

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

Having

*Poop Bridge & Forecastle*

Port of Survey

*Guel***LEONIDAS**

(Type of Superstructures.)

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

*(ex BELLORADO.)**British Greek  
Glasgow**160221**4573**1928-9*

Date of Survey

*29<sup>th</sup> July 1932*

Name of Surveyor

*W. H. H. H.*

Particulars of Classification

*+100A1*

Moulded Dimensions: Length

*384.0*

Breadth

*51.75*

Depth

*29.0*

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

*11,040*

tons

Coefficient of fineness for use with Tables

*.789*

Depth for Freeboard (D)

Moulded depth

...

...

...

*29.00*

Stringer plate

...

...

...

*40.03*

Sheathing on exposed deck

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

Depth for Freeboard (D) =

*29.03*

Depth correction

(a) Where D is greater than Table depth  
(D - Table depth) R =*(29.03 - 25.60) 2.954 = 10.13*(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)

*51.75*Standard Round of Beam =  $\frac{B \times 12}{50} =$ *12.412*

Ship's Round of Beam =

*13"*

Difference

*.58*

Restricted to

Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.58}{4} \left( 1 - \frac{49.35}{51.75} \right) = -.07$ 

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>33.42</i>	<i>33.42</i>	<i>7'-9"</i>		<i>33.42</i>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	<i>112.0</i>	<i>112.00</i>	<i>7'-9"</i>		<i>112.00</i>
" overhang aft ...					
" overhang forward ...					
File enclosed ...	<i>44.1</i>	<i>44.1</i>	<i>7'-9"</i>		<i>44.1</i>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<i>189.52</i>	<i>189.52</i>			<i>189.52</i>

Standard Height of Superstructure

*7.34*

R.Q.D.

Deduction for complete superstructure

*40.93*Percentage covered  $\frac{S}{L} =$ *49.35%* $\frac{S_1}{L} =$ *49.35%* $\frac{E}{L} =$ *49.35%*

Percentage from Table, Line A. ✓

(corrected for absence of forecastle (if required))

Percentage from Table, Line B.

*35.44%*

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction =  $40.93 \times 35.44 = 14.50$ 

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>48.40</i>	1		<i>48.40</i>	<i>64.0</i>	<i>64.00</i>	1		<i>64.00</i>
$\frac{1}{2}$ L from A.P. ...	<i>21.54</i>	4		<i>86.16</i>	<i>26.7</i>	<i>26.86</i>	4		<i>107.44</i>
$\frac{2}{3}$ L " ...	<i>5.32</i>	2		<i>10.64</i>	<i>6.9</i>	<i>6.71</i>	2		<i>13.42</i>
Amidships ...		4			<i>0</i>		4		
$\frac{2}{3}$ L from F.P. ...	<i>10.64</i>	2		<i>21.28</i>	<i>13.4</i>	<i>13.23</i>	2		<i>26.46</i>
$\frac{1}{2}$ L " ...	<i>43.07</i>	4		<i>172.28</i>	<i>52.0</i>	<i>52.94</i>	4		<i>211.76</i>
F.P. ...	<i>96.80</i>	1		<i>96.80</i>	<i>120.0</i>	<i>120.00</i>	1		<i>120.00</i>
Total ...				<i>435.56</i>					<i>543.08</i>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{107.52}{18} \left( \frac{75-24.67}{2} \right) = -3.01$ 

If limited to ship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck =

*29.03*

Summer freeboard =

*5.37*

Moulded draught (d) =

*23.66*

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = *5.91* = *6"*

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ *10,686*

Tons per inch immersion at summer load water line

 $T =$ *39.25*Deduction =  $\frac{\Delta}{40T}$  inches*6 3/4*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{789 + .68}{1.36} = \frac{1.469}{1.36}$ 

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

+

-

*10.13**14.50**3.01**.07**10.13**17.58**-7.45**66.60**71.94**64.49*

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, 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 " " ...

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Lloyd's Register  
Foundation

1906 Reassigned







*Two permanent arrangements. in the fore part of the ship.*  
Rpt. 9a.

~~Port of~~

*Bellorado*

Continuation of Report No.

~~dated~~

*32766*

on the

*Two additional ventilators (one each side port and  
starboard) were fitted to No 3' tween deck, the coamings  
being 11-3" high x 12" diameter x  $\frac{3}{8}$ " thick, stayed to  
bridge after bulkhead.*

*See Cof. letter 23/2/37.  
Noted. LWB. 25/2/37*

*0287  $\frac{2}{3}$*

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— *one horizontal bar.*



## Particulars of Scuppers and Sanitary Discharge Pipes

*Below freeboard deck fitted with gunmetal down  
and above freeboard deck fitted with storm valve at ship's side.*

## Particulars of Side Scuttles:

*All side scuttles to crew spaces in forecabin fitted with hinged deadlights  
all scuttles of substantial construction*

## Particulars of Guard Rails:

*Guard rails on forecabin deck 3'-3" high bearing 2 rods + stanchion space 5'-0" apart  
" " " Bridge 3'-3" " " 3 " " 5'-0"  
" " " Poop 3'-3" " " 2 " " 5'-0"*

## Particulars of Gangways, Lifelines, etc.:

*Lifelines are provided  
on the fore and after wells  
to prevent accidents.*

## 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 ...	102'-0" <sup>48'</sup>	4'-0"	4'-0" x 18"	4	24.0 sqft	20.5 sqft
Forward Well ...	92'-0"	4'-0"	4'-0" x 18"	3	18.0 sqft	18.4 sqft

State position of each freeing port  
(F. and A. position and height above deck edge)

After Well: from Bridge 18'-1" 35'-11" 64'-0" 81'-2"  
Forward Well: from forecabin 36'-3" 57'-10" 78'-0"

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — *one horizontal bar.*

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 ...	.38	.34	6 x 3 x .40	2'-6"	Bkt top & bottom	6'-0" x 4'-0"	18"	7'-9"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	.40	.40	3 x 3 x .40	2'-7"	heel	5'-0" x 4'-0"	20"	4'-9"
Bridge, Forward Bulkhead ...	.48	.44	9" BA	2'-5"	Bkt top & bottom	4'-7" x 2'-7"	18"	4'-9"
Forecastle Bulkhead ...	.32	.28	3 x 3 x .35	2'-9"	heel	5'-0" x 2'-0"	18"	4'-9"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	.28	.28	3 x 3 x .40	2'-7 1/2"	heel	5'-0" x 3'-6"	18"	4'-6"
Exposed Machinery Casings on Superstructure Decks ...	.38	.32	3 x 3 x .40	2'-7 1/2"	Bkt at top	5'-0" x 2'-0"	18"	4'-3"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...								
Deckhouses on Flush Deck Ships ...								

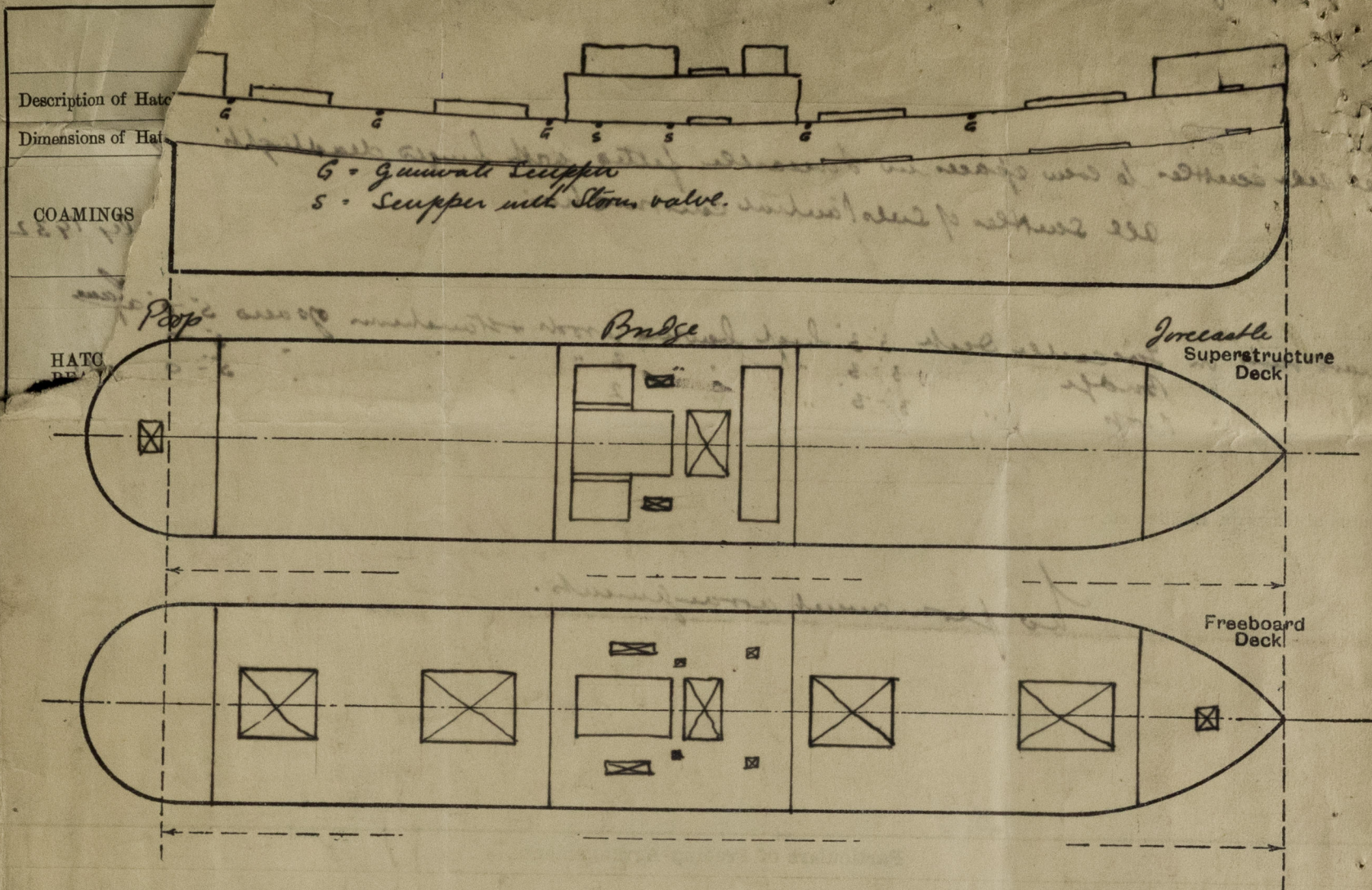
## Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead ...	3" storm boards in riveted channels full height	2 doors
Raised Quarter Deck Bulkhead ...		
Bridge, After Bulkhead ...	3" storm boards in riveted channels full height	1 door
Bridge, Forward Bulkhead ...	Hinged steel cargo door clips & bolts 15" apart	1 door
Forecastle Bulkhead ...	3" storm boards in riveted channels full height	2 doors
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	Saddle back opening portable steel plate bolts spaced 7 1/2" apart - no small opening has the means of closing - steel door is ER hinged - spring lock up	1 door
Exposed Machinery Casings on Superstructure Decks ...	Hinged steel door to filling spring lock up - strong leak door is ER spring lock up (Don't recommend)	1 door
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...		
Deckhouses on Flush Deck Ships ...		



On Upper Deck } Coals trunks ha  
in Bridge } Immunity ho

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



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

*Not surveyed afloat  
Nothing done towards special survey.*

Builder's name and yard number

*Lithgows Ltd.*

Names of sister ships

Owners

*Bellorado S S Co.*

Fee £

*12 15 -*

Received by me



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