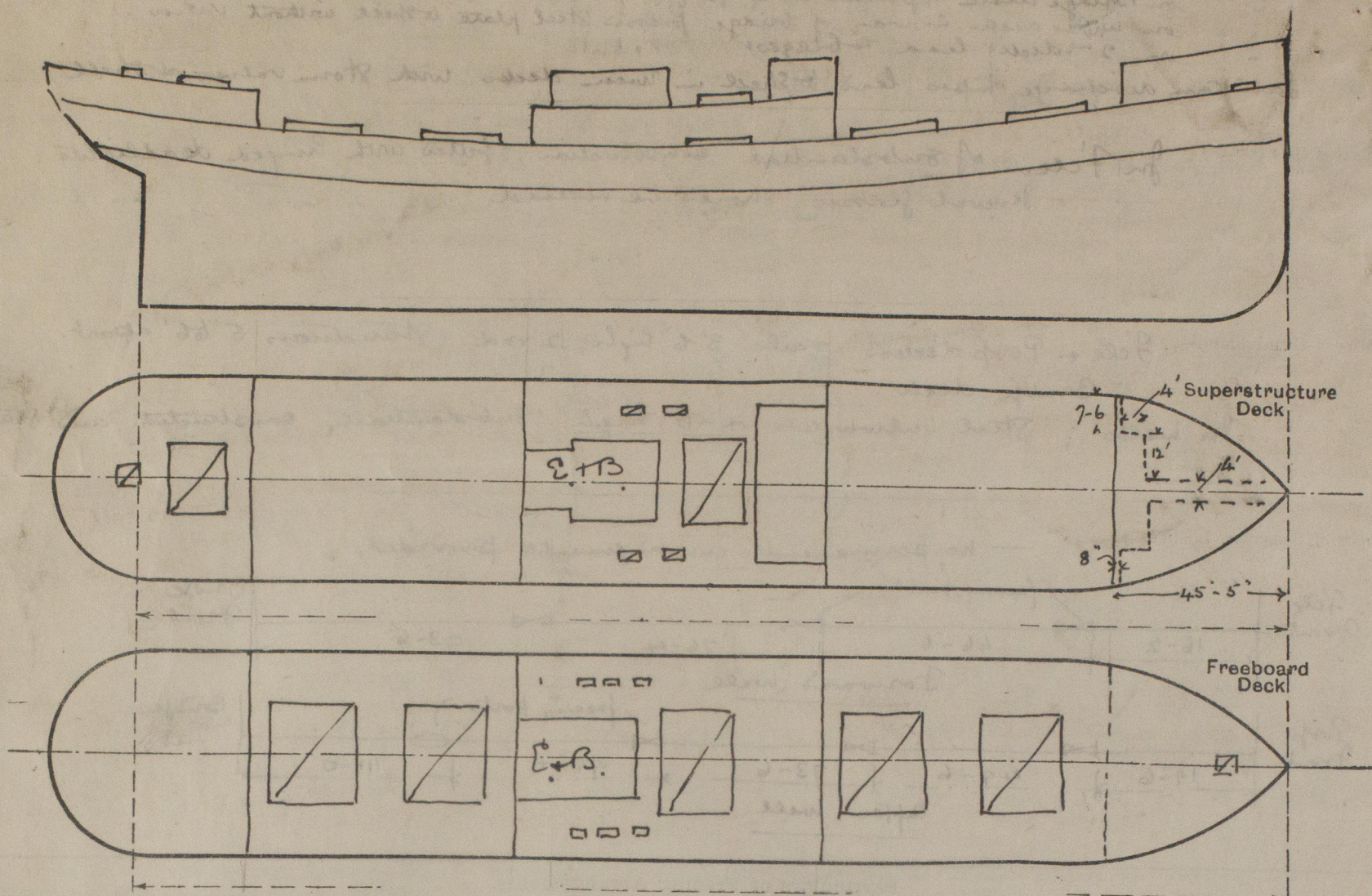
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..	.4	.38	not accessible		① 4' x 2' - 2" ② 4' x 3' 9" - 9" ③ 5' 3" x 4' - 4"	→	18" 21" 21"	8' - 0"
Raised Quarter <del>Deck</del> Bulkhead ...								
Bridge, After Bulkhead ... ..	.4	.38	3 3/4 x 3 x .45	30"	none	① 4' x 2' - 1" ② 4' x 5' (2 off)	18" 18"	8' - 0"
Bridge, Forward Bulkhead ... ..	.4	.38	8" B.A.	2' - 4"	Bkts.	3' x 5'	18"	8' - 0"
Forecastle Bulkhead ... ..	.38	.38	3 x 3 = .4	30'	none	4' - 8' x 2'	18"	8' - 0"
Trunk, <del>Aft</del> ... ..								
Trunk, <del>Forward</del> ... ..								
Exposed Machinery Casings on Free-board or <del>Raised</del> Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks <del>Bde.</del> ...	.38	.38	3 x 3 = .42	3 - 9	bkts at top	5' x 2'	18"	7' - 0"
Machinery Casings within Superstruc-tures not fitted with Class I Closing Appliances ... ..	.25	.25	"	"	✓	① 5' x 5' ② 5' x 4' ③ 5' x 2'	18"	8 - 0
Deckhouses on Flush Deck Ships ...								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	<ol style="list-style-type: none"> <li>hinged steel door, <del>bolts</del> padlocks, <del>no</del> <i>with through bolts spaced not more than 12" apart</i></li> <li>portable bolted plate <del>bolts</del> 15" apart, <del>no</del></li> <li>" " " " <del>no</del></li> </ol>
Raised Quarter Deck Bulkhead	<ol style="list-style-type: none"> <li>hinged steel doors, padlocks, <del>spring locks not in order</del></li> <li>fitted for stormboards, free height in middle channels, <del>now closed by hinge to work door 2 1/2" thick - padlocks</del></li> </ol>
Bridge, After Bulkhead	<ol style="list-style-type: none"> <li>hinged steel doors, through bolts spaced 12" apart &amp; hinged also each. <del>no</del></li> <li>stormboards 3" thick to height of 3'-9" in alleyway. <del>fastenings not in order</del></li> </ol>
Bridge, Forward Bulkhead	<ol style="list-style-type: none"> <li>hinged steel doors, through bolts spaced 12" apart &amp; hinged also each. <del>no</del></li> <li>stormboards 3" thick to height of 3'-9" in alleyway. <del>fastenings not in order</del></li> </ol>
Forecastle Bulkhead	<ol style="list-style-type: none"> <li>hinged steel doors, through bolts spaced 12" apart &amp; hinged also each. <del>no</del></li> <li>stormboards 3" thick to height of 3'-9" in alleyway. <del>fastenings not in order</del></li> </ol>
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	<ol style="list-style-type: none"> <li>hinged steel doors. <del>Spring locks not in order</del></li> <li>hinged steel door in helms - <del>fastenings to close shut down bulkhead</del></li> </ol>
Exposed Machinery Casings on Superstructure Decks	<ol style="list-style-type: none"> <li>hinged door (steel) - <del>fastenings to close shut down bulkhead</del></li> <li>hinged steel door in helms - <del>fastenings to close shut down bulkhead</del></li> </ol>
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	<ol style="list-style-type: none"> <li>hinged door (steel) - <del>fastenings to close shut down bulkhead</del></li> <li>hinged steel door in helms - <del>fastenings to close shut down bulkhead</del></li> </ol>



P36 July

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—



Inning hatches on U. Dh. & B de.  
2' x 2', 9" B.A. coaming.  
cleats 18" apart 1st paulin.  
1st covers 22", bearing 3".

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

Freeboard survey held on vessel afloat.  
No part of Special Periodical Survey  
held at this time.

Repairs are required to E.H.B. casing in  
Bridge tween decks.

The upper (freeboard) deck plating in bridge  
space tween deck bulkheads was found  
unduly thin and corroded through  
in places.

$$\begin{array}{r} \text{Fcl length} \\ \frac{4}{10} = \frac{45.42}{40.58} \\ \hline 2 \overline{) 4.84} \\ \underline{2.42} \\ 40.58 \\ \hline 43.00 \end{array}$$

Builder's name and yard number W. Hamilton & Co. Ltd.

Names of sister ships ✓

Owners E.G. Culucundis & S.E. Costomeni.

Fee £ 13 : 12 : —

Received by me



© 2020

Lloyd's Register  
Foundation